United States Air Force
611th Air Support Group/
Civil Engineering Squadron

Elmendorf AFB, Alaska

Final

Remedial Investigation and Feasibility Study

Cape Lisburne Radar Installation, Alaska

Volume 2 of 2
(Includes Appendices C through G)

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

05 FEBRUARY 1996

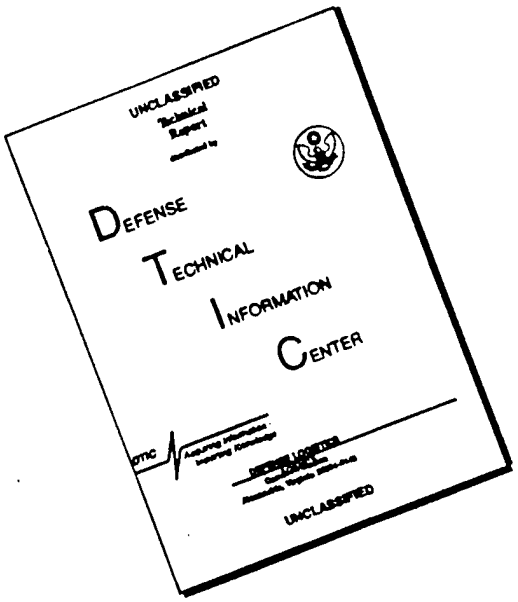
APPENDIX C

COPY OF THE TASK DESCRIPTIONS AND STATEMENT OF WORK

19960813 175

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DISCLAIMER NOTICE



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RSW SBX

SBX

ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 3

2. PROC INSTRUMENT ID NUMBER (PIIN)	3. CALL/ORDER NUMBER	4. DATE OF ORDER*	5. REQUISITION/PURCHASE REQUEST PROJECT NUMBER	6. CERTIFIED FOR NATIONAL DEFENSE UNDER
F33615-90-D-4010 MARK ALL PACKAGES AND PAPERS WITH THIS NUMBER	0022	8 APR 1993	FY7624-93-08202	DO-C9

7. ISSUED BY — CODE FQ2826

DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
HUMAN SYSTEMS CENTER/PK
8005 9TH STREET
BROOKS AFB TX 78235-5353
BUYER: EDWIN CUSTODIO/HSC-PKVBA
PHONE: (210) 536-4493

8. ADMINISTERED BY — CODE S2101A

DCASMA BALTIMORE
200 TOWSONTOWN BLVD, WEST
TOWSON MD 21204-5299

9. CONTRACTOR NAME AND ADDRESS — CODE 69148 — FACILITY CODE — IF "9" FOR MULTIPLE FACILITIES SEE SECT "G"

ICF TECHNOLOGY, INC
9300 LEE HIGHWAY
FAIRFAX VA 22031-1207

PHONE: (703) 934-3000
COUNTY: FAIRFAX

10. MAIL INVOICE TO

U

11. DISCOUNT FOR PROMPT PAYMENT

				NET DAYS
1ST	N	%	DAYS	OTHER
2ND		%	DAYS	IF "9" SEE SECT "G"
3RD		%	DAYS	

12A. PURCHASE OFFICE POINT OF CONTACT

MVH/M6V/MVY

12B. RESERVED FOR SERVICE/AGENCY USE

13. PAYMENT WILL BE MADE BY — CODE S3910A — IF "9" SEE SECT "G"

DCASR, PHILADELPHIA
P.O. BOX 7730
PHILADELPHIA, PA 19101-7478

14. TYPE CONTRACTOR	15. SECURITY A. CLASSIFICATION	B. DATE OF DD 254
A	U	

16. CONTRACT ADMINISTRATION

A. FAST PAY	B. CONTRACT (1) KIND	(2) TYPE	C. ABSTRACT RECP ADP POINT	D. SPL CONT PROVISIONS	E. CONT ADMIN FUNC LIMT	17. (RESERVED)	18. (IVC/AGENCY USE	19. SURV. CRIT	20. TOTAL AMOUNT
	I	Y						C	NOT-TO-EXCEED $299,855.00

21. APPROPRIATION AND ACCOUNTING DATA

A. ENTY CLAS B. ACRN C. APPROPRIATION D. LIMIT SUBHEAD E. SUPPLEMENTAL ACCOUNTING CLASSIFICATION

U AA 5733400

F. CPN RECIPIENT DODAAC G. OBLIGATION AMOUNT H. NON-CLASSIFIED APPROPRIATION I. SOC AGENCY USE

P74400 $299,855.00 303 7434 434419 00007 53440 78008F 674400

22A. TYPE OF ORDER — DELIVERY X — PURCHASE

B. NON-DOD CONTRACT NUMBER: FY7624-93-08202

This delivery order is subject to instructions contained on this side of form only and is issued in accordance with and subject to terms and conditions of above numbered contract, or Non-DOD Contract Number.

Reference your

Furnish the following on terms specified herein.

If quantity accepted by the Government is same as quantity ordered, indicate by mark. If different, enter actual quantity accepted below quantity ordered and encircle.

23. UNITED STATES OF AMERICA — BY: NAME OF CONTRACTING/ORDERING OFFICER AND DATE

GARY J. MACDECY 23APR93

24. TOTAL

25. DIFFERENCES

26. INITIALS

25. QUANTITY ORDERED HAS BEEN

☐ INSPECTED ☐ RECEIVED ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS STATED

27. S.O. VOUCHER NUMBER

28. SHIP NUMBER

☐ PARTIAL ☐ FINAL

29. PAID BY

30. AMOUNT VERIFIED CORRECT FOR

DATE — SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

31. PAYMENT ☐ COMPLETE ☐ PARTIAL ☐ FINAL

32. CHECK NUMBER

33. I CERTIFY THIS AMOUNT IS CORRECT AND PROPER FOR PAYMENT

SIGNATURE AND TITLE OF CERTIFYING OFFICER

34. BILL OF LADING NUMBER

36. RECEIVED AT	37. RECEIVED BY	38. DATE RECEIVED	39. TOTAL CONTAINERS	40. G/R ACCOUNT NUMBER	41. G/R VOUCHER NUMBER

AFSC Form 700, DEC 89 — PREVIOUS EDITION IS OBSOLETE — *When used as a formal contract this will be the effective date.

REFERENCE AF FORM 616 H93SR232 (Change #1), DATED: 23 MAR 93.

1. In accordance with the provisions of the Basic Contract F33615-90-D-4010 and this Delivery Order 0022, the contractor shall accomplish the effort described in the Statement of Work (SOW) dated 16 MAR 93 attached hereto at a total ceiling price of $299,855.00.

2. As a result of paragraph 1 above, the subject order is more specifically modified as set forth below:

SECTION B - THE SCHEDULE:

Item No	Supplies/Services	Quantity Purch Unit	Unit Price Total Item Amt
0001	CLIN sec class: U noun: SAMPLING, ANALYSIS AND DATA acrn: AA nsn: N site codes pqa: D acp: D fob: D pr/mipr data: FY7624-93-08202 type contract: Y descriptive data: Conduct work in accordance with the Statement of Work (SOW) of this order, dated 16 MAR 93 and Section C, The Description/Specifications of the Basic contract. Submit data in accordance with Attachment #1, the Contract Data Requirements List (CDRL) of the basic contract as implemented by paragraph VI of this order's SOW dated 16 MAR 93.	1 LO	N N
0002	CLIN sec class: U noun: SUPPORT acrn: AA nsn: N site codes pqa: D acp: D fob: D pr/mipr data: FY7624-93-08202 type contract: Y descriptive data: Provide support in accordance with the Statement of Work (SOW) of this order, dated 16 MAR 93 and Section C, The Description/Specification of the basic contract.	1 LO	N N

3. SECTION C - Description/Specification: - See attached Statement of Work entitled "Installation Restoration Program/Remedial Investigation/Feasibility Study for Distant Early Warning (DEW) line Sites, AK (Barter Island AFS (BAR-M), Bullen Point AFS (POW-3), Point Lonely AFS (POW-1), Point Barrow AFS (POW-M), Point Lay AFS (LIZ-2), Wainwright AFS (LIZ-3), and Oliktok Point AFS (POW-2)" dated 16 MAR 93.

4. SECTION F - Schedule Data:

Item No	Supplies Schedule Data	Delivery Quantity	Schedule Date
0001	CLIN Del Sch acrn: AA sec class: U ship to: U descriptive data: Technical effort shall be completed in accordance with the Statement of Work (SOW) dated 16 MAR 93. All data shall be delivered in accordance with Attachment #1 of the basic contract as implemented by paragraph VI of the Statement of Work dated 16 MAR 93. The data shall be accepted by the Government not later than 31 DEC 93.	1	93DEC31
0002	CLIN Del Sch acrn: AA sec class: U ship to: U descriptive data: Technical effort shall be completed in accordance with the Contract Data Requirements List (Attachment #1) of the basic contract as implemented by paragraph VI of the Statement of Work.	1	93DEC31

F33615-90-D-4010-0022
Attachment 1
Page 1 of 7

1993 March 16

STATEMENT OF WORK
INSTALLATION RESTORATION PROGRAM
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

STAGE 1

DISTANT EARLY WARNING (DEW) LINE SITES and CAPE LISBURNE AFS, AR

I. DESCRIPTION OF WORK

1.1 Scope

1.1.1 **Background.** The objective of the Air Force Installation Restoration Program (IRP) is to assess past hazardous waste disposal and spill sites on Air Force installations and develop remedial actions consistent with the National Contingency Plan (NCP) for those sites which pose a threat to human health and welfare or the environment. This objective is achieved through a Remedial Investigation Feasibility Study (RI/FS) process in which conclusions and recommendations drawn from accurate and validated data are used to structure and guide subsequent activities.

The RI/FS process includes scoping to define data requirements and objectives, a remedial investigation to characterize sites for a baseline risk assessment, and a feasibility study to define and evaluate alternative remedial actions so that a recommended action may be selected. Each of these steps of the RI/FS process can be conducted in stages that focus on particular aspects of the process.

The contractor shall accomplish the actions described in this Statement of Work (SOW) to complete the RI/FS process at the following seven Dew Line Sites and Cape Lisburne:

Barter Island AFS (BAR-M); Bullen Point AFS (POW-3); Point Lonely AFS (POW-1); Point Barrow AFS (POW-M); Point Lay AFS (LIZ-2); Wainwright AFS (LIZ-3); and Oliktok Point AFS (POW-2).

1.1.2 **Requirements for Project Activities.** The Installation Restoration Program (IRP) Handbook referenced in this Statement of Work provides requirements for laboratory and field activities and applicable formats for project documents that shall be used by the contractor. Volume 1 of the Handbook dated May 1992 is provided under separate cover. This document is referenced in this Statement of Work as the Handbook. The contractor is responsible for the thorough knowledge and understanding of the previous findings and recommendations that affect this task prior to the start of field activities. The documents involved include but are not limited to the IRP Phase I Records Search, and the IRP Phase II plans and reports addressing the Dew Line Sites and Cape Lisburne.

1.1.3 **Meetings.** A maximum of two (2) contractor personnel, including the project leader, shall attend four (4) meetings at Elmendorf AFB, AK. Each meeting shall be two (2) 8-hour workdays in duration. All meetings shall be coordinated by the TPM.

1.1.4 **Special Notifications.** The contractor shall immediately report to the TPM, or designate, via telephone, any data or results generated during this investigation which may indicate an imminent health risk. Following this telephone notification, a written notice shall be prepared and

delivered within three (3) days. This notification shall include supporting documentation (sequence 16, para 6.1)

1.2 Project Scoping Documents

The purpose of the project scoping documents is to clearly and comprehensively define project activities prior to the initiation of field work. The contractor shall prepare and submit the following project scoping documents for this task prior to the initiation of any field activities or laboratory analyses.

1.2.1 **Engineering Network Analysis.** Provide within ten (10) days after the issuance of an order a computer generated network analysis which is a detailed task plan for the RI/FS work efforts. The network analysis (GANTT) chart shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period of the delivery order. The network analysis (GANTT) shall show both serial and parallel subtasks leading to a deliverable product or report, and shall show early and late start and completion dates with float. The network analysis (GANTT) shall be updated and submitted quarterly (sequence 3, para 6.1).

1.2.2 **Work Plan.** This section will discuss the overall approach, (including a brief summary of the Conceptual Site Model and Data Quality Objectives), major tasks, scope, timeline, and major decision points. Due to the extreme remoteness of the Dew Line Sites and Cape Lisburne, the contractor shall include a detailed plan for logistics and strategy to complete the RI/FS field activities. Follow the format specified in section 1 of the Handbook. In preparing the Work Plan, use previous reports and the information gathered during the literature search and presurvey along with experience at similar sites. Reevaluate the recommendations for Dew Line Sites and Cape Lisburne developed during previous IRP stages (sequence 4, para 6.1).

1.2.3 **Sampling and Analysis Plan (SAP).** The SAP consists of a quality assurance plan (QAPP) and a Field Sampling Plan (FSP). Prepare a SAP describing how project activities will be accomplished in the format specified in section 1 of the Handbook. Incorporate review comments and obtain TPM concurrence prior to the start of field activities (sequence 4, para 6.1).

1.2.4 **Health and Safety Plan (HSP).** Provide a written Health and Safety Plan within eight (8) weeks after the issuance of an order. The contractor shall comply with USAF, OSHA, EPA, state, and local health and safety regulations regarding the proposed work effort. Use EPA guidelines for designating the appropriate levels of protection needed at the study sites. The Health and Safety Plan shall provide no less protection than the protection contained in the manual entitled "Health and Safety Requirements for Employees Engaged in Field Activities" dated 1981 and the "Occupational Safety and Health Manual for Hazardous Waste Sites Activities" dated 1985 and 29 CFR 1910. Coordinate the Health and Safety Plan directly with applicable regulatory agencies prior to submittal to AFCEE/ESR. The contractor shall certify to AFCEE/ESR that the contractor has reviewed the coordinated Health and Safety Plan with each employee and also subcontractor's employees prior to the time each employee engages in field activities (sequence 4, para 6.1).

1.2.5 **Community Relations Plan.** The contractor shall prepare a Community Relations Plan (CRP) for the DEW Line Sites and Cape Lisburne AFS outlining the specific public communications and involvement techniques to be used in coordination with remedial site activities (sequence 4, para 6.1). Follow the guidance contained in "Community Relations in Superfund, a Handbook", office of Solid Waste and Emergency Response (OSWER) Directive

9230.0-03C (EPA/540/R-92/009, January 1992. PB92-963341), and other applicable directives. Also, use as a guidance previously accomplished CRP from other installations in Alaska. Appropriately adapt such guidance to the local situation at the DEW Line Sites and Cape Lisburne. As described in OSWER Directive 9230.0-03C, the CRP shall include, but not be limited to, a description of the sites and the community, an overview of the community involvement to date, key community concerns regarding the site and AF site activities, and suggested community relations activities. A contact list of elected officials, agency representatives, and interested groups and individuals shall be included in appropriate copies of the plan. In addition, the plan will include suggested locations for meetings and information repositories. Contractor activities to develop the CRP shall include conducting a review of site information provided by the AF.

1.3 **Project Activities**

The contractor shall conduct the following tasks to achieve the purposes stated herein, in compliance with approved scoping documents, the Handbook, and all applicable regulations and requirements.

1.3.1 **Community Relations.** Provide support to the base public affairs office for the tasks described below pertaining to the RI/FS Community Relations Program.

1.3.1.1 Public meetings and workshops. The contractor shall be responsible for coordinating public meetings and workshops for all DEW Line Sites and Cape Lisburne AFS. This includes producing briefing scripts, slides and any associated products such as response cards and sign-in sheets. As requested by the base Community Relations office in coordination with the TPM, research and provide materials for public queries, news media queries, and news releases. Assume a maximum of one (1) workshop/meeting (Seq. nos. 3,9).

1.3.1.2 Public notices. As required by the base Community Relations office and the TPM, the contractor shall prepare and publish public notices for the Fairbanks and local newspapers. The purpose of these notices is to inform the public of a meeting, workshop, or comment period in which they have the opportunity to be involved in the IRP Program at DEW Line Sites and Cape Lisburne AFS. Also, these notices may be utilized to inform the public of other pertinent program information such as quarterly notices of documents placed in the information repositories. The format for the notices shall be coordinated with the Community Relations office and TPM, and then submitted to the TPM for review prior to delivery to the base. Assume a maximum of two (2) notices (Seq. no. 3).

1.3.1.3 Photo Notebook The contractor shall develop a photo notebook which focuses on the overall IRP program at DEW Line Sites and Cape Lisburne AFS. The layout of the notebook will be coordinated with the public affairs office and TPM. Assume a maximum of one (1) update (Seq. no. 9).

1.3.1.4 Mailing List. In coordination with the base Community Relations office and the TPM, prepare and update the mailing list on a quarterly basis. Assume a maximum of two (2) updates (Seq. no. 3).

1.3.1.5 Maps. Prepare presentation quality maps of the installations and their sites to use in newsletters and to distribute to the public.

1.3.2 **Literature Search.** Conduct a literature search and analyze aerial photos of the DEW Line Sties to supplement existing information that has been collected. The purpose of the literature search is to complete the

conceptual site model so that a numerical estimate of risk can be developed.

1.3.3 **Presurvey.** Within eight weeks of the issuance of an order, the contractor shall visit the Dew Line Sites and Cape Lisburne to ensure complete understanding of site conditions. Coordinate this visit with the TPM and the 11 CEOS project manager. The contractor shall look for evidence of contamination at each site visited (e.g., leaking drums, vegetative stress, leachate seeps). The contractor shall observe the physical settings of each site visited to formulate specific recommendations concerning boring placement, use of geophysical techniques, and other aspects of the proposed field investigation. The findings of the presurvey shall be used to prepare the Work Plan, SAP, and HSP for the RI and to prepare scoping documents for the treatability study(ies). Assume one presurvey and one reconnaisance trips.

1.3.4 **Quality Assurance/Quality Control (QA/QC).** A QA/QC program shall be conducted and documented for all work pursuant to this delivery order. Contractor and project-specific documents concerning QA/QC procedures and requirements shall be strictly followed. Data generated under the QA/QC program shall be used by the contractor for evaluating the analytical results and field records assembled for each site to identify accurate and validated data that may be used to assess risk, develop conceptual site models and evaluate alternatives.

1.3.5 **Conceptual Site Model.** Use all available RI/FS data supported by acceptable QA/QC results (as measured against QAPP requirements) and site characterization information to refine, based on newly collected data, the conceptual site model. The model shall define the nature and extent of contamination and the transport and fate of those contaminants. The minimum requirements of the model are given in section 2 of the Handbook. The complexity and detail of the site model shall be consistent with the nature of the site and site problems, and the amount of data available the conceptual site model shall be documented in the Work Plan.

1.3.6 **ARARs Evaluation.** The contractor shall identify all Applicable or Relevant and Appropriate Requirements (ARAR). These ARARs will be documented in the Work Plan.

1.4 **Project Deliverables**

Deliver the following documents in compliance with the requirements of item VI, the formats required in section 1 and 4 of the Handbook, and the specifications noted below. Draft reports are considered "drafts" only because they have not been reviewed and approved by the Air Force. In all other respects, "drafts" shall be complete, in the proper format, fully illustrated, and free of grammatical and typographical errors.

1.4.1 **Scoping Documents.**

a. Engineering Network Analysis (GANTT) (para 1.2.1). Provide within ten (10) days after the issuance of an order. Update and submit quarterly (sequence 3, para 6.1).

b. Work Plan (para 1.2.2). Use the format in section 1 of the Handbook (sequence 4, para 6.1).

c. Sampling and Analysis Plan (1.2.3). Use the format in section 1 of the Handbook (sequence 4, para 6.1).

d. Health and Safety Plan (para 1.2.4). Provide within six (6) weeks after the issuance of an order (sequence 4, para 6.1).

e. Community Relations Plan (para 1.2.5). Provide within eight (8) weeks after issuance of an order (sequence 4, para 6.1).

1.4.2 **Special Notification.** Provide written notification of imminent health hazards and supporting documentation within three (3) days of telephone notification (sequence 16, para 6.1).

1.4.3 **Presentation Materials.** The contractor shall prepare and present up to two (2) presentation packages at meetings coordinated by the Air Force (sequence 9, para 6.1). Attendance of these meetings is included in paragraph 1.1.3 of this SOW. As part of the presentation materials, the contractor shall provide paper copies of all slides and overheads.

1.4.4 **Meeting Summaries** (para 1.1.3). Provide no later than five (5) days after conclusion of each meeting (sequence 18, para 6.1).

1.4.5 **Newsletter.** Prepare and submit a quarterly newsletter which presents the status of the entire base IRP Program. This will include preparing an outline resulting from input by all contractors involved in the program. The outline must be approved by the base and TPM prior to submittal of the newsletter. The final product will be printed and distributed as agreed to by the TPM. Assume a maximum of two (2) newsletters (Sequence no. 3).

1.4.6 **Fact Sheets.** As required by the base IRP Program, prepare and submit fact sheets which facilitate the public's understanding of the IRP Program. These sheets should include key community concerns regarding sites as specified by the base. Use the format agreed to by the base and TPM. Print and distribute the fact sheets as agreed to by the TPM. Assume a maximum of two (2) fact sheets (Sequence no. 3).

1.4.7 **Public Notices.** In accordance with paragraph 1.3.6.2, prepare and submit public notices for the Fairbanks and local newspapers. Use the format agreed to by the base and TPM (Sequence no. 3).

1.4.8 **Photo Notebook.** In accordance with paragraph 1.3.6.3, develop a photo notebbok which focuses on the overall base IRP Program. Prior to implementation, submit a conceptual layout of the notebook for review by the base and TPM (Sequence no. 9).

1.4.9 **Mailing List.** In accordance with the base Community Relations coordinator and paragraph 1.3.6.4, update the existing mailing list on a quarterly basis (Sequence no. 3).

1.4.10 **Maps.** In accordance with the base community Relations coordinator and paragraph 1.3.6.5, prepare presentation quality maps.

II. **Site Location and Dates**

Dew Line Sites and Cape Lisburne, date to be established.

III. **Base Support** The base will:

3.1 Provide the contractor with existing engineering plans, drawings, diagrams, aerial photographs, digitized map files, etc., to facilitate evaluation of IRP sites under investigation.

3.2 Arrange for personnel identification badges, vehicles passes, and/or entry permits with the contention the contractor will provide necessary information to the base personnel no less than four weeks before needed.

3.3 Provide the contractor with all previously approved documents which provide information on all IRP efforts conducted at Dew Line Sites and Cape Lisburne and will aid in the determination of the amount of field work and analyses which need to be conducted.

IV. Government Furnished Property

See above in section III.

V. Government Points of Contact:

5.1 MAJCOM Coordinator

Major James R. Williams III
AFCEE/ESRU
8001 Inner Circle DR STE 2
Brooks AFB TX 78235-5328
(210) 536-5243
DSN 240-5243
(210) 536-9026 FAX
DSN 240-9026

5.2 Restoration Team Chief

Mr. Marty M. Faile
AFCEE/ESRU
8001 Inner Circle DR STE 2
Brooks AFB TX 78235-5328
(210) 536-5243
DSN 240-5243
(210) 536-9026 FAX
DSN 240-9026

5.3 Base Point of Contact (POC)

Mr. Jim Wolfe
11 CEOS/DEVR
21885 Second Street
Elmendorf AFB AK 99506-4420
(907) 552-4532
DSN 317-552-4532
(907) 552-1533 FAX
DSN 317-552-1533

5.4 Public Affairs Coordinator

Ms. Wende Wolf
11 CEOS/DEVR
21885 Second Street
Elmendorf AFB AK 99506-4420
(907) 552-4532
DSN 317-552-4532
(907) 552-1533 FAX
DSN 317-552-1533

VI. Deliverables

6.1 Attachment 1 of the Basic Contract

Sequence numbers 1 and 5 listed in attachment 1 to the basic contract app. all orders. Guidance for preparing R&D Status Reports (sequence 1) is contained in the Handbook, section 4. In addition, the sequence numbers at dates listed below are applicable to this order:

Sequence No.	Data No.	Block 10 (Freq.)	Block 11 (as of date)	Block 12 (date of 1st. submit.)	Block 13 (date of final report)	Block (no. c copies
1 (NETWORK ANALYSIS)	I.1.4.1a	QTRLY	12APR93	16APR93		
4 (WORK PLAN)	I.1.4.1b	ONE/R	12APR93	30MAY93	a	4
4 (ESP)	I.1.1.4c	ONE/R	12APR93	30MAY93	30JUL93	b
4 (SHIP)	I.1.4.1d	OTIME	12APR93	30MAY93	30JUL93	b
4 (COMM. REL. PLAN)	I.1.1.4e	ONE/R	12APR93	30MAY93	-	10
16 (SPECIAL NOTIF.)	I.1.4.2	OTIME	12APR93	30MAY93	31DEC93	b
9 (PERSNT. MATERIAL)	I.1.4.3	ASREQ	c	c	-	1
10 (MTG. RPTS)	I.1.4.4	ONE/R	d	d	-	10
3 (NEWSLETTER)	I.1.4.5	e	e	e	-	5
3 (FACT SHEETS)	I.1.4.6	QTRLY	12APR93	30NOV93	-	2
3 (PUBLIC NOTICES)	I.1.4.7	ASREQ	12APR93	15JUL93	A	-
9 (PHOTO NOTEBOOK)	I.1.4.8	ASREQ	12APR93	15JUL93	B	-
3 (MAILING LIST)	I.1.4.9	OTIME	12APR93	15JUL93	C	-
3 (MAPS)	I.1.4.10	QTRLY	12APR93	15JUL93	-	1
		OTIME	12APR93	15JUL93	A	-
					-	2

6.2 Reserved.

6.3 Notes

a. Submit Quarterly Thereafter.

b. One (1) first draft plan (8 copies), one (1) second draft plan (8 copies), and one (1) final plan (10 copies) are required. Incorporate Air Force comments into the second draft and final plan as specified by the TPM. Supply AFCEE/ESR with an advance copy of the first draft, second draft, and final plan for acceptance prior to distribution. Distribute the remaining copies of each plan as specified by the TPM. The second and final reports shall be submitted within three (3) weeks of receipt of comments from the TPM.

c. Primary and Secondary Documents. One first draft report (25 copies), one second draft report (25 copies), and one final report (35 bound copies plus the original camera-ready copy and a 3.5 inch disk formatted in WordPerfect 5.1 containing the document file) are required. Incorporate Air Force comments into the second draft and final reports as specified by the TPM. Supply the TPM with an advance copy of the first draft, second draft, and final reports for acceptance prior to distribution. Distribute the remaining copies as specified by the TPM .

d. Provide written notice with supporting documentation within three (3) days of telephone notification and at the direction of the TPM. Assume a maximum of 100 pages.

e. Provide within one (1) week of task/meeting completion.

f. Provide 500 copies of the Newsletters and distribute as agreed to by the TPM. This includes mailing the final product to on-base personnel and addresses on the existing mailing list.

g. Provide draft and final deliverables. Provide two advance copies to the AFCEE TPM and to the 11 CEOS Community Relations Coordinator for acceptance prior to preparation of the final deliverables.

h. Provide poster-size map.

REF 68X 68X

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. PAGE 1 OF 3

2. PROC INSTRUMENT ID NO. (PIIN)	3. SPIIN	4. EFFECTIVE DATE	5. REQUISITION/PURCHASE REQUEST PROJECT NO.	6. BCC/DMS RATING
F33615-90-D-4010	002201		FY7624-93-08305	--

7. ISSUED BY CODE FQ2826

DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
HUMAN SYSTEMS CENTER/PK
8005 9TH STREET
BROOKS AFB TX 78235-5353
Buyer: EDWIN CUSTODIO/HSC-PKVBA
Phone: (210) 536-4493

8. ADMINISTERED BY (IF OTHER THAN BLOCK 7) CODE S2404A

DCMAO, BALTIMORE
200 TOWNSONTOWN BLVD., WEST
TOWNSON MD 21204-5299

9. CONTRACTOR NAME AND ADDRESS CODE 69148 FACILITY CODE

ICF TECHNOLOGY
9330 LEE HIGHWAY
FAIRFAX VA 22031-1207
COUNTY; FAIRFAX
PHONE: (703) 934-3000

MAIL DATE
JUN 1? 1993

IF "9" FOR MULTIPLE FACILITIES SEE SECT "K"

MAILING ADDRESS;
ICF TECHNOLOGY, INC
ATTN: CYNTHIA L. FALCE
FOUR GATEWAY CENTER 12TH FLOOR
PITTSBURGH PA 15222

10. SECURITY CLAS U

11. DISCOUNT FOR PROMPT PAYMENT

1ST	%	DAYS	NET DAYS
2ND	%	DAYS	OTHER IF '9'
3RD	%	DAYS	SEE SECT "E"

12. PURCHASE OFFICE POINT OF CONTACT MVH/M6V/MVY

13. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLITCITATIONS

☐ The above numbered solicitation is amended as set forth in Block 17. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended

Offeror must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation, or as amended by one of the following methods:

(a) By signing and returning _____ copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

14. THIS BLOCK APPLIES ONLY TO MODIFICATION OF CONTRACTS

☐ THIS CHANGE IS ISSUED PURSUANT TO _____ THE CHANGES SET FORTH HEREIN ARE MADE TO THE ABOVED NUMBERED CONTRACT/ORDER.

☐ THE ABOVE NUMBERED CONTRACT IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (SUCH AS CHANGES IN PAYING OFFICE, APPROPRIATION DATA, ETC.) SET FORTH HEREIN.

☐ THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF _____ IT MODIFIES THE ABOVE NUMBERED CONTRACT AS SET FORTH HEREIN.

☒ THIS MODIFICATION IS ISSUED PURSUANT TO FAR 52.243-3, Changes - Time and Materials or Labor Hours (Aug 1987)

15. CONTRACT ADMINISTRATION DATA

A. KIND OF MOD	B. MOD ABST RECIPIENT ADP PT	C. DATE OF SIGNATURE MODIFICATION	D. CHANGE IN CONTRACT AMOUNT INCREASE (+) DECREASE (-)	E. LOSING PO/CAO ON TRANSFER	F. GAINING PO/CAO ON TRANSFER	G. SVC/AGENCY USE
C			$			

16. ENTER ANY APPLICABLE CHANGES

A. PAY CODE	B. EFFECTIVE DATE OF AWARD	C. CONTRACT (1) TYPE (2) KIND	D. TYPE CONTR	E. SURV CRIT	F. SPL CONTR PROVISIONS	G. PAYING OFC CODE	H. DATE SIGNED	I. SECURITY (1) CLAS (2) DATE OF DD 254

17. REMARKS *(Except as provided herein, all items and conditions of the contract, as heretofore changed, remain unchanged and in full force and effect.)* SUBJ: INCREASE IN CEILING AMOUNT
PROJECT OFFICER: MICHAEL F. MCGHEE, AFCEE/ESR, 8001 INNER CIRCLE, SUITE 2, BROOKS AFB, TX 78235-5328
FINANCE OFFICE: (SC1010) DFAS-COLUMBUS CENTER
ATTN: INDEPENDANCE
P.O. BOX 182362, COLUMBUS OHIO 43218-2362

18. ☒ CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT ☐ CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE

19. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*
BY

20. NAME AND TITLE OF SIGNER *(Type or print)*

21. DATE SIGNED

22. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*
BY Gary J. Macdecy

23. NAME OF CONTRACTING OFFICER *(Type or print)*
GARY J. MACDECY

24. DATE SIGNED 93 Jun 16

AFMC FORM 702, JUL 92 REPLACES AFSC FORM 702, AUG 84 WHICH IS OBSOLETE

1. Pursuant to the "Changes" Clause of Section I of the basic contract. The ceiling amount for the order is increased by $99,986. from $299, 855. to $399,841. The performance period remains the same, 31 DEC 93,as a result of this change.

2. As a result of paragraph 1 above, said order is more specifically modified as follows:

a. SECTION A - Cover page - The NTE amount in Block 20 (Cover Page) is increased by $99,986. from $299,855. to $399,841.

b. SECTION B - Supplies and Services - Establish Special ACRN XA.

Item No	Supplies/Services	Quantity Purch Unit	Unit Price / Total Item Amt	
0001	CLIN Change sec class: U			N N
	noun: SAMPLING, ANALYSIS, AND DATA acrn: XA nsn: N site codes pqa: D acp: D fob: D type contract: Y			
0002	CLIN Change sec class: U			N N
	noun: SUPPORT acrn: XA nsn: N site codes pqa: D acp: D fob: D type contract: Y			

c. SECTION C - Description/Specs/Work Statement - The SOW for this order remains the same as the Basic order entitled, "Installation Restoration Program/Remedial Investigation/Feasibility Study for Distant Early Warning (DEW) Line Sites and Cape Lisburne AFS, AK" dated 16 MAR 93.

d. SECTION F - Supplies Schedule Data - is modified to include ACRN AB and Special ACRN XA.

Item No	Supplies Schedule Data	Delivery Quantity	Schedule Date
0001	CLIN Del Sch Change sec class: U acrn: XA ship to: U	1	93DEC31

0002 CLIN Del Sch Change sec class: U
acrn: XA
ship to: U 1 93DEC31

e. SECTION G. - Accounting Classification Data - is amended as set forth below:

ACRN	Acct Class Data	Appropriation/Lmt Subhead/CPN Recip DODAAD Supplemental Accounting Classification	Obligation Amount
AB	ACCOUNT ESTABLISH UNCLASSIFIED	5733400 F74400 303 7434 434419 000007 53440 000000 674400 pr/mipr data: FY7624-93-08305	$99,986.00
XA	SPECIAL ACRN ESTABLISH UNCLASSIFIED		

descriptive data:
Special ACRN XA funds CLINs 0001 and 0002 and includes the following:

ACRN AA: $299,855.
AB: $ 99,986.
TOTAL $399,841.

Finance Officer: Pay Funds in Alphabetical Order.

3. This supplemental agreement constitutes full settlement of any claims of the contractor under the contract, including the clause entitled, "Changes", arising out of or in connection with the changes effected hereby.

REF 68X 68X

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. PAGE 1 OF 3

2. PROC INSTRUMENT ID NO. (PIIN)	3. SPIIN	4. EFFECTIVE DATE	5. REQUISITION/PURCHASE REQUEST PROJECT NO.	6. BCC/DMS RATING
F33615-90-D-4010	002202	93JUL23	FY7624-93-08353	--

7. ISSUED BY CODE FQ2826

DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
HUMAN SYSTEMS CENTER/PK
8005 9TH STREET
BROOKS AFB TX 78235-5353
Buyer: REBECCA ROUNSAVILL/PKVBA
Phone: (210) 536-4502

8. ADMINISTERED BY (IF OTHER THAN BLOCK 7) CODE S2404A

DCMAO, BALTIMORE
ATTN: CHESAPEAKE
200 TOWNSONTOWN BLVD, WEST
TOWNSON MD 21204-5299

9. CONTRACTOR NAME AND ADDRESS CODE 69148 FACILITY CODE

ICF TECHNOLOGY
9330 LEE HIGHWAY
FAIRFAX VA 22031-1207
COUNTY; FAIRFAX
PHONE: (703) 934-3000

MAIL DATE
JUL 26 1993

IF "9" FOR MULTIPLE FACILITIES SEE SECT "K"

MAILING ADDRESS;
ICF TECHNOLOGY, INC
ATTN: CYNTHIA L. FALCE
FOUR GATEWAY CENTER 12TH FLOOR
PITTSBURGH PA 15222

10. SECURITY CLAS U

11. DISCOUNT FOR PROMPT PAYMENT

1ST	%	DAYS	NET DAYS
2ND	%	DAYS	OTHER IF "9"
3RD	%	DAYS	SEE SECT "E"

12. PURCHASE OFFICE POINT OF CONTACT
MVX/M6V/MVY

13. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLITCITATIONS

☐ The above numbered solicitation is amended as set forth in block 17. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation, or as amended by one of the following methods:

(a) By signing and returning _____ copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

14. THIS BLOCK APPLIES ONLY TO MODIFICATION OF CONTRACTS

☐ THIS CHANGE IS ISSUED PURSUANT TO _____
THE CHANGES SET FORTH HEREIN ARE MADE TO THE ABOVED NUMBERED CONTRACT/ORDER.

☐ THE ABOVE NUMBERED CONTRACT IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (SUCH AS CHANGES IN PAYING OFFICE, APPROPRIATION DATA, ETC.) SET FORTH HEREIN.

☐ THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF _____
IT MODIFIES THE ABOVE NUMBERED CONTRACT AS SET FORTH HEREIN.

☒ THIS MODIFICATION IS ISSUED PURSUANT TO FAR 52.253-3, Changes - Time and Materials or Labor Hours. (AUG 1987)

15. CONTRACT ADMINISTRATION DATA

A. KIND OF MOD	B. MOD ABST RECIPIENT ADP PT	C. DATE OF SIGNATURE MODIFICATION	D. CHANGE IN CONTRACT AMOUNT INCREASE (+) DECREASE (-)	E. LOSING PO/CAO ON TRANSFER	F. GAINING PO/CAO ON TRANSFER	G. SVC/AGENCY USE
C			$			

16. ENTER ANY APPLICABLE CHANGES

A. PAY CODE	B. EFFECTIVE DATE OF AWARD	C. CONTRACT (1) TYPE (2) KIND	D. TYPE CONTR	E. SURV CRIT	F. SPL CONTR PROVISIONS	G. PAYING OFC CODE	H. DATE SIGNED	I. SECURITY (1) CLAS (2) DATE OF DD 254

17. REMARKS *(Except as provided herein, all items and conditions of the contract, as heretofore changed, remain unchanged and in full force and effect.)* SUBJ: INCREASE IN CEILING AMOUNT
PROJECT OFFICER: MICHAEL F. MCGHEE, AFCEE/ESR, 8001 INNER CIRCLE, SUITE 2, BROOKS AFB, TX 78235-5328
FINANCE OFFICE: (SC1030) DFAS-COLUMBUS CENTER
ATTN: DFAS-CO/CHESAPEAKE DIVISION
P.O. BOX 182264, COLUMBUS OHIO 43218-2264

18. ☒ CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT ☐ CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE

19. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*
BY

20. NAME AND TITLE OF SIGNER *(Type or print)*

21. DATE SIGNED

22. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*
BY Gary J. Macdecy

23. NAME OF CONTRACTING OFFICER *(Type or print)*
GARY J. MACDECY

24. DATE SIGNED
93 Jul 23

AFMC FORM 702, JUL 92 REPLACES AFSC FORM 702, AUG 84 WHICH IS OBSOLETE

REFERENCE: AF Form 616 H93-SR329, DATED: 9 JUL 93; EXPIRES: 15SEP 93; $2,9M

1. Pursuant to the "Changes" Clause of Section I of the basic contract. The ceiling amount for the order is increased by $2,899,511.00 from $399,841.00 to $3,299,352.00. The performance period is changed to 94 Feb 15, as a result of this change.

2. As a result of paragraph 1 above, said order is more specifically modified as follows:

a. SECTION A Cover page - The NTE amount in Block 20 (Cover Page) is increased by $2,899,511.00 from $399,841.00 to $3,299,352.00.

b. SECTION B - Supplies and Services - Establish Special ACRN XA.

Item No	Supplies/Services	Quantity Purch Unit	Unit Price Total Item Amount	
0001	CLIN Change sec class: U			N N
	noun: SAMPLING, ANALYSIS AND DATA acrn: XA nsn: N site codes pqa: D acp: D fob: D type contract: Y			
0002	CLIN Change sec class: U			N N
	noun: SUPPORT acrn: XA nsn: N site codes pqa: D acp: D fob: D type contract: Y			
0004	CLIN Establish sec class: U	1 LO		N N
	noun: CHEMICAL ANALYSES acrn: XA nsn: N site codes pqa: D acp: D fob: D pr/mirp Data: FY7624-93-08353 type contract: Y			

c. SECTION C - Description/Specs/Work Statement - The SOW for this order entitled, "Installation Restoration Program Remedial Investigation/Feasibility Study, Stage 1, Distant Early Warning (DEW) Line Sites and Cape Lisburne AFS, AK", dated 6 JUL 93 is attached hereto as Attachment #1 to this modification.

d. SECTION F - Supplies Schedule Data is modified to include ACRN AB and Special ACRN XA.

Item No	Supplies Schedule Data	Delivery Quantity	Schedule Date
0001	CLIN Del Sch Change sec class: U acrn: XA ship to: U	1	95JANØ1
0002	CLIN Del Sch Change sec class: U acrn: XA ship to: U	1	95JANØ1
0004	CLIN Del Sch Establish sec class: U acrn: XA ship to: U	1	95JANØ1

e. SECTION G - Accounting Classification Data - is amended as set forth below:

ACRN	Acct Class data	Appropriation/Lmt Subhead/CPN Recip DODAAD Supplemental Accounting Classification	Obligation Amount
AB	ACCOUNT CHANGE UNCLASSIFIED	5733400 F74400 303 7434 434419 000007 53440 000000 674400	$2,899,511.00+
	pr/mipr data:		
XA	SPECIAL ACRN CHANGE UNCLASSIFIED		
	descriptive data: Special ACRN XA funds CLINs 0001, 0002 and 0004 and includes the following:		

ACRN AA: $ 299,855.00
AB: $ 99,986.00 (MOD 0022-01)
$2,899,511.00 (MOD 0022-02)
TOTAL $3,299,352.00

FINANCE OFFICER: Pay funds in alphabetical order.

3. This supplemental agreement constitutes full settlement of any claims of the contractor under the contract, including the clause entitled, "Changes", arising out of or in connecting with the changes effected hereto.

1993 JUL 6

STATEMENT OF WORK
INSTALLATION RESTORATION PROGRAM
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

STAGE 1

DISTANT EARLY WARNING (DEW) LINE SITES and CAPE LISBURNE AFS, AK

I. DESCRIPTION OF WORK

1.1 Scope

1.1.1 **Background.** The objective of the Air Force Installation Restoration Program (IRP) is to assess past hazardous waste disposal and spill sites on Air Force installations and develop remedial actions consistent with the National Contingency Plan (NCP) for those sites which pose a threat to human health and welfare or the environment. This objective is achieved through a Remedial Investigation Feasibility Study (RI/FS) process in which conclusions and recommendations drawn from accurate and validated data are used to structure and guide subsequent activities.

The RI/FS process includes scoping to define data requirements and objectives, a remedial investigation to characterize sites for a baseline risk assessment, and a feasibility study to define and evaluate alternative remedial actions so that a recommended action may be selected. Each of these steps of the RI/FS process can be conducted in stages that focus on particular aspects of the process.

The contractor shall accomplish the actions described in this Statement of Work (SOW) to complete the RI/FS process at the following seven Dew Line Sites and Cape Lisburne:

Barter Island AFS (BAR-M); Bullen Point AFS (POW-3); Point Lonely AFS (POW-1); Point Barrow AFS (POW-M); Point Lay AFS (LIZ-2); Wainwright AFS (LIZ-3); and Oliktok Point AFS (POW-2).

1.1.2 **Requirements for Project Activities.** The Installation Restoration Program (IRP) Handbook referenced in this Statement of Work provides requirements for laboratory and field activities and applicable formats for project documents that shall be used by the contractor. Volume 1 of the Handbook dated May 1992 is provided under separate cover. This document is referenced in this Statement of Work as the Handbook. The contractor is responsible for the thorough knowledge and understanding of the previous findings and recommendations that affect this task prior to the start of field activities. The documents involved include but are not limited to the IRP Phase I Records Search, and the IRP Phase II plans and reports addressing the Dew Line Sites and Cape Lisburne.

1.1.3 **Meetings.** A maximum of two (2) contractor personnel, including the project leader, shall attend ~~four (4)~~ eight (8) meetings at Elmendorf AFB, AK. Each meeting shall be two (2) 8-hour workdays in duration. All meetings shall be coordinated by the Restoration Team Chief (RTC).

1.1.4 **Special Notifications.** The contractor shall immediately report to the RTC, or designate, via telephone, any data or results generated during this investigation which may indicate an imminent health risk. Following this telephone notification, a written notice shall be prepared and

delivered within three (3) days. This notification shall include supporting documentation (sequence 16, para 6.1)

1.2 Project Scoping Documents

The purpose of the project scoping documents is to clearly and comprehensively define project activities prior to the initiation of field work. The contractor shall prepare and submit the following project scoping documents for this task prior to the initiation of any field activities or laboratory analyses.

1.2.1 **Engineering Network Analysis.** Provide within ten (10) days after the issuance of an order a computer generated network analysis which is a detailed task plan for the RI/FS work efforts. The network analysis (GANTT) chart shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period of the delivery order. The network analysis (GANTT) shall show both serial and parallel subtasks leading to a deliverable product or report, and shall show early and late start and completion dates with float. The network analysis (GANTT) shall be updated and submitted quarterly (sequence 3, para 6.1).

1.2.2 **Work Plan.** This section will discuss the overall approach, (including a brief summary of the Conceptual Site Model and Data Quality Objectives), major tasks, scope, timeline, and major decision points. Due to the extreme remoteness of the Dew Line Sites and Cape Lisburne, the contractor shall include a detailed plan for logistics and strategy to complete the RI/FS field activities. Follow the format specified in section 1 of the Handbook. In preparing the Work Plan, use previous reports and the information gathered during the literature search and presurvey along with experience at similar sites. Reevaluate the recommendations for Dew Line Sites and Cape Lisburne developed during previous IRP stages (sequence 4, para 6.1).

1.2.3 **Sampling and Analysis Plan (SAP).** The SAP consists of a quality assurance plan (QAPP) and a Field Sampling Plan (FSP). Prepare a SAP describing how project activities will be accomplished in the format specified in section 1 of the Handbook. Incorporate review comments and obtain RTC concurrence prior to the start of field activities (sequence 4, para 6.1).

1.2.4 **Health and Safety Plan (HSP).** Provide a written Health and Safety Plan within eight (8) weeks after the issuance of an order. The contractor shall comply with USAF, OSHA, EPA, state, and local health and safety regulations regarding the proposed work effort. Use EPA guidelines for designating the appropriate levels of protection needed at the study sites. The Health and Safety Plan shall provide no less protection than the protection contained in the manual entitled "Health and Safety Requirements for Employees Engaged in Field Activities" dated 1981 and the "Occupational Safety and Health Manual for Hazardous Waste Sites Activities" dated 1985 and 29 CFR 1910. Coordinate the Health and Safety Plan directly with applicable regulatory agencies prior to submittal to AFCEE/ESR. The contractor shall certify to AFCEE/ESR that the contractor has reviewed the coordinated Health and Safety Plan with each employee and also subcontractor's employees prior to the time each employee engages in field activities (sequence 4, para 6.1).

1.2.5 **Community Relations Plan.** The contractor shall prepare a Community Relations Plan (CRP) for the DEW Line Sites and Cape Lisburne AFS outlining the specific public communications and involvement techniques to be used in coordination with remedial site activities (sequence 4, para 6.1). Follow the guidance contained in "Community Relations in Superfund, a Handbook", office of Solid Waste and Emergency Response (OSWER) Directive

9230.0-03C (EPA/540/R-92/009, January 1992, PB92-963341), and other applicable directives. Also, use as a guidance previously accomplished CRP from other installations in Alaska. Appropriately adapt such guidance to the local situation at the DEW Line Sites and Cape Lisburne. As described in OSWER Directive 9230.0-03C, the CRP shall include, but not be limited to, a description of the sites and the community, an overview of the community involvement to date, key community concerns regarding the site and AF site activities, and suggested community relations activities. A contact list of elected officials, agency representatives, and interested groups and individuals shall be included in appropriate copies of the plan. In addition, the plan will include suggested locations for meetings and information repositories. Contractor activities to develop the CRP shall include conducting a review of site information provided by the AF.

1.3 Project Activities

The contractor shall conduct the following tasks to achieve the purposes stated herein, in compliance with approved scoping documents, the Handbook, and all applicable regulations and requirements.

1.3.1 **Community Relations.** Provide support to the base public affairs office for the tasks described below pertaining to the RI/FS Community Relations Program.

1.3.1.1 Public meetings and workshops. The contractor shall be responsible for coordinating public meetings and workshops for all DEW Line Sites and Cape Lisburne AFS. This includes producing briefing scripts, slides and any associated products such as response cards and sign-in sheets. As requested by the base Community Relations office in coordination with the RTC, research and provide materials for public queries, news media queries, and news releases. Assume a maximum of one (1) workshop/meeting (Seq. nos. 3,9).

1.3.1.2 Public notices. As required by the base Community Relations office and the RTC, the contractor shall prepare and publish public notices for the Fairbanks and local newspapers. The purpose of these notices is to inform the public of a meeting, workshop, or comment period in which they have the opportunity to be involved in the IRP Program at DEW Line Sites and Cape Lisburne AFS. Also, these notices may be utilized to inform the public of other pertinent program information such as quarterly notices of documents placed in the information repositories. The format for the notices shall be coordinated with the Community Relations office and RTC, and then submitted to the RTC for review prior to delivery to the base. Assume a maximum of two (2) notices (Seq. no. 3).

1.3.1.3 Photo Notebook. The contractor shall develop a photo notebook which focuses on the overall IRP program at DEW Line Sites and Cape Lisburne AFS. The layout of the notebook will be coordinated with the public affairs office and RTC. Assume a maximum of one (1) update (Seq. no. 9).

1.3.1.4 Mailing List. In coordination with the base Community Relations office and the RTC, prepare and update the mailing list on a quarterly basis. Assume a maximum of two (2) updates (Seq. no. 3).

1.3.1.5 Maps. Prepare presentation quality maps of the installations and their sites to use in newsletters and to distribute to the public.

1.3.1.6 Information Repository/Administrative Record. Prepare a listing of all documents required for the Information Repository and Administrative Record. Create an Informatin Repository and Administrative Record. The Reporsitory and Record will be maintained by the 11 CEOS/CEVR Community Relations Coordinator. Assume two locations for the Repository and Record, one in Anchorage and another in Elmendorf AFB, AK. Actual locations will be determined by the 11 CEOS/CEVR Community Relations Coordinator.

1.3.2 **Literature Search.** Conduct a literature search and analyze aerial photos of the DEW Line Sties to supplement existing information that has been collected. The purpose of the literature search is to complete the conceptual site model so that a numerical estimate of risk can be developed.

1.3.3 **Presurvey.** Within eight weeks of the issuance of an order, the contractor shall visit the Dew Line Sites and Cape Lisburne to ensure complete understanding of site conditions. Coordinate this visit with the RTC and the 11 CEOS project manager. The contractor shall look for evidence of contamination at each site visited (e.g., leaking drums, vegetative stress, leachate seeps). The contractor shall observe the physical settings of each site visited to formulate specific recommendations concerning boring placement, use of geophysical techniques, and other aspects of the proposed field investigation. The findings of the presurvey shall be used to prepare the Work Plan, SAP, and HSP for the RI and to prepare scoping documents for the treatability study(ies). Assume one presurvey and one reconnaisance trips.

1.3.4 **Quality Assurance/Quality Control (QA/QC).** A QA/QC program shall be conducted and documented for all work pursuant to this delivery order. Contractor and project-specific documents concerning QA/QC procedures and requirements shall be strictly followed. Data generated under the QA/QC program shall be used by the contractor for evaluating the analytical results and field records assembled for each site to identify accurate and validated data that may be used to assess risk, develop conceptual site models and evaluate alternatives.

1.3.5 **Conceptual Site Model.** Use all available RI/FS data supported by acceptable QA/QC results (as measured against QAPP requirements) and site characterization information to refine, based on newly collected data, the conceptual site model. The model shall define the nature and extent of contamination and the transport and fate of those contaminants. The minimum requirements of the model are given in section 2 of the Handbook. The complexity and detail of the site model shall be consistent with the nature of the site and site problems, and the amount of data available the conceptual site model shall be documented in the Work Plan.

1.3.6 **ARARs Evaluation.** The contractor shall identify all Applicable or Relevant and Appropriate Requirements (ARAR). These ARARs will be documented in the Work Plan.

1.3.7 **Data Collection, Sampling, and Analysis Procedures.** The contractor shall conduct field activities, sampling, laboratory analysis, and data quality assessment. Section 2 of the Handbook is recommended for the contractor to follow. The contractor shall conduct all activities in accordance with the WP and the SAP approved by the COR. The COR shall be notified in writing of any planned deviation from the activities specified in these documents. COR approval of deviations is required prior to performance.

The field investigation (including all drilling and sampling operations) shall be supervised by a registered geologist, hydrogeologist, or professional engineer. If required by the state, the on-site field supervisor shall be

certified by the state to install test wells. A detailed log of field conditions, materials penetrated during drilling, well completion, and sampling conditions, as described in Section 2 of the Handbook, shall be maintained and made available for Government inspection upon request. Decisions on well and boring locations, well depths, screened intervals, and all details of the field investigation shall be made by the COR, and the contractor's field or project supervisor.

1.3.8 **Regulatory Requirements and Permits.** All well drilling, development , sampling, laboratory analysis, and other activities pursuant to this effort shall be conducted in strict accordance with all applicable federal and state laws, ordinances, rules and regulations, and all authorities with jurisdiction over such activities. The contractor shall complete permits, applications, other documents, and proficiency tests required by the regulatory agencies. The contractor shall file documents with appropriate agencies and pay all applicable permit and filing fees. The contractor shall identify locations requiring permits to Radar Station Manager. The contractor shall include all correspondence in appendices to the technical reports in accordance with Section 4 of the Handbook.

All laboratory analyses shall conform to all applicable federal, state, and local regulatory agency requirements. If the requirements specify that certification is necessary to conduct one or more specific analyses, the contractor shall furnish documentation showing laboratory certification with the first set of analytical data supplied to AFCEE/ESR and the COR.

The contractor shall containerize and sample materials suspected to be hazardous in accordance with applicable requirements, Guidance from the Handbook, and the approved Plans. The contractor shall transport these containerized materials to a location within the installation boundary designated by the Radar Station Manager at a frequency specified by the Station Manager. The contractor shall handle, store, and/or dispose of potentially hazardous materials. The contractor shall transport and empty containerized materials determined not to be hazardous to locations within the installation boundary identified by the Station Manager.

1.3.9 **Remedial Investigation (RI).** The contractor shall conduct a RI to characterize environmental conditions; define the concentration, nature, and extent of contamination; and quantitatively estimate the risk to human health and the environment and study the area through the collection of geologic and hydrologic data, environmental samples, the laboratory analyses of those samples for potential contaminants, the evaluation of the analytical results and field measurements with respect to quality control data, and the interpretation and analysis of accurate and precise data. The purpose of data collection, sample collection, and laboratory analysis is to determine whether any contaminants generated from installation activities have entered the environment. The field investigation is used to determine the source of any identified contaminants, the magnitude of contamination relative to Applicable or Relevant and Appropriate Requirements (ARARs), and any naturally occurring or background concentrations for specific compounds. The RI shall comply with the specifications, procedures, and methodologies presented in the project-specific SAP. The COR must be notified in writing prior to any modification of or deviation from any activity described in these documents.

1.3.9.1 **Soil Borehole Drilling and Sampling and Well Installation and Sampling.** The contractor shall drill and collect samples from boreholes as specified in the SAP. The contractor shall evaluate the need to install, sample, and develop monitoring or extraction wells.

1.3.9.1.1 **Lithologic Samples.** The contractor shall describe core samples at least every five (5) feet of drilling or at each change in lithology, whichever is less, to indicate significant changes in lithology of characteristic properties that relate to the strata penetrated. Any deviations shall be coordinated with the COR. Guidance for standard identification practices are found in the Handbook. The contractor shall include in the field logbook observations made by the driller and rig geologist during drilling such as depth to water, penetration rate, drill rig behavior, and other observations that might be indicative of changes in formation characteristics. The contractor shall record depth to permafrost in all the soil borings and shall not proceed beyond five (5) feet into the permafrost layer.

1.3.9.1.2 **Drill Cuttings and Drilling Fluids.** The contractor shall containerize all drill cuttings and drilling fluids. All drill cuttings and drilling fluids shall be managed and disposed of in accordance with the project SAP. (Note: The contractor shall be responsible for providing all necessary containers.) The contractor shall be responsible for the logistics of the ultimate disposal of all drill fluids or drill cuttings deemed hazardous in accordance with current EPA off-site disposal policy and state and/or local hazardous waste disposal laws. The contrator shall coordinate with the Station Manager for on-site placement and disposal of all drill cuttings, fluids, purge fluid, and excavated material. If on-site disposal is excluded, all hazardous waste shall be transported by a permitted hazardous waste transporter to a licensed Resource Conservation and Recovery Act (RCRA) approved facility and be accompanied by a Uniform Hazardous Waste Manifest. The contractor shall provide a final, completed copy of the hazardous waste manifest to the 11 CEOS/CEVR. The Radar Stations' hazardous waste managers will sign all hazardous waste manifest documents.

1.3.9.1.3 **Well/Boring Precautions.** The contractor shall mark the field locations of all borings during the planning/mobilization phase of the field investigation. The contractor shall consult with base personnel to minimize the disruption of base activities, to properly position wells with respect to site locations, and to avoid penetrating underground utilities. The contractor shall obtain all permits prior to commencement of digging and drilling operations. The contractor shall utilize a registered land surveyor in determining the elevations and locations of all off-base background study borings. All borings and wells from which samples are taken shall be surveyed by the contractor for vertical and horizontal control. The contractor shall record the positions on project and site specific maps. Bench marks used must have been previously established from and be traceable to a U. S. Coast and Geodetic Survey (USCGS) or U. S. Geological Survey (USGS) survey marker. Clearly identify all bench mark locations on the base map.

1.3.9.1.4 **Water-Level Measurements in Boreholes.** The contractor shall measure water levels in all boreholes after the water level has stabilized. Include this information and the date of measurement in the boring logs. Also, record soil moisture conditions (moist, wet, saturated, etc.) in the boring log.

1.3.9.1.5 **Air Monitoring During Drilling.** The contractor shall monitor the ambient air in the breathing zone above the borehole during all drilling with an appropriate organic vapor analyzer to identify potentially hazardous and/or toxic vapors. Include air monitoring results in borehole logs.

1.3.9.1.6 **Subsurface Soil Sampling.** The contractor shall collect soil samples from borings as specified in the SAP. The SAP specifies the analytical methods, the parameters for analysis, and the estimated number of analyses for soil samples.

1.3.9.1.7 **Well Construction Requirements.** The contractor shall coordinate with the COR to determine well completion requirements (flush or projected above ground surface). All wells shall be secured as soon as possible after drilling. The contractor shall provide corrosion resistant locks for both flush and above-ground well assemblies. The locks shall be compatible with existing wells. The contractor shall turn the lock keys over to 11 CEOS/CEVR POC following completion of the field effort. The contractor shall coordinate with the 11 CEOS/CEVR POC, the RTC, and the COR the selection of exact well and screen placement, gravel pack design, and screen slot size.

1.3.9.1.8 **Well Logs.** For each well, the contractor shall prepare a well completion log and schematic diagram showing well construction details. Lithologic descriptions, well elevation survey data, and other information included in the well logs shall conform to the specifications of the SAP.

1.3.9.1.9 **Well Development.** The contrator shall develop each well as soon as possible. Guidance for well development procedures are found in the the Handbook. The contractor shall measure the rate of water production, pH, specific conductance, and water temperature during well development.

1.3.9.1.10 **Well Placement.** The contractor shall avoid installing wells in depressions or areas subject to frequent flooding and/or standing water. If wells must be installed in such areas, the contractor shall design the wells so standing water does not leak into the top of the casing or cascade down the annular space.

1.3.9.1.11 **Well and Borehole Clean-up.** The contractor shall clean the area following the completion of each well and borehole. The contractor shall return all sites to the original condition of the site.

1.3.9.1.12 **Groundwater and Surface Water Sampling.** The contractor shall collect groundwater and Surface Water samples from newly developed well and existing wells and from surface water bodies. The SAP shall specify the analytical methods, the parameters for analysis, and the estimated number of analyses for groundwater and surface water samples.

1.3.9.1.13 **Composite Sampling.** The contractor shall collect and analyze drill cuttings, fluids, purge fluids, and excavated material. The SAP shall specify the analytical methods, the parameters for analysis, and the estimated number of analyses for composite samples.

1.3.9.2 **Geophysical Surveys.** The contractor shall evaluate whether geophysical surveys are needed (e.g., to determine boundaries of landfills, to locate underground debris, utilities and storage tanks). Where geophysical surveys are appropriate, the contractor shall select a geophysical survey technique or techniques [such as ground penetrating radar (GPR), magnetometer or electromagnetic surveys (EM)] that will best meet the desired application. The technique(s) used shall be approved by the RTC prior to use. Approximate number of surveying days is included in Annex A which is to be used for costing purposes only. Appropriate grid systems shall be established and the contractor shall use the results of this survey to prepare a contour map of the results. Provide this map as an attachment to the first R&D Status Report

submitted after the completion of the geophysical surveys. The contractor shall perform the geophysical surveys before drilling and use the results in selecting the location of soil borings, wells, test pits, if necessary.

1.3.9.3 **Permeability Testing.** The contractor shall determine the need for a permeability test at Cape Lisburne AFS, to provide additional data on the hydrogeologic characteristics of the water table aquifer. The SAP shall specify the method to be used for the permeability test.

1.3.9.4 **Water Level Measurement.** The contractor shall evaluate the need for conducting a complete round of water level measurements in all existing and new wells at Cape Lisburne AFS at the beginning of field work and during the field sampling effort. Data gathered shall be used for interpreting groundwater flow directions and groundwater gradient.

1.3.9.5 **Soil Gas Surveys.** The contractor shall evaluate the need for soil gas surveys and Hydropunch (e.g., to select soil boring locations). If soil gas surveys and hydropunch are included as part of the approved Work Plan and FSP, the contractor shall establish appropriate grid systems. The contractor shall prepare a posting map of soil gas values relative to their location on the grid used. Provide this map as an attachment to the first R&D Status Report submitted after completion of the soil gas survey (sequence 3, para 6.1). Approximate number of surveying days are included in Annex A which is to be used for costing purposes only.

1.3.9.6 **Groundwater Field Screening.** The contractor shall perform groundwater field screening. The SAP shall specify the method, location, and type of groundwater field screening.

1.3.9.7 **Baseline Risk Assessment.** The contractor shall use data supported by acceptable QA/QC results (as measured against QAPP requirements) and the conceptual site model to numerically estimate the risk posed by site contaminants to human health and the environment. The contractor shall identify and list all ARARs for those contaminants detected in environmental samples at the site. The contractor shall provide all ARARs evaluations as an attachment to the Technical Report. Provide the results of the baseline risk assessment in the Technical Report using the formats in Section 4 of the Handbook as a guidance.

The contractor shall identify those sites posing minimal or no threat to human health, welfare, or the environment and for which no further action is appropriate.

The contractor shall use the results of the risk assessment in establishing remedial action objectives and developing remedial alternatives in the Feasibility Study.

1.3.9.8 **Defense Priority Model Scores.** The contractor shall use the Defense Priority Model to score the sites. The score shall be included as an appendix to the RI/FS Technical Report.

1.3.9.9 **Fate and Transport.** The contractor shall perform fate and transport modeling for contaminants of interest to include the projection of future contaminant concentrations within the boundaries of the site. This will be done in conjunction with the RI/FS report.

1.3.13 **Weekly Field Activity Report**

The contractor shall transmit a Weekly field activity report. The AFCEE RTC shall develop the format for the report.

1.4 Project Deliverables

Deliver the following documents in compliance with the requirements of item VI, the formats required in section 1 and 4 of the Handbook, and the specifications noted below. Draft reports are considered "drafts" only because they have not been reviewed and approved by the Air Force. In all other respects, "drafts" shall be complete, in the proper format, fully illustrated, and free of grammatical and typographical errors.

1.4.1 **Scoping Documents.**

a. Engineering Network Analysis (GANTT) (para 1.2.1). Provide within ten (10) days after the issuance of an order. Update and submit quarterly (sequence 3, para 6.1).

b. Work Plan (para 1.2.2). Use the format in section 1 of the Handbook (sequence 4, para 6.1).

c. Sampling and Analysis Plan (1.2.3). Use the format in section 1 of the Handbook (sequence 4, para 6.1).

d. Health and Safety Plan (para 1.2.4). Provide within six (6) weeks after the issuance of an order (sequence 4, para 6.1).

e. Community Relations Plan (para 1.2.5). Provide within eight (8) weeks after issuance of an order (sequence 4, para 6.1).

1.4.2 **Special Notification.** Provide written notification of imminent health hazards and supporting documentation within three (3) days of telephone notification (sequence 16, para 6.1).

1.4.3 **Presentation Materials.** The contractor shall prepare and present up to two (2) presentation packages at meetings coordinated by the Air Force (sequence 9, para 6.1). Attendance of these meetings is included in paragraph 1.1.3 of this SOW. As part of the presentation materials, the contractor shall provide paper copies of all slides and overheads.

1.4.4 **Meeting Summaries** (para 1.1.3). Provide no later than five (5) days after conclusion of each meeting (sequence 18, para 6.1).

1.4.5 **Newsletter.** Prepare and submit a quarterly newsletter which presents the status of the entire base IRP Program. This will include preparing an outline resulting from input by all contractors involved in the program. The outline must be approved by the base and RTC prior to submittal of the newsletter. The final product will be printed and distributed as agreed to by the RTC. Assume a maximum of two (2) newsletters (Sequence no. 3).

1.3.10 **Feasibility Study (FS).** The contractor shall perform a FS concurrently with the RI. As much of the FS as possible shall be performed early in the RI/FS process and refined as additional RI data are obtained. The contractor shall use the information from the RI and the baseline risk assessment to develop and evaluate remedial action alternatives for each site where a threat to human health or the environment exists. The contractor shall follow the procedures specified in USEPA OSWER Directive 9355.3-01, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA." The contractor shall employ streamlining methods wherever possible and develop and evaluate the minimum number of alternatives needed to provide a range of promising treatment and containment actions. The contractor shall eliminate impracticable alternatives from further consideration early in the FS process. The scope and level of detail shall be consistent with the nature and complexity of site problems.

1.3.10.1 **Develop and Screen Alternatives.** The contractor shall establish remedial action objectives and remediation goals for protecting human health and the environment. These objectives and goals shall be determined based on identified ARARs and acceptable exposure levels as defined in the baseline risk assessment and refined throughout the RI/FS process. Identify general response actions and applicable technologies based on site and contaminant conditions, and combine technologies to formulate distinct alternatives. The contractor shall develop alternatives which eliminate, control, and /or reduce risk to human health or the environment to acceptable levels for each pathway. Where a wide variety of promising alternatives exists, the contractor shall screen the alternatives based on effectiveness, implementability, and cost. The contractor shall detail the development and screening of the alternatives process and identify the alternatives selected for detailed analysis in the Informal Technical Information Report (ITIR).

1.3.10.2 **Detailed Screening of Alternatives.** The contractor shall conduct a detailed analysis on each alternative selected and identified in the above step and approved by the COR. Using the methodology in OSWER Directive 9355.3-01, the contractor shall evaluate each alternative against the nine criteria. In addition to the individual assessment, the contractor shall perform a comparative analysis to determine the relative performance of alternatives. The contractor shall focus the analysis on sub-factors and criteria most pertinent to each site and the scope and complexity of the proposed action. Provide a summary of the Detailed Analysis of Alternatives in the R&D report submitted following task completion. Include summary tables of the individual and comparative analyses that will be used in the Technical Report.

1.3.11 **Desicion Documents.** The contractor shall prepare and submit Decision Documents (DD) following the Handbook Section 4.4 as guidance. The purpose of the DD is to support a remedial action alternative or a no further action alternative.

1.3.12 **Site Specific Requirements.** The contractor shall perform the requirements listed in this SOW in conformance with the guidance of the Handbook, requirements of the approved WP, and the SAP. Annex A specifies the proposed values for field and laboratory activities to be conducted, specifications for field activities, information for sediment and soil samples, analytical methods, parameters for analysis, estimated number of analyses for water/sediment/soil samples, required analytical methods, estimated number of analyses for all core samples, estimated number soil gas analyses for each parameter, and field QC sample requirements for soil and water samples for costing purposes only.

1.4.6 **Fact Sheets.** As required by the base IRP Program, prepare and submit fact sheets which facilitate the public's understanding of the IRP Program. These sheets should include key community concerns regarding sites as specified by the base. Use the format agreed to by the base and RTC. Print and distribute the fact sheets as agreed to by the RTC. Assume a maximum of two (2) fact sheets (Sequence no. 3).

1.4.7 **Public Notices.** In accordance with paragraph 1.3.6.2, prepare and submit public notices for the Fairbanks and local newspapers. Use the format agreed to by the base and RTC (Sequence no. 3).

1.4.8 **Photo Notebook.** In accordance with paragraph 1.3.6.3, develop a photo notebbok which focuses on the overall base IRP Program. Prior to implementation, submit a conceptual layout of the notebook for review by the base and RTC (Sequence no. 9).

1.4.9 **Mailing List.** In accordance with the base Community Relations coordinator and paragraph 1.3.6.4, update the existing mailing list on a quarterly basis (Sequence no. 3).

1.4.10 **Maps.** In accordance with the base community Relations coordinator and paragraph 1.3.6.5, prepare presentation quality maps.

1.4.11 **Information Repository/Administrative Records.** Submit the Information Repository and Administrative Records in accordance with Air Force Guidance and in concurrance with the COR and the base Community Relations Coordinator. (sequence no. 4, para 6.1)

1.4.12 **Data Management.** The contractor shall meet the data deliverable requirements of the Installation Restoration Program Information Management System (IRPIMS). The contractor shall be responsible for recording field and laboratory data into a computerized format as required by the most current version of the IRPIMS Data Loading Handbook (mailed under separate cover). In order to perform this task, the contractor shall use the IRPIMS Quality Control Tool (QC Tool) and PC software utility (mailed under separate cover with software manual) to quality check ASCII data files and to check all data files for compliance with requirements in the IRPIMS Data Loading Handbook. Upon request, the IRPIMS Contractor Data Loading Tool (CDLT) is available. This PC software is designed to assist the contractor in preparing the various ASCII data files.

Individual IRPIMS data files (e.g., analytical results, groundwater level data, etc.), including resubmissions, shall be delivered with a transmittal letter by the contractor to the Air Force Center for Environmental Excellence (AFCEE) in sequence according to a controlled time schedule as identified in the current version of the IRPIMS Data Loading Handbook. The contractor shall include a copy of the Quality Control Tool error report, i.e., output from the QC tool, for each IRPIMS file submission. The error report shall be submitted both in hard copy and as an electronic file on the submission disks with the filename of the error report identified in the transmittal letter (SEQUENCE No. 3).

All contractor data deliverables shall be sent to:

AFCEE/ESD BLDG 624W
ENVIRONMENTAL RESTORATION DIVISION
ATTN: IRPIMS Data Management
Brooks AFB, TX 78235-5000

In addition, the contractor shall provide a copy of the transmittal letter to the Air Force contracting office responsible for the contract, HSC/PKV (Brooks AFB, TX, 78235-5000) for AFCEE contracts. This letter shall identify the files included or otherwise omitted (with an appropriate explanation), the Government contract and delivery order number, and the Air Force POC that is responsible for monitoring the Government contract.

The contractor shall be responsible for the accuracy and completeness of all data submitted. All data entered into the IRPIMS data files and submitted by the contractor shall correspond exactly with the data contained in the original laboratory reports and other documents associated with sampling and laboratory contractual tasks.

Each file delivered by the contractor will be electronically evaluated by AFCEE/ESD for format compliance and data integrity in order to verify acceptance. All files delivered by the contractor are required to be error-free and in compliance with the IRPIMS Data Loading Handbook. Any errors identified by AFCEE/ESD in the submission shall be corrected by the contractor.

1.4.13 **Decision Document.** The contractor shall prepare and submit DD as described in Section 1.3.11 (SEQUENCE No. 4, para 6.1).

1.4.14 **Technical Reports.** Summarize the findings of the tasks pursuant to the SOW, integrate them with the results of all pertinent previous studies, and formulate conclusions and recommendations for future efforts in Technical Reports.

1.4.14.1. **Remedial Investigation (RI) Report** (para 1.3.3). Provide a RI Report following the format in section 4 of the Handbook (sequence 4, para 6.1).

1.4.14.2. **Risk Assessment (RA) Report** (para 1.3.3.7). Provide a RA Report following the format in section 4 of the Handbook (sequence 4, para 6.1).

1.4.14.3 **Feasibility Study Report** (para 1.3.4). Provide a Feadsibility Study Report foillowing the format in section 4.0 of the Handbook. (sequence 4, para 6.1).

1.4.14.4 **RI/FS Technical Report** (para 1.3.3). Provide a RI/FS Technical Report following the format in section 4.0 of the Handbook. The RI/FS Technical Report shall integrate the RI, RA, and FS reports. Provide two microfiche copies with the final RI/FS Technical Report (sequence 4, para 6.1).

1.4.15 **Basewide Comprehensive IRP Document.** The contractor shall develop a comprehensive document that summarizes both the historic and projected IRP activities. This document shall be used as managment tool to efficiently guide future IRP activities at the DEW Line Sites and Cape Lisburne AFS. The contractor shall follow the outline developed by the AFCEE RTC. Assume two (2) updates (sequence no. 4)

1.4.16 **Analytical Data ITIR.** Prepare and submit the following ITIR's:

a. <u>Development & Screening of Alternatives</u> (para. 1.3.10.1). Submit the results of the development and screening of alternatives in an ITIR prepared in compliance with section 3 of the Handbook (sequence 3, para 6.1)

b. Detailed Screening of Alternatives (para 1.3.10.2).

c. DPM Scoring (para 1.3.9.8). Provide scores, a summary of procedures and assumptions, and Automated DPM output tables for all sites scored with DPM (sequence 3, para 6.1).

d. Mylar® Map. Construct Radar Stations' maps of Mylar using guidelines in section 3 of the Handbook. The Maps shall contain all sites and related water and sediment sampling locations (sequence no.3, para. 6.1). The contractor shall create and update digitized map files. Use the digitized data file to produce the Mylar map. The contractor shall print the revision date on the Mylar maps and the date shall be encoded in the digitized data file. Provide a copy of the revised digitized data file to AFCEE-ESO/ER (sequence 1, para. 6.2).

e. Geophysical Survey Contour Map (para 1.3.9.2). Provide a contour map showing geophysical survey results. Interpret the significance of the data in the R&D Status Report (sequence 3, para 6.1).

f. Soil Gas Map (para 1.3.9.5). Provide site maps showing soil gas data superimposed on the sampling locations and incorporate soil gas data generated by the 11 CEOS/CEOR. Interpret the significance of the data in the R&D Status Report (sequence 3, para 6.1).

g. Site Characterization Summary Informal Technical Information Report (SCS ITIR). The contractor shall prepare the report to include the following components:

1. Source identification and contaminant delineation.

2. Identification and ranking of appropriate treatability studies for the listed sites.

3. Data and interpretations integrating the findings of the current study and all previous RI efforts at the sites.

4. Current isoconcentration plots of contaminants detected at each site, lithologic logs of each boring showing contaminants detected and relationship to other borings in the site, and cross-sections of the site showing contaminant distribution.

5. The contents and objectives of a Site Characterization Summary Informal Technical Information Report (ITIR) are specified in the Handbook. The Site Characterization Summary ITIR shall serve as a core document for the RI report. The contractor shall submit an annotated outline of each section of the ITIR for approval by the TPM prior to preparation of the report itself. The contractor shall prepare the report as specified in the accepted annotated outline. The contractor shall submit newly revised portions of the working draft ITIR in order to make available current site characterization data. A prime objective shall be to minimize the volume of comments on the working draft and final submittals by incorporating comments into the report in an on-going manner. The final summary shall contain all sites included in this effort (Sequence No. 4).

h. Weekly Field Activities Report (para 1.3.13). Transmit a Weekly field activities report during field activities pursuant to a format developed by the AFCEE RTC. (Seqence 4, para 6.1)

II. Site Location and Dates

Dew Line Sites and Cape Lisburne, date to be established.

III. Base Support The base will:

3.1 Provide the contractor with existing engineering plans, drawings, diagrams, aerial photographs, digitized map files, etc., to facilitate evaluation of IRP sites under investigation.

3.2 Arrange for personnel identification badges, vehicles passes, and/or entry permits with the contention the contractor will provide necessary information to the base personnel no less than four weeks before needed.

3.3 Provide the contractor with all previously approved documents which provide information on all IRP efforts conducted at Dew Line Sites and Cape Lisburne and will aid in the determination of the amount of field work and analyses which need to be conducted.

IV. Government Furnished Property

See above in section III.

V. Government Points of Contact:

5.1 MAJCOM Coordinator

Major James R. Williams III
AFCEE/ESRU
8001 Inner Circle DR STE 2
Brooks AFB TX 78235-5328
(210) 536-5243
DSN 240-5243
(210) 536-9026 FAX
DSN 240-9026

5.2 Restoration Team Chief

Mr. Michael F. McGhee
AFCEE/ESRU
8001 Inner Circle DR STE 2
Brooks AFB TX 78235-5328
(210) 536-5293
DSN 240-5293
(210) 536-9026 FAX
DSN 240-9026

5.3 Base Point of Contact (POC)

Mr. Jim Wolfe
11 CEOS/CEVR
21885 Second Street
Elmendorf AFB AK 99506-4420
(907) 552-4532
DSN 317-552-4532
(907) 552-1533 FAX
DSN 317-552-1533

5.4 Public Affairs Coordinator

Ms. Wende Wolf
11 CEOS/DEVR
21885 Second Street
Elmendorf AFB AK 99506-4420
(907) 552-4532
DSN 317-552-4532
(907) 552-1533 FAX
DSN 317-552-1533

VI. Deliverables

6.1 Attachment 1 of the Basic Contract

Sequence numbers 1 and 5 listed in attachment 1 to the basic contract apply to all orders. Guidance for preparing R&D Status Reports (sequence 1) is contained in the Handbook, section 4. In addition, the sequence numbers and dates listed below are applicable to this order:

Sequence No.	Para No.	Block 10 (freq.)	Block 11 (as of date)	Block 12 (date of 1st. submit.)	Block 13 (date of final report)	Block 14 (no. of copies)
3 (NETWORK ANALYSIS)	I.1.4.1a	QTRLY	12APR93	30APR93	a	4
4 (WORK PLAN)	I.1.4.1b	ONE/R	12APR93	30MAY93	30JULY93	b
4 (SAP)	I.1.1.4c	ONE/R	12APR93	30MAY93	30JULY93	b
4 (HSP)	I.1.4.1d	OTIME	12APR93	30MAY93	-	10
4 (COMM. REL. PLAN)	I.1.1.4e	ONE/R	12APR93	30MAY93	31DEC93	b
16 (SPECIAL NOTIF.)	I.1.4.2	OTIME	c	c	-	3
9 (PRESNT. MATERIAL)	I.1.4.3	ASREQ	d	d	-	10
18 (MTG. RPTS)	I.1.4.4	ONE/R	e	e	-	5
3 (NEWSLETTER)	I.1.4.5	QTRLY	12APR93	30NOV93	a	f
3 (FACT SHEETS)	I.1.4.6	ASREQ	12APR93	15JUL93	g	-
3 (PUBLIC NOTICES)	I.1.4.7	ASREQ	12APR93	15JUL93	g	h
9 (PHOTO NOTEBOOK)	I.1.4.8	OTIME	12APR93	15JUL93	-	1
3 (MAILING LIST)	I.1.4.9	QTRLY	12APR93	15JUL93	a	-
3 (MAPS)	I.1.4.10	OTIME	12APR93	15JUL93	-	2
4 INFO REPOS	I.1.4.11	OTIME	31JUL93	-	31JAN94	2
3 (IRPMS Data ITIR) (Data Management) BCHCON BCHLDI BCHSLI BCHWCI BCHSAMP BCHCALC BCHLTD BCHTEST BCHRES BCHGWD	I.1.4.12	OTIME	31JUL93	31JAN94	31MAR94	2
4 DECISION DOC	I.1.4.13	ONE/R	i	i	31OCT94	b
4 RI REPORT	I.1.4.14.1	ONE/R	15SEP93	15FEB94	30APR94	b
4 RISK ASSESSMENT	I.1.4.14.2	ONE/R	1OCT93	16MAY94	15JUL94	b
4 FEASIB. STUDY	I.1.4.14.3	ONE/R	30SEPT93	30AUG94	-	b
4 RI/FS Report	I.1.4.14.4	ONE/R	30SEP93	30SEP94	1JAN95	b
4 IRP DOCUMENT	I.14.15	ONE/R	31JUL93	31OCT93	10DEC93	b
3 SCREENING ALTER ITIR	I.1.4.16a	OTIME	30SEP93	30DEC93	-	10
3 DETAL ANALYSIS ALTER ITIR	I..1.4.16.b	OTIME	28 FEB94	30MAR94	-	10
1 DPM SCORING	I.1.4.16c	OTIME	30SEP93	j	j	3
3 MYLAR MAP	I.1.4.16d	OTIME	k	k	-	5
3 GEOPHYS CONT	I.1.4.16.e	OTIME	l	l	-	10
3 SOIL GAS MAP	I.1.4.16f	OTIME	l	l	-	10
4 SCS ITIR	I.1.4.16g	ONE/R	15SEP93	30NOV93	15FEB94	5
4 WEEKLY ACT REP	I.1.4.16h	WEEKLY	13AUG93	13AUG93	-	1

6.2 Reserved.

6.3 Notes

a. Submit Quarterly Thereafter.

b. One (1) first draft plan (8 copies), one (1) second draft plan (8 copies), and one (1) final plan (10 copies) are required. Incorporate Air Force comments into the second draft and final plan as specified by the RTC. Supply AFCEE/ESR with an advance copy of the first draft, second draft, and

final plan for acceptance prior to distribution. Distribute the remaining copies of each plan as specified by the RTC. The second and final reports shall be submitted within three (3) weeks of receipt of comments from the RTC.

c. Primary and Secondary Documents. One first draft report (25 copies), one second draft report (25 copies), and one final report (35 bound copies plus the original camera-ready copy and a 3.5 inch disk formatted in WordPerfect 5.1 containing the document file) are required. Incorporate Air Force comments into the second draft and final reports as specified by the RTC. Supply the RTC with an advance copy of the first draft, second draft, and final reports for acceptance prior to distribution. Distribute the remaining copies as specified by the RTC .

d. Provide written notice with supporting documentation within three (3) days of telephone notification and at the direction of the RTC. Assume a maximum of 100 pages.

e. Provide within one (1) week of task/meeting completion.

f. Provide 500 copies of the Newsletters and distribute as agreed to by the RTC. This includes mailing the final product to on-base personnel and addresses on the existing mailing list.

g. Provide draft and final deliverables. Provide two advance copies to the AFCEE RTC and to the 11 CEOS Community Relations Coordinator for acceptance prior to preparation of the final deliverables.

h. Provide poster-size map.

i. Submit with the second draft Technical Report

j. Submit with the Technical Report

k. Provide with the Technical Report

l. Provide within four (4) weeks of task completion

ANNEX-A, TABLE A-1
SUMMARY OF ESTIMATED FIELD WORK
FOR COST-ESTIMATING PURPOSES ONLY

Estimated Number of Monitor Wells to be Constructed	5
Estimated Footage of Monitor Wells	100
Estimated Number of Water Samples for Lab Analysis	339
Estimated Number of Surface and Subsurface Soil Sampling	1350
Estimated Number of Soil Samples from Augerings	1350
Estimated Number of Containerized Waste Samples	40
Estimated Number of Disposal Water Samples	5
Estimated Number of Sludge Samples	5
Estimated Number of Wipe Samples	3
Estimated Number of Geophysical Surveys	3
Estimated Total Number of Survey Days	20
Estimated Number of Soil Gas Survey Days	20

Annex-A, Table A-2
Analytical METHODS AND ESTIMATED TOTAL NUMBER OF SOIL ANALYSES
(for Cost Estimating Purposes Only)

	analytical method (a)	Reporting Units	Number of Analyses	Trip Blanks	Amb. Cond Blanks	Equipment Blanks	Dup/Rep	Second Column(b)	Total Analyses
Petroleum Hydrocarbon (Gasoline Range Organics)	SW3050/SW8015 (mod)	mg/Kg	400	20	20	20	40	-	500
Petroleum Hydrocarbon (Diesel Range Organics)	SW3050/SW8015 (mod)	mg/Kg	400	-	-	20	40	-	460
ICP Screen (23 Metals, exclude Boron and Silica)	SW3050/SW6010	mg/Kg	100	-	-	6	10	-	116
Arsenic	SW3050/SW7060	mg/Kg	-	-	-	-	-	-	0
Lead	SW3050/SW7421	mg/Kg	-	-	-	-	-	-	0
Mercury	SW7471	mg/Kg	-	-	-	-	-	-	0
Selenium	SW3050/SW7740	mg/Kg	-	-	-	-	-	-	0
Organochlorine Pesticides and PCBs	SW3540/SW8080	mg/Kg	500	-	-	20	50	250	820
Volatile Organic Compounds	SW8240	mg/Kg	72	8	8	4	7	36	135
Semivolatile Organic Compounds	SW3540/SW8270	mg/Kg	100	-	-	10	10	-	120
Polynuclear Aromatic Hydrocarbons	SW3540/SW8310	mg/Kg	-	-	-	-	-	-	0
Volatile Organic Compounds	SW5030/SW8010	mg/kg	-	-	-	-	-	-	0
Volatile Organic Compounds	SW5030/SW8020	mg/kg	-	-	-	-	-	-	0
Volatile Organic Compounds	SW5030/SW8260	mg/kg	-	-	-	-	-	-	0
Total Organic Compounds	SW5030/SW9060	mg/kg	88	-	-	-	4	8	100
Cyanide, Total	SW9010	mg/Kg	-	-	-	-	-	-	0
Toxic Characteristic Leaching Procedures (TCLP)	SW1311	mg/L	40	-	-	-	-	-	40
Soil Moisture Content	ASTM D2216	Percent (%)	650	-	-	-	-	-	650
Soil PH	SW9045		650	-	-	-	-	-	650
Sulfer Cleanup/Florisil Cleanup	SW3660/SW3620		-	-	-	-	-	-	0
Gel-Permeation Cleanup	SW3640		-	-	-	-	-	-	0
Total Analyses			**3000**	**28**	**28**	**80**	**161**	**294**	**3591**

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'age 19 of 21

Annex A, TABLE A-3
Analytical Methods and Estimated Total Number of Water Analyses
(For Cost Estimating Purposes Only)

	analytical method (a)	Reporting Units	Number of Analyses	Trip Blanks	Amb. Cond Blanks	Equipment Blanks	Dup/Rep	Second Column(b)	Total Analyses
Alkalinity-Carbonate, Bicarbonate, & Hydroxide (field test)	A403	mg/L	10	-	-	-	1	-	11
Specific Conductance (field test)	E120.1	mg/L	10	-	-	-	1	-	11
pH (field test)	E150.1	µmhos/cm	15	-	-	-	2	-	17
Residue, Filterable (Total Dissoloved Solids)	E160.1	mg/L	80	-	-	3	8	-	91
Non-Filterable Residue (Total Suspended Solids)	E160.2	mg/L	80	-	-	-	8		88
Temperature (field test)	E170.1	deg C	200	-	-	-	-	-	200
Common Anions (Chloride, Fluoride, Sulfate)	E325.1	mg/L	-	-	-	-	-	-	0
Nitrogen, Nitrate+nitrite	E353.2	mg/L	-	-	-	-	-	-	0
ICP Screen (23 metals, exclude Boron and Silica)	SW3005/SW6010	mg/L	100	-	-	7	25	-	132
Arsenic	SW7060	mg/L	-	-	-	-	-	-	0
Lead	SW3005/SW7421	mg/L	100	-	-	2	10	-	112
Mercury	SW7470	mg/L	-	-	-	-	-	-	0
Selenium	SW7740	mg/L	-	-	-	-	-	-	0
Petroleum Hydrocarbons (Gasoline Range Organics)	SW5030/SW8015 (mod.)	mg/L	150	10	10	5	35	-	210
Petroleum Hydrocarbons (Diesel Range Organics)	SW5030/SW8015 (mod.)	mg/L	150	-	-	5	35	-	190
Purgeable Halocarbons	SW5030/SW8010	µg/L	150	8	8	4	25	75	270
Nonhalogenated Volatile Organics	SW5030/SW8015	µg/L	150	8	8	4	25	125	320
Purgeable Aromatics	SW5030/SW8020	µg/L	150	8	8	4	25	125	320
Organochlorine Pesticides and PCBs	SW3510/SW8080	µg/L	166	-	-	3	17	83	269
Semivolatile Organic Compounds	SW3510/SW8270	µg/L	150	-	-	4	15	-	169
Polynuclear Aromatic Hydrocarbons	SW3510/SW8310	µg/L	150	-	-	4	15	-	169
Volatile Organic Compounds	SW3510/SW8260	µg/L	-	-	-	-	-	-	0
Volatile Organic Compounds	SW3510/SW8240	µg/L	150	8	8	4	25	125	320
Total Organic Compounds	SW9060	µg/L	80	-	-	4	10		94
Total Petroleum Hydrocarbon (WTPH-HCID)	E418.1	mg/L	-	-	-	-	-	-	0
Sulfur Cleanup/Florisil Column Cleanup	SW3660/SW3620	-	-	-	-	-	-	-	0
Gel-Permeation Cleanup	SW3640	-	-	-	-	-	-	-	0
COLUMN TOTALS	-		2041	42	42	53	282	533	2993

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tachment 1
Page 20 of 21

Notes:

a Unless an abbreviated list of analytes is specified under "Parameter" above, the analytical protocol shall include all analytes listed in the referenced analytical method. The methods cited are from the following sources:

"A" Methods	Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985)
"E" Methods	Methods for Chemical Analysis of Water and Wastes, EPA Manual, 600/4-79-020 (USEPA, 1983--with additions)
"SW" Methods	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition (USEPA, 1986)
"ASTM" Methods	American Society for Testing and Materials, 1919 Race treet, Philadelphia, PA 19103

b The maximum number of second-column confirmation analyses shall not exceed fifty (50) percent of the actual number of field samples (to include duplicates, replicates, ambient, condition blanks, trip blanks, and equipment blanks). If the number of samples requiring second-column confirmation exceeds this allowance, contact the HSD Technical Project Manager. The total number of samples listed in Tables A-4 and A-5 includes the allowance applicable to each GC method. IF GC/MS, or a combination of second-column GC and GC/MS, is used, the total cost of all such analyses for a particular parameter shall not exceed the funding allowed for positive confirmation using only second-column GC.

REF 68X 68X

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. PAGE 1 OF 2

2. PROG INSTRUMENT ID NO. (PIIN)	3. SPIIN	4. EFFECTIVE DATE	5. REQUISITION/PURCHASE REQUEST PROJECT NO.	6. SCC/DMS RATING
F33615-90-D-4010	002203	94 FEB 15	FY7624-94-08235	

7. ISSUED BY CODE FA8900

DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIAL COMMAND
HUMAN SYSTEMS CENTER/PK
8005 9TH STREET
BROOKS AFB, TX 78235-5353
Buyer: EDWIN CUSTODIO/PKVBA
Phone: (210)536-4493

8. ADMINISTERED BY (IF OTHER THAN BLOCK 7) CODE S2404A

DCMAO, BALTIMORE
ATTN: CHESAPEAKE
200 TOWNSONTOWN BLVD, WEST
TOWNSON MD 21204-5299

9. CONTRACTOR NAME AND ADDRESS CODE 69148 FACILITY CODE

ICF TECHNOLOGY
9330 LEE HIGHWAY
FAIRFAX VA 22031-1207
COUNTY; FAIRFAX
PHONE; (703) 934-3000

IF "0" FOR MULTIPLE FACILITIES SEE SECT "K"

ADVANCE COPY

MAILING ADDRESS;
ICF TECHNOLOGY, INC
ATTN; CYNTHIA L. FALCE
FOUR GATEWAY CENTER 12TH FL.
PITTSBURGH PA 15222

10. SECURITY CLAS U

11. DISCOUNT FOR PROMPT PAYMENT

1 ST	%	DAYS	NET DAYS
2 ND	%	DAYS	OTHER IF '0'
3 RD	%	DAYS	SEE SECT "E"

12. PURCHASE OFFICE POINT OF CONTACT

MVH/M6V/MVH

13. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLITCITATIONS

☐ The above numbered solicitation is amended as set forth in Block 14. The hour and date specified for receipt of Offer ☐ is unchanged ☐ is extended

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:

(a) By signing and returning _____ copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER if by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

14. THIS BLOCK APPLIES ONLY TO MODIFICATION OF CONTRACTS

☐ THIS CHANGE IS ISSUED PURSUANT TO _____
THE CHANGES SET FORTH HEREIN ARE MADE TO THE ABOVED NUMBERED CONTRACT/ORDER.

☐ THE ABOVE NUMBERED CONTRACT IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (SUCH AS CHANGES IN PAYING OFFICE, APPROPRIATION DATA, ETC.) SET FORTH HEREIN.

☐ THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF _____
IT MODIFIES THE ABOVE NUMBERED CONTRACT AS SET FORTH HEREIN.

☒ THIS MODIFICATION IS ISSUED PURSUANT TO FAR52.253-3, CHANGES-TIME&MATLS OR LABOR HRS (AUG87)

15. CONTRACT ADMINISTRATION DATA

A. KIND OF MOD	B. MOD ABST RECIPIENT ADP PT	C. DATE OF SIGNATURE MODIFICATION	D. CHANGE IN CONTRACT AMOUNT INCREASE (+) DECREASE (-)	E. LOSING PO/CAO ON TRANSFER	F. GAINING PO/CAO ON TRANSFER	G. SVC/AGENCY USE
C			$			

16. ENTER ANY APPLICABLE CHANGES

A. PAY CODE	B. EFFECTIVE DATE OF AWARD	C. CONTRACT (1) TYPE (2) KIND	D. TYPE CONTR	E. SURV CRIT	F. SPL CONTR PROVISIONS	G. PAYING OFC CODE	H. DATE SIGNED	I. SECURITY (1) CLAS (2) DATE OF DD 254

17. REMARKS *(Except as provided herein, all items and conditions of the contract, as heretofore changed, remain unchanged and in full force and effect.)* SUBJECT: TIME EXTENSION AT NO INCREASE IN CEILING AMOUNT
PROJECT OFFICER: MICHAEL F. MCGHEE, AFCEE/ESR, BROOKS AFB, TX 78235-5328
FINANCE OFFICE: (SC1030) DFAS-COLUMBUS CENTER
ATTN:DFAS-CO/CHESAPEAKE DIV.
P.O.BOX 182264, COLUMBUS OHIO 43218-2264

18. ☒ CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT ☐ CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE

19. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	22. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*
BY	BY Gary J. MacDecy
20. NAME AND TITLE OF SIGNER *(Type or print)* / 21. DATE SIGNED	23. NAME OF CONTRACTING OFFICER *(Type or print)* GARY J. MACDECY / 24. DATE SIGNED 94 FEB 17

AFMC FORM 702, JUL 92 REPLACES AFSC FORM 702, AUG 84 WHICH IS OBSOLETE

1. Pursuant to the "Changes" Clause of Section I of the basic contract. The performance period and the final delivery schedule are changed from 15 Feb 94 (performance period) and 1 Jan 95 (final delivery schedule date) to 31 Dec 94. The ceiling amount of this delivery order will not be affected by this modification. This modification was generated by request of the contractor with no increase to the ceiling amount. contractor's letter dated 10 Feb 94 is incorporated to this document by reference.

ADVANCE COPY

REF 68X

CONTRACTOR COPY

68X

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. PAGE 1 OF 4

2. PROC INSTRUMENT ID NO. (PIIN)	3. SPIIN	4. EFFECTIVE DATE	5. REQUISITION/PURCHASE REQUEST PROJECT NO.	6. BCC/DMS RATING
F33615-90-D-4010	002204	IL DATE	FY7624-94-08663	

7. ISSUED BY CODE FA8900

DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
HUMAN SYSTEMS CENTER/PKVBC
8005 9TH STREET
BROOKS AFB TX 78235-5318
Buyer: BRENDA DILLARD, HSC/PKVBB
Phone: (210) 536-4503

8. ADMINISTERED BY (IF OTHER THAN BLOCK 7) CODE S2404A

DCMAO BALTIMORE
ATTN: CHESAPEAKE
200 TOWSONTOWN BLVD, WEST
TOWSON MD 21204-5299

9. CONTRACTOR NAME AND ADDRESS CODE 69148 FACILITY CODE

IF "0" FOR MULTIPLE FACILITIES SEE SECT "K"

ICF TECHNOLOGY
9330 LEE HIGHWAY
FAIRFAX VA 22031-1207

COUNTY: FAIRFAX
PHONE: (703) 934-3000

MAIL DATE
AUG 15 1994

10. SECURITY CLAS U

11. DISCOUNT FOR PROMPT PAYMENT
NONE

1ST	%	DAYS	NET DAYS
2ND	%	DAYS	OTHER IF "0"
3RD	%	DAYS	SEE SECT "E"

12. PURCHASE OFFICE POINT OF CONTACT
MEC/M5E/MVT

13. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLITCITATIONS

☐ The above numbered solicitation is amended as set forth in block 17. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation, or as amended by one of the following methods:

(a) By signing and returning _____ copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

14. THIS BLOCK APPLIES ONLY TO MODIFICATION OF CONTRACTS

☐ THIS CHANGE IS ISSUED PURSUANT TO _____ THE CHANGES SET FORTH HEREIN ARE MADE TO THE ABOVED NUMBERED CONTRACT/ORDER.

☐ THE ABOVE NUMBERED CONTRACT IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (SUCH AS CHANGES IN PAYING OFFICE, APPROPRIATION DATA, ETC.) SET FORTH HEREIN.

☐ THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF _____ IT MODIFIES THE ABOVE NUMBERED CONTRACT AS SET FORTH HEREIN.

☒ THIS MODIFICATION IS ISSUED PURSUANT TO FAR 52.243-3, CHANGES - TIME AND MATERIALS OR LABOR HOUI

15. CONTRACT ADMINISTRATION DATA

A. KIND OF MOD	B. MOD ABST RECIPIENT ADP PT	C. DATE OF SIGNATURE MODIFICATION	D. CHANGE IN CONTRACT AMOUNT INCREASE (+) DECREASE (-)	E. LOSING PO/CAO ON TRANSFER	F. GAINING PO/CAO ON TRANSFER	G. SVC/AGENCY USE
C			$			

16. ENTER ANY APPLICABLE CHANGES

A. PAY CODE	B. EFFECTIVE DATE OF AWARD	C. CONTRACT (1) TYPE (2) KIND	D. TYPE CONTR	E. SURV CRIT	F. SPL CONTR PROVISIONS	G. PAYING OFC CODE	H. DATE SIGNED	I. SECURITY (1) CLAS (2) DATE OF DD 254

17. REMARKS *(Except as provided herein, all items and conditions of the contract, as heretofore changed, remain unchanged and in full force and effect.)* SUBJECT: REVISION TO STATEMENT OF WORK
PROJ MNGR: SAMER N. KARMI, AFCEE/ERDW, 8001 INNER CIRCLE, BROOKS AFB, TX
FINANCE OFFICE: (SC1030)DFAS COLUMBUS CENTER, ATTN: DFAS-CO/CHESAPEAKE DIV
PO BOX 182264, COLUMBUS OH 43218-2264

18. ☒ CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT ☐ CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE

19. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	22. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*
BY	BY William M Watts
20. NAME AND TITLE OF SIGNER *(Type or print)* / 21. DATE SIGNED	23. NAME OF CONTRACTING OFFICER *(Type or print)* WILLIAM M. WATTS / 24. DATE SIGNED 15 AUG 94

AFMC FORM 702, JUL 92 REPLACES AFSC FORM 702, AUG 84 WHICH IS OBSOLETE

1. Pursuant to the "Changes" Clause in Section I of the basic contract, the Statement of Work for Delivery Order 0022, dated 06 Jul 93 is superseded by the revised Statement of Work, dated 17 Jul 94. The subject delivery order ceiling amount is increased by $229,526.00.

2. As a result of paragraph 1 above, the said order is more specifically modified as set forth below:

a. SECTION A - Cover Page - The Not-to-Exceed amount in block 20 (cover page) is increased BY $229,526.00 from $3,299,352.00 to $3,528,878.00."

b. SECTION B - THE SCHEDULE

Item No	Supplies/Services	Quantity Purch Unit	Unit Price Total Item Amount
0001	CLIN Change sec class: U	1	N
		LO	N

noun: SAMPLING, ANALYSIS AND DATA
acrn: XA nsn: N
site codes: pqa: D acp: D fob: D
pr/mipr data: FY7624-94-08202, FY7624-93-08305, FY7624-94-08353, FY7624-94-08235, and FY7624-94-08663
type contract: Y

descriptive data:
Conduct work in accordance with the Statement of Work (SOW) of this order, dated 17 JUL 94 and Section C, The Description/Specifications of the Basic contract. Submit data in accordance with Attachment #1, the Contract Data Requirements List (CDRL) of the basic contract as implemented by paragraph VI of this order's SOW. This modification adds $83,590.00 to the price for CLIN 0001.

0002	CLIN Change sec class: U	1	N
		LO	N

noun: SAMPLING, ANALYSIS AND DATA
acrn: XA nsn: N
site codes: pqa: D acp: D fob: D
pr/mipr data: FY7624-94-08202, FY7624-93-08305, FY7624-94-08353, FY7624-94-08235, and FY7624-94-08663
type contract: Y

descriptive data:
Provide support in accordance with the Statement Work (SOW) of this order, dated 17 JUL 94 and Section C, The Description/Specification of the basic contract. This modification adds $128,148.00 to the price for CLIN 0002.

SECTION B - THE SCHEDULE (Cont'd)

Item No	Supplies/Services	Quantity Purch Unit	Unit Price Total Item Amount
0004	CLIN Change sec class: U	1	N
		LO	N

noun: CHEMICAL ANALYSES
acrn: XA nsn: N
site codes: pqa: D acp: D fob: D
pr/mipr data: FY7624-94-08353, FY7624-94-08235, and FY7624-94-08663
type contract: Y

descriptive data:
This modification adds $17,788.00 to the price for CLIN 0004.

c. SECTION C - Description/Specs - The SOW for this order entitled "Installation Restoration Program Remedial Investigation/Feasibility Study, Distant Early Warning (DEW) Line Sites and Cape Lisburne AFS, AK", dated 17 Jul 94 is attached hereto as Attachment #1 to this modification.

d. SECTION F - Supplies Schedule Data - The delivery schedule is modified as set forth below:

Item No	Supplies Schedule Data		Delivery Quantity	Schedule Date
0001	CLIN Del Sch Change acrn: XA ship to: U	sec class: U	1	95APR01
0002	CLIN Del Sch Change acrn: XA ship to: U	sec class: U	1	95APR01
0004	CLIN Del Sch Establish acrn: XA ship to: U	sec class: U	1	95APR01

e. SECTION G - Accounting Classification Data:

ACRN	Acct Class data	Appropriation/Lmt Subhead/CPN Recip DODAAD Supplemental Accounting Classification	Obligation Amount
AC	ACCOUNT ESTABLISH UNCLASSIFIED	5743400 F74400 304 7431 434419 040000 53440 000000 674400	$229,526.00+
	pr/mipr data: FY7624-94-08663		
XA	SPECIAL ACRN CHANGE UNCLASSIFIED		

descriptive data:
Special ACRN XA funds CLINs 0001, 0002, and 0004 and includes the following:

AA:$ 299,855.00
AB:$ 99,986.00 (mod 0022,01)
:$2,899,511.00 (mod 0022,02)
AC:$ 229,526.00 (mod 0022-04)
TOTAL $3,528,878.00

FINANCE OFFICER: Pay funds in alphabetical order.

3. All other terms and conditions remain unchanged.

1994 JUL 17 ~~1993 JUL 6~~

STATEMENT OF WORK
INSTALLATION RESTORATION PROGRAM
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

~~STAGE 1~~

DISTANT EARLY WARNING (DEW) LINE SITES and CAPE LISBURNE AFS, AK

I. DESCRIPTION OF WORK

1.1 Scope

1.1.1 **Background.** The objective of the Air Force Installation Restoration Program (IRP) is to assess past hazardous waste disposal and spill sites on Air Force installations and develop remedial actions consistent with the National Contingency Plan (NCP) for those sites which pose a threat to human health and welfare or the environment. This objective is achieved through a Remedial Investigation Feasibility Study (RI/FS) process in which conclusions and recommendations drawn from accurate and validated data are used to structure and guide subsequent activities.

The RI/FS process includes scoping to define data requirements and objectives, a remedial investigation to characterize sites for a baseline risk assessment, and a feasibility study to define and evaluate alternative remedial actions so that a recommended action may be selected. Each of these steps of the RI/FS process can be conducted in stages that focus on particular aspects of the process.

The Contractor shall accomplish the actions described in this Statement of Work (SOW) to complete the RI/FS process at the following seven Dew Line Sites and Cape Lisburne:

Barter Island AFS (BAR-M); Bullen Point AFS (POW-3); Point Lonely AFS (POW-1); Point Barrow AFS (POW-M); Point Lay AFS (LIZ-2); Wainwright AFS (LIZ-3); and Oliktok Point AFS (POW-2).

1.1.2 **Requirements for Project Activities.** ~~The Installation Restoration Program (IRP) Handbook referenced in this Statement of Work provides requirements for laboratory and field activities and applicable formats for project documents that shall be used by the Contractor. Volume 1 of the Handbook dated May 1992 is provided under separate cover. This document is referenced in this Statement of Work as the Handbook.~~ The Handbook to Support the Installation Restoration Program (IRP) Statements of Work, dated September 1993, referred to in this SOW as "The Handbook," is provided under separate cover as general guidance only. Any reference within the Handbook language regarding compliance and/or formats for reports as a requirement of this Delivery Order shall be considered deleted. If a conflict is identified between this general guidance and any OSWER, U.S. Environmental Protection Agency (EPA), or other regulatory guidance or requirements, the Handbook shall be disregarded. Also, references to requirements for approval for deviations throughout the Handbook shall be considered invalid. Finally, the Method Detection Limits (MDLs) identified in the Handbook are a consolidation of numerous CFR documents which incorporate current EPA requirements. However, the Contractor shall be responsible for any updates in the CFR. The Contractor is responsible for the thorough knowledge and understanding of the previous findings and recommendations that affect this

task prior to the start of field activities. The documents involved include but are not limited to the IRP Phase I Records Search, and the IRP Phase II plans and reports addressing the Dew Line Sites and Cape Lisburne.

1.1.3 **Meetings.** ~~A maximum of two (2) Contractor personnel, including the project leader, shall attend eight (8) meetings at Elmendorf AFB, AK. Each meeting shall be two (2) 8-hour workdays in duration.~~ All meetings shall be coordinated by the Restoration Team Chief (RTC).

1.1.4 **Special Notifications.** The Contractor shall immediately report to the RTC via telephone, any data or results generated during this investigation which may indicate an imminent health risk. Following this telephone notification, a written notice shall be prepared and delivered within three (3) days. This notification shall include supporting documentation (sequence 16, para 6.1)

1.2 Project Scoping Documents

The purpose of the project scoping documents is to clearly and comprehensively define project activities prior to the initiation of field work. The Contractor shall prepare and submit the following project scoping documents for this task prior to the initiation of any field activities, removal actions, or laboratory analyses.

1.2.1 **Engineering Network Analysis.** Provide within ten (10) days after the issuance of an order a computer generated network analysis which is a detailed task plan for the RI/FS work efforts. The network analysis (GANTT) chart shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period of the delivery order. The network analysis (GANTT) shall show both serial and parallel subtasks leading to a deliverable product or report, and shall show early and late start and completion dates with float. The network analysis (GANTT) shall be updated and submitted quarterly (sequence 3, para 6.1).

1.2.2 **Work Plan.** This section will discuss the overall approach, (including a brief summary of the Conceptual Site Model and Data Quality Objectives), major tasks, scope, timeline, and major decision points. Due to the extreme remoteness of the Dew Line Sites and Cape Lisburne, the Contractor shall include a detailed plan for logistics and strategy to complete the RI/FS field activities. Follow the format specified in section 1 of the Handbook. In preparing the Work Plan, use previous reports and the information gathered during the literature search and presurvey along with experience at similar sites. Reevaluate the recommendations for Dew Line Sites and Cape Lisburne developed during previous IRP stages. The Contractor shall also prepare a draft and final addendum to the existing DEW Lines RI/FS work plan. The addendum shall detail the removal activities occurring at Cape Lisburne LRRS pursuant to paragraph I.1.3.14 of this SOW. (sequence 4, para 6.1).

1.2.3 **Sampling and Analysis Plan (SAP).** The SAP consists of a quality assurance plan (QAPP) and a Field Sampling Plan (FSP). Prepare a SAP describing how project activities will be accomplished in the format specified in section 1 of the Handbook. The Contractor shall also prepare a short addendum to this basic SAP which focuses on those sampling and analysis activities undertaken as part of the removal action specified in paragraph I.1.3.14 of this SOW. Incorporate review comments and obtain RTC concurrence prior to the start of field activities (sequence 4, para 6.1).

1.2.4 **Health and Safety Plan (HSP).** Provide a written Health and Safety Plan within eight (8) weeks after the issuance of an order. The Contractor shall also prepare an addendum to the existing DEW Lines RI/FS HSP, concerning removal activities conducted pursuant to paragraph I.1.3.14 of this SOW. The Contractor shall comply with USAF, OSHA, EPA, state, and local health and safety regulations regarding the proposed work effort. Use EPA guidelines for designating the appropriate levels of protection needed at the study sites. The Health and Safety Plan shall provide no less protection than the protection contained in the manual entitled "Health and Safety Requirements for Employees Engaged in Field Activities" dated 1981 and the "Occupational Safety and Health Manual for Hazardous Waste Sites Activities" dated 1985 and 29 CFR 1910. Coordinate the Health and Safety Plan directly with applicable regulatory agencies prior to submittal to AFCEE/ESR. The Contractor shall certify to AFCEE/ESR that the Contractor has reviewed the coordinated Health and Safety Plan with each employee and also subcontractor's employees prior to the time each employee engages in field activities (sequence 4, para 6.1).

1.2.5 **Community Relations Plan.** The Contractor shall prepare a Community Relations Plan (CRP) for the DEW Line Sites and Cape Lisburne AFS outlining the specific public communications and involvement techniques to be used in coordination with remedial site activities (sequence 4, para 6.1). Follow the guidance contained in "Community Relations in Superfund, a Handbook", office of Solid Waste and Emergency Response (OSWER) Directive 9230.0-03C (EPA/540/R-92/009, January 1992, PB92-963341), and other applicable directives. Also, use as a guidance previously accomplished CRP from other installations in Alaska. Appropriately adapt such guidance to the local situation at the DEW Line Sites and Cape Lisburne. As described in OSWER Directive 9230.0-03C, the CRP shall include, but not be limited to, a description of the sites and the community, an overview of the community involvement to date, key community concerns regarding the site and AF site activities, and suggested community relations activities. A contact list of elected officials, agency representatives, and interested groups and individuals shall be included in appropriate copies of the plan. In addition, the plan will include suggested locations for meetings and information repositories. Contractor activities to develop the CRP shall include conducting a review of site information provided by the AF.

1.3 **Project Activities**

The Contractor shall conduct the following tasks to achieve the purposes stated herein, in compliance with approved scoping documents, the Handbook, and all applicable regulations and requirements.

1.3.1 **Community Relations.** Provide support to the base public affairs office for the tasks described below pertaining to the RI/FS Community Relations Program.

1.3.1.1 Public meetings and workshops. The Contractor shall be responsible for coordinating public meetings and workshops for all DEW Line Sites and Cape Lisburne AFS. This includes producing briefing scripts, slides and any associated products such as response cards and sign-in sheets. As requested by the base Community Relations office in coordination with the RTC, research and provide materials for public queries, news media queries, and news releases. Assume a maximum of one (1) workshop/meeting (Seq. nos. 3,9).

1.3.1.2 Public notices. As required by the base Community Relations office and the RTC, the Contractor shall prepare and publish public notices for the Fairbanks and local newspapers. The purpose of these notices is to inform the public of a meeting, workshop, or comment period in which they have the opportunity to be involved in the IRP Program at DEW Line Sites and Cape Lisburne AFS. Also, these notices may be utilized to inform the public of other pertinent program information such as quarterly notices of documents placed in the information repositories. The format for the notices shall be coordinated with the Community Relations office and RTC, and then submitted to the RTC for review prior to delivery to the base. Assume a maximum of two (2) notices (Seq. no. 3).

1.3.1.3 Photo Notebook. The Contractor shall develop a photo notebook which focuses on the overall IRP program at DEW Line Sites and Cape Lisburne AFS. The layout of the notebook will be coordinated with the public affairs office and RTC. Assume a maximum of one (1) update (Seq. no. 9).

1.3.1.4 Mailing List. In coordination with the base Community Relations office and the RTC, prepare and update the mailing list on a quarterly basis. Assume a maximum of two (2) updates (Seq. no. 3).

1.3.1.5 Maps. Prepare presentation quality maps of the installations and their sites to use in newsletters and to distribute to the public.

1.3.1.6 Information Repository/Administrative Record. Prepare a listing of all documents required for the Information Repository and Administrative Record. Create an Information Repository and Administrative Record. The Repository and Record will be maintained by the 11 CEOS/CEVR Community Relations Coordinator. Assume two locations for the Repository and Record, one in Anchorage and another in Elmendorf AFB, AK. Actual locations will be determined by the 11 CEOS/CEVR Community Relations Coordinator.

1.3.2 **Literature Search.** Conduct a literature search and analyze aerial photos of the DEW Line Sties to supplement existing information that has been collected. The purpose of the literature search is to complete the conceptual site model so that a numerical estimate of risk can be developed.

1.3.3 **Presurvey.** Within eight weeks of the issuance of an order, the Contractor shall visit the Dew Line Sites and Cape Lisburne to ensure complete understanding of site conditions. Coordinate this visit with the RTC and the 11 CEOS project manager. The Contractor shall look for evidence of contamination at each site visited (e.g., leaking drums, vegetative stress, leachate seeps). The Contractor shall observe the physical settings of each site visited to formulate specific recommendations concerning boring placement, use of geophysical techniques, and other aspects of the proposed field investigation. The findings of the presurvey shall be used to prepare the Work Plan, SAP, and HSP for the RI and to prepare scoping documents for the treatability study(ies). Assume one presurvey and one reconnaissance trip.

1.3.4 **Quality Assurance/Quality Control (QA/QC).** A QA/QC program shall be conducted and documented for all work pursuant to this delivery order. Contractor and project-specific documents concerning QA/QC procedures and requirements shall be strictly followed. Data generated under the QA/QC program shall be used by the Contractor for evaluating the analytical results and field records assembled for each site to identify accurate and validated data that may be used to assess risk, develop conceptual site models and evaluate alternatives.

1.3.5 **Conceptual Site Model.** Use all available RI/FS data supported by acceptable QA/QC results (as measured against QAPP requirements) and site characterization information to refine, based on newly collected data, the conceptual site model. The model shall define the nature and extent of contamination and the transport and fate of those contaminants. The minimum requirements of the model are given in section 2 of the Handbook. The complexity and detail of the site model shall be consistent with the nature of the site and site problems, and the amount of data available the conceptual site model shall be documented in the Work Plan.

1.3.6 **ARARs Evaluation.** The Contractor shall identify all Applicable or Relevant and Appropriate Requirements (ARAR). These ARARs will be documented in the Work Plan.

1.3.7 **Data Collection, Sampling, and Analysis Procedures.** The Contractor shall conduct field activities, sampling, laboratory analysis, and data quality assessment. Section 2 of the Handbook is recommended for the Contractor to follow. The Contractor shall conduct all activities in accordance with the WP and the SAP approved by the COR. The COR shall be notified in writing of any planned deviation from the activities specified in these documents. COR approval of deviations is required prior to performance. The Contractor shall ensure that all analyses and analytical methods' QA/QC requirements are being met at all times before and during the analysis of samples.

The field investigation (including all drilling and sampling operations) shall be supervised by a registered geologist, hydrogeologist, or professional engineer. If required by the state, the on-site field supervisor shall be certified by the state to install test wells. A detailed log of field conditions, materials penetrated during drilling, well completion, and sampling conditions, as described in Section 2 of the Handbook, shall be maintained and made available for Government inspection upon request. Decisions on well and boring locations, well depths, screened intervals, and all details of the field investigation shall be made by the COR, and the Contractor's field or project supervisor.

1.3.8 **Regulatory Requirements and Permits.** All well drilling, development , sampling, laboratory analysis, and other activities pursuant to this effort shall be conducted in strict accordance with all applicable federal and state laws, ordinances, rules and regulations, and all authorities with jurisdiction over such activities. The Contractor shall complete permits, applications, other documents, and proficiency tests required by the regulatory agencies. The Contractor shall file documents with appropriate agencies and pay all applicable permit and filing fees. The Contractor shall identify locations requiring permits to Radar Station Manager. The Contractor shall include all correspondence in appendices to the technical reports in accordance with Section 4 of the Handbook.

All laboratory analyses shall conform to all applicable federal, state, and local regulatory agency requirements. If the requirements specify that certification is necessary to conduct one or more specific analyses, the Contractor shall furnish documentation showing laboratory certification with the first set of analytical data supplied to AFCEE/ESR and the COR.

The Contractor shall containerize and sample materials suspected to be hazardous in accordance with applicable requirements, Guidance from the Handbook, and the approved Plans. The Contractor shall transport these containerized materials to a location within the installation boundary designated by the Radar Station Manager at a frequency specified by the

Station Manager. The Contractor shall handle, store, and/or dispose of potentially hazardous materials. The Contractor shall transport and empty containerized materials determined not to be hazardous to locations within the installation boundary identified by the Station Manager.

1.3.9 **Remedial Investigation (RI).** The Contractor shall conduct a RI to characterize environmental conditions; define the concentration, nature, and extent of contamination; and quantitatively estimate the risk to human health and the environment and study the area through the collection of geologic and hydrologic data, environmental samples, the laboratory analyses of those samples for potential contaminants, the evaluation of the analytical results and field measurements with respect to quality control data, and the interpretation and analysis of accurate and precise data. The purpose of data collection, sample collection, and laboratory analysis is to determine whether any contaminants generated from installation activities have entered the environment. The field investigation is used to determine the source of any identified contaminants, the magnitude of contamination relative to Applicable or Relevant and Appropriate Requirements (ARARs), and any naturally occurring or background concentrations for specific compounds. The RI shall comply with the specifications, procedures, and methodologies presented in the project-specific SAP. The COR must be notified in writing prior to any modification of or deviation from any activity described in these documents.

1.3.9.1 **Soil Borehole Drilling and Sampling and Well Installation and Sampling.** The Contractor shall drill and collect samples from boreholes as specified in the SAP. The Contractor shall evaluate the need to install, sample, and develop monitoring or extraction wells.

1.3.9.1.1 **Lithologic Samples.** The Contractor shall describe core samples at least every five (5) feet of drilling or at each change in lithology, whichever is less, to indicate significant changes in lithology of characteristic properties that relate to the strata penetrated. Any deviations shall be coordinated with the COR. Guidance for standard identification practices are found in the Handbook. The Contractor shall include in the field logbook observations made by the driller and rig geologist during drilling such as depth to water, penetration rate, drill rig behavior, and other observations that might be indicative of changes in formation characteristics. The Contractor shall record depth to permafrost in all the soil borings and shall not proceed beyond five (5) feet into the permafrost layer.

1.3.9.1.2 **Drill Cuttings and Drilling Fluids.** The Contractor shall containerize all drill cuttings and drilling fluids. All drill cuttings and drilling fluids shall be managed and disposed of in accordance with the project SAP. (Note: The Contractor shall be responsible for providing all necessary containers.) The Contractor shall be responsible for the logistics of the ultimate disposal of all drill fluids or drill cuttings deemed hazardous in accordance with current EPA off-site disposal policy and state and/or local hazardous waste disposal laws. The contractor shall coordinate with the Station Manager for on-site placement and disposal of all drill cuttings, fluids, purge fluid, and excavated material. If on-site disposal is excluded, all hazardous waste shall be transported by a permitted hazardous waste transporter to a licensed Resource Conservation and Recovery Act (RCRA) approved facility and be accompanied by a Uniform Hazardous Waste Manifest. The Contractor shall provide a final, completed copy of the hazardous waste manifest to the 11 CEOS/CEVR. The Radar Stations' hazardous waste managers will sign all hazardous waste manifest documents.

1.3.9.1.3 **Well/Boring Precautions.** The Contractor shall mark the field locations of all borings during the planning/mobilization phase of the field investigation. The Contractor shall consult with base personnel to minimize the disruption of base activities, to properly position wells with respect to site locations, and to avoid penetrating underground utilities. The Contractor shall obtain all permits prior to commencement of digging and drilling operations. The Contractor shall utilize a registered land surveyor in determining the elevations and locations of all off-base background study borings. All borings and wells from which samples are taken shall be surveyed by the Contractor for vertical and horizontal control. The Contractor shall record the positions on project and site specific maps. Bench marks used must have been previously established from and be traceable to a U. S. Coast and Geodetic Survey (USCGS) or U. S. Geological Survey (USGS) survey marker. Clearly identify all bench mark locations on the base map.

1.3.9.1.4 **Water-Level Measurements in Boreholes.** The Contractor shall measure water levels in all boreholes after the water level has stabilized. Include this information and the date of measurement in the boring logs. Also, record soil moisture conditions (moist, wet, saturated, etc.) in the boring log.

1.3.9.1.5 **Air Monitoring During Drilling.** The Contractor shall monitor the ambient air in the breathing zone above the borehole during all drilling with an appropriate organic vapor analyzer to identify potentially hazardous and/or toxic vapors. Include air monitoring results in borehole logs.

1.3.9.1.6 **Subsurface Soil Sampling.** The Contractor shall collect soil samples from borings as specified in the SAP. The SAP specifies the analytical methods, the parameters for analysis, and the estimated number of analyses for soil samples.

1.3.9.1.7 **Well Construction Requirements.** The Contractor shall coordinate with the COR to determine well completion requirements (flush or projected above ground surface). All wells shall be secured as soon as possible after drilling. The Contractor shall provide corrosion resistant locks for both flush and above-ground well assemblies. The locks shall be compatible with existing wells. The Contractor shall turn the lock keys over to 11 CEOS/CEVR POC following completion of the field effort. The Contractor shall coordinate with the 11 CEOS/CEVR POC, the RTC, and the COR the selection of exact well and screen placement, gravel pack design, and screen slot size.

1.3.9.1.8 **Well Logs.** For each well, the Contractor shall prepare a well completion log and schematic diagram showing well construction details. Lithologic descriptions, well elevation survey data, and other information included in the well logs shall conform to the specifications of the SAP.

1.3.9.1.9 **Well Development.** The contractor shall develop each well as soon as possible. Guidance for well development procedures are found in the Handbook. The Contractor shall measure the rate of water production, pH, specific conductance, and water temperature during well development.

1.3.9.1.10 **Well Placement.** The Contractor shall avoid installing wells in depressions or areas subject to frequent flooding and/or standing water. If wells must be installed in such areas, the Contractor shall design the wells so standing water does not leak into the top of the casing or cascade down the annular space.

1.3.9.1.11 **Well and Borehole Clean-up.** The Contractor shall clean the area following the completion of each well and borehole. The Contractor shall return all sites to the original condition of the site.

1.3.9.1.12 **Groundwater and Surface Water Sampling.** The Contractor shall collect groundwater and Surface Water samples from newly developed well and existing wells and from surface water bodies. The SAP shall specify the analytical methods, the parameters for analysis, and the estimated number of analyses for groundwater and surface water samples.

1.3.9.1.13 **Composite Sampling.** The Contractor shall collect and analyze drill cuttings, fluids, purge fluids, and excavated material. The SAP shall specify the analytical methods, the parameters for analysis, and the estimated number of analyses for composite samples.

1.3.9.2 **Geophysical Surveys.** The Contractor shall evaluate whether geophysical surveys are needed (e.g., to determine boundaries of landfills, to locate underground debris, utilities and storage tanks). Where geophysical surveys are appropriate, the Contractor shall select a geophysical survey technique or techniques [such as ground penetrating radar (GPR), magnetometer or electromagnetic surveys (EM)] that will best meet the desired application. The technique(s) used shall be approved by the RTC prior to use. Approximate number of surveying days is included in Annex A which is to be used for costing purposes only. Appropriate grid systems shall be established and the Contractor shall use the results of this survey to prepare a contour map of the results. Provide this map as an attachment to the first R&D Status Report submitted after the completion of the geophysical surveys. The Contractor shall perform the geophysical surveys before drilling and use the results in selecting the location of soil borings, wells, test pits, if necessary.

1.3.9.3 **Permeability Testing.** The Contractor shall determine the need for a permeability test at Cape Lisburne AFS, to provide additional data on the hydrogeologic characteristics of the water table aquifer. The SAP shall specify the method to be used for the permeability test.

1.3.9.4 **Water Level Measurement.** The Contractor shall evaluate the need for conducting a complete round of water level measurements in all existing and new wells at Cape Lisburne AFS at the beginning of field work and during the field sampling effort. Data gathered shall be used for interpreting groundwater flow directions and groundwater gradient.

1.3.9.5 **Soil Gas Surveys.** The Contractor shall evaluate the need for soil gas surveys and Hydropunch (e.g., to select soil boring locations). If soil gas surveys and hydropunch are included as part of the approved Work Plan and FSP, the Contractor shall establish appropriate grid systems. The Contractor shall prepare a posting map of soil gas values relative to their location on the grid used. Provide this map as an attachment to the first R&D Status Report submitted after completion of the soil gas survey (sequence 3, para 6.1). Approximate number of surveying days are included in Annex A which is to be used for costing purposes only.

1.3.9.6 **Groundwater Field Screening.** The Contractor shall perform groundwater field screening. The SAP shall specify the method, location, and type of groundwater field screening.

1.3.9.7 **Baseline Risk Assessment.** The Contractor shall use data supported by acceptable QA/QC results (as measured against QAPP requirements) and the conceptual site model to numerically estimate the risk posed by site contaminants to human health and the environment. The Contractor shall identify and list all ARARs for those contaminants detected in environmental

samples at the site. The Contractor shall provide all ARARs evaluations as an attachment to the Technical Report. Provide the results of the baseline risk assessment in the Technical Report using the formats in Section 4 of the Handbook as a guidance.

The Contractor shall identify those sites posing minimal or no threat to human health, welfare, or the environment and for which no further action is appropriate.

The Contractor shall use the results of the risk assessment in establishing remedial action objectives and developing remedial alternatives in the Feasibility Study.

1.3.9.8 **Defense Priority Model Scores.** The Contractor shall use the Defense Priority Model to score the sites. The score shall be included as an appendix to the RI/FS Technical Report.

1.3.9.9 **Fate and Transport.** The Contractor shall perform fate and transport modeling for contaminants of interest to include the projection of future contaminant concentrations within the boundaries of the site. This will be done in conjunction with the RI/FS report.

1.3.10 **Feasibility Study (FS).** The Contractor shall perform a FS concurrently with the RI. As much of the FS as possible shall be performed early in the RI/FS process and refined as additional RI data are obtained. The Contractor shall use the information from the RI and the baseline risk assessment to develop and evaluate remedial action alternatives for each site where a threat to human health or the environment exists. The Contractor shall follow the procedures specified in USEPA OSWER Directive 9355.3-01, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA." The Contractor shall employ streamlining methods wherever possible and develop and evaluate the minimum number of alternatives needed to provide a range of promising treatment and containment actions. The Contractor shall eliminate impracticable alternatives from further consideration early in the FS process. The scope and level of detail shall be consistent with the nature and complexity of site problems.

1.3.10.1 **Develop and Screen Alternatives.** The Contractor shall establish remedial action objectives and remediation goals for protecting human health and the environment. These objectives and goals shall be determined based on identified ARARs and acceptable exposure levels as defined in the baseline risk assessment and refined throughout the RI/FS process. Identify general response actions and applicable technologies based on site and contaminant conditions, and combine technologies to formulate distinct alternatives. The Contractor shall develop alternatives which eliminate, control, and /or reduce risk to human health or the environment to acceptable levels for each pathway. Where a wide variety of promising alternatives exists, the Contractor shall screen the alternatives based on effectiveness, implementability, and cost. The Contractor shall detail the development and screening of the alternatives process and identify the alternatives selected for detailed analysis in the Informal Technical Information Report (ITIR).

1.3.10.2 **Detailed Screening of Alternatives.** The Contractor shall conduct a detailed analysis on each alternative selected and identified in the above step and approved by the COR. Using the methodology in OSWER Directive 9355.3-01, the Contractor shall evaluate each alternative against the nine criteria. In addition to the individual assessment, the Contractor shall perform a comparative analysis to determine the relative performance of alternatives. The Contractor shall focus the analysis on sub-factors and criteria most pertinent to each site and the scope and complexity of the

proposed action. Provide a summary of the Detailed Analysis of Alternatives in the R&D report submitted following task completion. Include summary tables of the individual and comparative analyses that will be used in the Technical Report.

1.3.11 **Decision Documents.** The Contractor shall prepare and submit Decision Documents (DD) following the Handbook Section 4.4 as guidance. The purpose of the DD is to support a remedial action alternative or a no further action alternative. The Contractor shall submit an Interim Decision Document detailing the removal action process, results and conclusions.

1.3.12 **Site Specific Requirements.** The Contractor shall perform the requirements listed in this SOW in conformance with the guidance of the Handbook, requirements of the approved WP, and the SAP. Annex A specifies the proposed values for field and laboratory activities to be conducted, specifications for field activities, information for sediment and soil samples, analytical methods, parameters for analysis, estimated number of analyses for water/sediment/soil samples, required analytical methods, estimated number of analyses for all core samples, estimated number soil gas analyses for each parameter, and field QC sample requirements for soil and water samples for costing purposes only.

1.3.13 **Weekly Field Activity Report**

The contractor shall transmit a Weekly field activity report. The reports shall include, but not be limited to, all field work detailed in this SOW, a listing of any problems encountered (e.g., equipment problems, equipment downtime), and actions taken to resolve those problems. ~~The AFCEE RTC shall develop the format for the report.~~

1.3.14 **Removal Actions**

The Contractor shall complete the following tasks to remove or otherwise control source contamination and further characterize site conditions at Cape Lisburne LRRS. The Contractor shall include any data generated during these activities in the pertinent reports.

1.3.14.1 **Task 1** involves placement of an interceptor trench (French drain) below Petroleum, Oil, and Lubricant (POL) Tanks 1 and 2 to capture spilled or leaked petroleum products which are currently migrating through the subsurface toward a nearby surface water body. Collected material shall drain to a sump for separation into its water and petroleum components. Accumulated water shall be treated using granulated activated carbon or appropriate vapor control technology, chemically analyzed for the presence of remaining contaminants, and subsequently, in coordination with Alaska Department of Environmental Conservation (ADEC), disposed of according to all applicable water regulations. Recovered petroleum product will be incinerated on-site, after coordination ADEC. Soils excavated to accommodate the trench may be returned to the surrounding land, provided that they are not considered hazardous under the RCRA "contained-in" policy. Soils which are deemed hazardous may be drummed and sent for off-site disposal according to applicable hazardous waste regulations, or may be stored on-site pending subsequent remedial activities.

1.3.14.2 **Task 2** requires the removal and off-site disposal of a sludge pile located at Landfill and Waste Accumulation Area Number 1. Using a backhoe provided by the base, the sludge pile shall be excavated,

containerized in 55-gallon drums, and transported to a disposal facility in the continental U.S. A temporary drum staging area shall be established nearby to store the drums until they are transported. Current plans may involve shipment of waste on the barge's return trip to Cape Lisburne. Prior to field operations on this task, a representative sample of the sludge must be collected and analyzed using TCLP and other characteristic methods to determine if the material is a hazardous waste. The sludge must be managed and disposed of according to the results of such analyses. After removal of the sludge, the excavated area must also be sampled and analyzed to detect any constituents remaining at the site.

1.3.14.3 **Task 3** involves limited PCB sampling and analysis. The purpose of this task is twofold: to further characterize contamination in ocean sediments adjacent to Landfill and Waste Accumulation Area Number 1, and to locate a reported "hot spot" undiscovered during the 1993 RI/FS sampling program.

1.4 Project Deliverables

Deliver the following documents in compliance with the requirements of item VI, the formats required in section 1 and 4 of the Handbook, and the specifications noted below. Draft reports are considered "drafts" only because they have not been reviewed and approved by the Air Force. In all other respects, "drafts" shall be complete, in the proper format, fully illustrated, and free of grammatical and typographical errors.

1.4.1 Scoping Documents.

a. Engineering Network Analysis (GANTT) (para 1.2.1). Provide within ten (10) days after the issuance of an order. Update and submit quarterly (sequence 3, para 6.1).

b. Work Plan (para 1.2.2). Use the format in section 1 of the Handbook (sequence 4, para 6.1).

c. Sampling and Analysis Plan (1.2.3). Use the format in section 1 of the Handbook (sequence 4, para 6.1).

d. Health and Safety Plan (para 1.2.4). Provide within six (6) weeks after the issuance of an order (sequence 4, para 6.1).

e. Community Relations Plan (para 1.2.5). Provide within eight (8) weeks after issuance of an order (sequence 4, para 6.1).

1.4.2 **Special Notification.** Provide written notification of imminent health hazards and supporting documentation within three (3) days of telephone notification (sequence 16, para 6.1).

1.4.3 **Presentation Materials.** The Contractor shall prepare and present up to two (2) presentation packages at meetings coordinated by the Air Force (sequence 9, para 6.1). Attendance of these meetings is included in paragraph 1.1.3 of this SOW. As part of the presentation materials, the Contractor shall provide paper copies of all slides and overheads.

1.4.4 **Meeting Summaries** (para 1.1.3). Provide no later than five (5) days after conclusion of each meeting (sequence 18, para 6.1).

1.4.5 **Newsletter.** Prepare and submit a quarterly newsletter which presents the status of the entire base IRP Program. This will include preparing an outline resulting from input by all Contractors involved in the program. The outline must be approved by the base and RTC prior to submittal of the newsletter. The final product will be printed and distributed as agreed to by the RTC. Assume a maximum of two (2) newsletters (Sequence no. 3).

1.4.6 **Fact Sheets.** As required by the base IRP Program, prepare and submit fact sheets which facilitate the public's understanding of the IRP Program. These sheets should include key community concerns regarding sites as specified by the base. Use the format agreed to by the base and RTC. Print and distribute the fact sheets as agreed to by the RTC. Assume a maximum of two (2) fact sheets (Sequence no. 3).

1.4.7 **Public Notices.** In accordance with paragraph 1.3.6.2, prepare and submit public notices for the Fairbanks and local newspapers. Use the format agreed to by the base and RTC (Sequence no. 3).

1.4.8 **Photo Notebook.** In accordance with paragraph 1.3.6.3, develop a photo notebook which focuses on the overall base IRP Program. The Contractor shall include photos of sites under investigation, field and removal activities, and sample locations. Photos shall reflect proper sampling techniques, QA/QC procedures, and Health and Safety reports during field activities. Prior to implementation, submit a conceptual layout of the notebook for review by the base and RTC (Sequence no. 9).

1.4.9 **Mailing List.** In accordance with the base Community Relations coordinator and paragraph 1.3.6.4, update the existing mailing list on a quarterly basis (Sequence no. 3).

1.4.10 **Maps.** In accordance with the base community Relations coordinator and paragraph 1.3.6.5, prepare presentation quality maps.

1.4.11 **Information Repository/Administrative Records.** Submit the Information Repository and Administrative Records in accordance with Air Force Guidance and in concurrence with the COR and the base Community Relations Coordinator. (sequence no. 4, para 6.1)

1.4.12 **Data Management.** The Contractor shall meet the data deliverable requirements of the Installation Restoration Program Information Management System (IRPIMS). The Contractor shall be responsible for recording field and laboratory data into a computerized format as required by the most current version of the IRPIMS Data Loading Handbook (mailed under separate cover). In order to perform this task, the Contractor shall use the IRPIMS Quality Control Tool (QC Tool) and PC software utility (mailed under separate cover with software manual) to quality check ASCII data files and to check all data files for compliance with requirements in the IRPIMS Data Loading Handbook. Upon request, the IRPIMS Contractor Data Loading Tool (CDLT) is available. This PC software is designed to assist the Contractor in preparing the various ASCII data files.

Individual IRPIMS data files (e.g., analytical results, groundwater level data, etc.), including resubmissions, shall be delivered with a transmittal letter by the Contractor to the Air Force Center for Environmental Excellence (AFCEE) in sequence according to a controlled time schedule as identified in the current version of the IRPIMS Data Loading Handbook. The Contractor shall include a copy of the Quality Control Tool error report, i.e., output from the QC tool, for each IRPIMS file submission. The error report shall be

submitted both in hard copy and as an electronic file on the submission disks with the filename of the error report identified in the transmittal letter (SEQUENCE No. 3).

All Contractor data deliverables shall be sent to:

AFCEE/ESD BLDG 624W
ENVIRONMENTAL RESTORATION DIVISION
ATTN: IRPIMS Data Management
Brooks AFB, TX 78235-5000

In addition, the Contractor shall provide a copy of the transmittal letter to the Air Force contracting office responsible for the contract, HSC/PKV (Brooks AFB, TX, 78235-5000) for AFCEE contracts. This letter shall identify the files included or otherwise omitted (with an appropriate explanation), the Government contract and delivery order number, and the Air Force POC that is responsible for monitoring the Government contract.

The Contractor shall be responsible for the accuracy and completeness of all data submitted. All data entered into the IRPIMS data files and submitted by the Contractor shall correspond exactly with the data contained in the original laboratory reports and other documents associated with sampling and laboratory contractual tasks.

Each file delivered by the Contractor will be electronically evaluated by AFCEE/ESD for format compliance and data integrity in order to verify acceptance. All files delivered by the Contractor are required to be error-free and in compliance with the IRPIMS Data Loading Handbook. Any errors identified by AFCEE/ESD in the submission shall be corrected by the Contractor.

1.4.13 **Decision Document.** The Contractor shall prepare and submit DD as described in Section 1.3.11 (SEQUENCE No. 4, para 6.1).

1.4.14 **Technical Reports.** Summarize the findings of the tasks pursuant to the SOW, integrate them with the results of all pertinent previous studies, and formulate conclusions and recommendations for future efforts in Technical Reports.

1.4.14.1. **Remedial Investigation (RI) Report** (para 1.3.3). Provide a RI Report following the format in section 4 of the Handbook (sequence 4, para 6.1).

1.4.14.2. **Risk Assessment (RA) Report** (para 1.3.3.7). Provide a RA Report following the format in section 4 of the Handbook (sequence 4, para 6.1).

1.4.14.3 **Feasibility Study Report** (para 1.3.4). Provide a Feasibility Study Report following the format in section 4.0 of the Handbook. (sequence 4, para 6.1).

1.4.14.4 **RI/FS Technical Report** (para 1.3.3). Provide a RI/FS Technical Report following the format in section 4.0 of the Handbook. The RI/FS Technical Report shall integrate the RI, RA, and FS reports. Provide two microfiche copies with the final RI/FS Technical Report (sequence 4, para 6.1).

1.4.15 **Basewide Comprehensive IRP Document.** The Contractor shall develop a comprehensive document that summarizes both the historic and projected IRP activities. This document shall be used as management tool to efficiently guide future IRP activities at the DEW Line Sites and Cape Lisburne AFS. The Contractor shall follow the outline developed by the AFCEE RTC. Assume two (2) updates (sequence no. 4)

1.4.16 **Analytical Data ITIR.** Prepare and submit the following ITIRs, as well as the Analytical Data ITIR itself:

a. Development & Screening of Alternatives (para. 1.3.10.1). Submit the results of the development and screening of alternatives in an ITIR prepared in compliance with section 3 of the Handbook (sequence 3, para 6.1)

b. Detailed Screening of Alternatives (para 1.3.10.2).

c. DPM Scoring (para 1.3.9.8). Provide scores, a summary of procedures and assumptions, and Automated DPM output tables for all sites scored with DPM (sequence 3, para 6.1).

d. Mylar® Map. Construct Radar Stations' maps of Mylar using guidelines in section 3 of the Handbook. The Maps shall contain all sites and related water and sediment sampling locations (sequence no. 3, para. 6.1). The Contractor shall create and update digitized map files. Use the digitized data file to produce the Mylar map. The Contractor shall print the revision date on the Mylar maps and the date shall be encoded in the digitized data file. Provide a copy of the revised digitized data file to AFCEE-ESO/ER (sequence 1, para. 6.2).

e. Geophysical Survey Contour Map (para 1.3.9.2). Provide a contour map showing geophysical survey results. Interpret the significance of the data in the R&D Status Report (sequence 3, para 6.1).

f. Soil Gas Map (para 1.3.9.5). Provide site maps showing soil gas data superimposed on the sampling locations and incorporate soil gas data generated by the 11 CEOS/CEOR. Interpret the significance of the data in the R&D Status Report (sequence 3, para 6.1).

g. Site Characterization Summary Informal Technical Information Report (SCS ITIR). The Contractor shall prepare the report to include the following components:

1. Source identification and contaminant delineation.

2. Identification and ranking of appropriate treatability studies for the listed sites.

3. Data and interpretations integrating the findings of the current study and all previous RI efforts at the sites.

4. Current isoconcentration plots of contaminants detected at each site, lithologic logs of each boring showing contaminants detected and relationship to other borings in the site, and cross-sections of the site showing contaminant distribution.

5. The contents and objectives of a Site Characterization Summary Informal Technical Information Report (ITIR) are specified in the Handbook. The Site Characterization Summary ITIR shall serve as a core document for the RI report. The Contractor shall submit an annotated outline of each section of the

ITIR for approval by the TPM prior to preparation of the report itself. The Contractor shall prepare the report as specified in the accepted annotated outline. The Contractor shall submit newly revised portions of the working draft ITIR in order to make available current site characterization data. A prime objective shall be to minimize the volume of comments on the working draft and final submittals by incorporating comments into the report in an on-going manner. The final summary shall contain all sites included in this effort (Sequence No. 4).

h. Weekly Field Activities Report (para 1.3.13). Transmit a Weekly field activities report during field activities pursuant to a format developed by the AFCEE RTC. (Sequence no. 4, para 6.1)

II. Site Location and Dates

Dew Line Sites and Cape Lisburne, date to be established.

III. Base Support The base will:

3.1 Provide the Contractor with existing engineering plans, drawings, diagrams, aerial photographs, digitized map files, etc., to facilitate evaluation of IRP sites under investigation.

3.2 Arrange for personnel identification badges, vehicles passes, and/or entry permits with the contention the Contractor will provide necessary information to the base personnel no less than four weeks before needed.

3.3 Provide the Contractor with all previously approved documents which provide information on all IRP efforts conducted at Dew Line Sites and Cape Lisburne and will aid in the determination of the amount of field work and analyses which need to be conducted.

IV. Government Furnished Property
Not Applicable

V. Government Points of Contact:

5.1 MAJCOM Coordinator

Major James R. Williams III
AFCEE/ERD
8001 Inner Circle DR STE 2
Brooks AFB TX 78235-5328
(210) 536-5243
DSN 240-5243
(210) 536-9026 FAX
DSN 240-9026

5.2 Restoration Team Chief

Mr. Michael F. McGhee
AFCEE/ERD
8001 Inner Circle DR STE 2
Brooks AFB TX 78235-5328
(210) 536-5293
DSN 240-5293
(210) 536-9026 FAX
DSN 240-9026

5.3 Base Point of Contact (POC)

Mr. Jim Wolfe
11 CEOS/CEVR
21885 Second Street
Elmendorf AFB AK 99506-4420
(907) 552-4532
DSN 317-552-4532
(907) 552-1533 FAX
DSN 317-552-1533

5.4 Public Affairs Coordinator

Ms. Wende Wolf
11 CEOS/DEVR
21885 Second Street
Elmendorf AFB AK 99506-4420
(907) 552-4532
DSN 317-552-4532
(907) 552-1533 FAX
DSN 317-552-1533

VI. Deliverables

6.1 Attachment 1 of the Basic Contract

Sequence numbers 1 and 5 listed in attachment 1 to the basic contract apply to all orders. Guidance for preparing R&D Status Reports (sequence 1) is contained in the Handbook, section 4. In addition, the sequence numbers and dates listed below are applicable to this order:

Sequence No.	Para No.	Block 10 (freq.)	Block 11 (as of date)	Block 12 (date of 1st. submit.)	Block 13 (date of final report)	Block 14 (no. of copies)
3 (NETWORK ANALYSIS)	I.1.4.1a	QTRLY	12APR93	30APR93	a	4
4 (WORK PLAN)	I.1.4.1b	ONE/R	12APR93	30MAY93	30JULY93	b
4 (WORK PLAN ADDENDUM)	I.1.4.1b	ONE/R		2WKSDOA	15SEPT94	m
4 (SAP)	I.1.1.4c	ONE/R	12APR93	30MAY93	30JULY93	b
4 (SAP ADDENDUM)	I.1.4.1c	ONE/R		3WKSDOA	15SEPT94	n
4 (HSP)	I.1.4.1d	OTIME	12APR93	30MAY93	-	10
4 (HSP ADDENDUM)	I.1.4.1d	OTIME		2WKSDOA		5
4 (COMM. REL. PLAN)	I.1.1.4e	ONE/R	12APR93	30MAY93	31DEC93	b
16 (SPECIAL NOTIF.)	I.1.4.2	OTIME	c	c	-	3
9 (PRESNT. MATERIAL)	I.1.4.3	ASREQ	d	d	-	10
18 (MTG. RPTS)	I.1.4.4	ONE/R	e	e	-	5
3 (NEWSLETTER)	I.1.4.5	QTRLY	12APR93	30NOV93	a	f
3 (FACT SHEETS)	I.1.4.6	ASREQ	12APR93	15JUL93	g	-
3 (PUBLIC NOTICES)	I.1.4.7	ASREQ	12APR93	15JUL93	g	h
9 (PHOTO NOTEBOOK)	I.1.4.8	OTIME	12APR93	15JUL93	-	1
3 (MAILING LIST)	I.1.4.9	QTRLY	12APR93	15JUL93	a	-
3 (MAPS)	I.1.4.10	OTIME	12APR93	15JUL93	-	2
4 INFO REPOS	I.1.4.11	OTIME	31JUL93	-	31JAN94	2
3 (IRPMS Data ITIR) (Data Management) BCHCON BCHLDI BCHSLI BCHWCI BCHSAMP BCHCALC BCHLTD BCHTEST BCHRES BCHGWD	I.1.4.12	OTIME	31JUL93	31JAN94	31MAR94	2
4 DECISION DOC	I.1.4.13	ONE/R	i	i	31OCT94	b
4 RI REPORT	I.1.4.14.1	ONE/R	15SEP93	15FEB94	30APR94	b
4 RISK ASSESSMENT	I.1.4.14.2	ONE/R	1OCT93	16MAY94	15JUL94	b
4 FEASIB. STUDY	I.1.4.14.3	ONE/R	30SEPT93	30AUG94	-	b
4 RI/FS Report	I.1.4.14.4	ONE/R	30SEP93	30SEP94	1JAN95	b
4 IRP DOCUMENT	I.14.15	ONE/R	31JUL93	31OCT93	10DEC93	b
3 ANALYTICAL DATA ITIR		OTIME		01DEC94		2
3 SCREENING ALTER ITIR	I.1.4.16a	OTIME	30SEP93	30DEC93	-	10
3 DETAL ANALYSIS ALTER ITIR	I..1.4.16.b	OTIME	28 FEB94	30MAR94	-	10
1 DPM SCORING	I.1.4.16c	OTIME	30SEP93	j	j	3
3 MYLAR MAP	I.1.4.16d	OTIME	k	k	-	5
3 GEOPHYS CONT	I.1.4.16.e	OTIME	l	l	-	10
3 SOIL GAS MAP	I.1.4.16f	OTIME	l	l	-	10
4 SCS ITIR	I.1.4.16g	ONE/R	-	01FEB95	01APR95	o
~~4 SCS ITIR~~	~~I.1.4.16g~~	~~ONE/R~~	~~15SEP93~~	~~30NOV93~~	~~15FEB94~~	~~5~~
4 WEEKLY ACT REP	I.1.4.16h	WEEKLY	13AUG93	13AUG93	-	1

6.2 Reserved.

6.3 Notes

a. Submit Quarterly Thereafter.

b. One (1) first draft plan (8 copies), one (1) second draft plan (8 copies), and one (1) final plan (10 copies) are required. Incorporate Air Force comments into the second draft and final plan as specified by the RTC. Supply AFCEE/ESR with an advance copy of the first draft, second draft, and final plan for acceptance prior to distribution. Distribute the remaining copies of each plan as specified by the RTC. The second and final reports shall be submitted within three (3) weeks of receipt of comments from the RTC.

c. Primary and Secondary Documents. One first draft report (25 copies), one second draft report (25 copies), and one final report (35 bound copies plus the original camera-ready copy and a 3.5 inch disk formatted in WordPerfect 5.1 containing the document file) are required. Incorporate Air Force comments into the second draft and final reports as specified by the RTC. Supply the RTC with an advance copy of the first draft, second draft, and final reports for acceptance prior to distribution. Distribute the remaining copies as specified by the RTC .

d. Provide written notice with supporting documentation within three (3) days of telephone notification and at the direction of the RTC. Assume a maximum of 100 pages.

e. Provide within one (1) week of task/meeting completion.

f. Provide 500 copies of the Newsletters and distribute as agreed to by the RTC. This includes mailing the final product to on-base personnel and addresses on the existing mailing list.

g. Provide draft and final deliverables. Provide two advance copies to the AFCEE RTC and to the 11 CEOS Community Relations Coordinator for acceptance prior to preparation of the final deliverables.

h. Provide poster-size map.

i. Submit with the second draft Technical Report.

j. Submit with the Technical Report.

k. Provide with the Technical Report.

l. Provide within four (4) weeks of task completion.

m. Both a draft and a final addendum to the existing work plan is required for the removal actions specified in paragraph I.1.3.14. Field removal activities performed at Cape Lisburne LRRS pursuant to paragraph I.1.3.14 of this SOW shall commence upon submittal of the draft work plan to AFCEE for review. The Contractor shall distribute both versions of the work plan as specified by AFCEE.

n. The SAP addendum shall focus on the sampling and analysis activities to be conducted under the removal actions specified in paragraph I.1.3.14 of this SOW. The Contractor shall incorporate any Government comments into the final project-specific SAP. The Contractor shall distribute the SAP as specified by AFCEE.

o. A Site Characterization Summary ITIR must be prepared based on the findings of sampling and analyses conducted pursuant to the removal action specified in paragraph I.1.3.14. The Contractor shall incorporate any Government comments into the final ITIR. The Contractor shall distribute the ITIR as specified by AFCEE.

Notes:

a Unless an abbreviated list of analytes is specified under "Parameter" above, the analytical protocol shall include all analytes listed in the referenced analytical method. The methods cited are from the following sources:

"A" Methods — Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985)

"E" Methods — Methods for Chemical Analysis of Water and Wastes, EPA Manual, 600/4-79-020 (USEPA, 1983--with additions)

"SW" Methods — Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition (USEPA, 1986)

"ASTM" Methods — American Society for Testing and Materials, 1919 Race Street, Philadelphia, PA 19103

b The maximum number of second-column confirmation analyses shall not exceed fifty (50) percent of the actual number of field samples (to include duplicates, replicates, ambient, condition blanks, trip blanks, and equipment blanks). If the number of samples requiring second-column confirmation exceeds this allowance, contact the HSD Technical Project Manager. The total number of samples listed in Tables A-4 and A-5 includes the allowance applicable to each GC method. IF GC/MS, or a combination of second-column GC and GC/MS, is used, the total cost of all such analyses for a particular parameter shall not exceed the funding allowed for positive confirmation using only second-column GC.

REF 68X

68X

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. PAGE 1 OF 3

2. PROC INSTRUMENT ID NO. (PIIN)	3. SPIIN	4. EFFECTIVE DATE	5. REQUISITION/PURCHASE REQUEST PROJECT NO.	6. BCC/DMS RATING
F33615-90-D-4010	002205	20SEP94	FY7624-94-08822	

7. ISSUED BY CODE FA8900

DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIAL COMMAND
HUMAN SYSTEMS CENTER
BROOKS AFB TX 78235-5320

Buyer: EDWIN CUSTODIO HSC/PKVBC
Phone: (210)536-4493

8. ADMINISTERED BY (IF OTHER THAN BLOCK 7) CODE S2404A

DCMAO BALTIMORE
ATTN: CHESAPEAKE
200 TOWSONTOWN BLVD, WEST
TOWSON, MD 21204-5299

DUPLICATE ORIGINAL

9. CONTRACTOR NAME AND ADDRESS CODE 69148 FACILITY CODE

IF "0" FOR MULTIPLE FACILITIES SEE SECT "K"

ICF TECHNOLOGY
9300 LEE HIGHWAY
FAIRFAX VA 22031-1207

PHONE: (703)934-3000
COUNTRY: FAIRFAX

MAIL DATE

SEP 23 1994

10. SECURITY CLAS U

11. DISCOUNT FOR PROMPT PAYMENT

1ST	%	DAYS	NET DAYS
2ND	%	DAYS	OTHER IF "0"
3RD	%	DAYS	SEE SECT "E"

12. PURCHASE OFFICE POINT OF CONTACT

MVH/M1E/MVH

13. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLITCITATIONS

☐ The above numbered solicitation is amended as set forth in block 17. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation, or as amended by one of the following methods:

(a) By signing and returning _____ copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

14. THIS BLOCK APPLIES ONLY TO MODIFICATION OF CONTRACTS

☐ THIS CHANGE IS ISSUED PURSUANT TO _____
THE CHANGES SET FORTH HEREIN ARE MADE TO THE ABOVED NUMBERED CONTRACT/ORDER.

☐ THE ABOVE NUMBERED CONTRACT IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (SUCH AS CHANGES IN PAYING OFFICE, APPROPRIATION DATA, ETC.) SET FORTH HEREIN.

☐ THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF _____
IT MODIFIES THE ABOVE NUMBERED CONTRACT AS SET FORTH HEREIN.

☒ THIS MODIFICATION IS ISSUED PURSUANT TO FAR 52.232-7 PAYMENT UNDER T&M OR LABOR HOURS

15. CONTRACT ADMINISTRATION DATA

A. KIND OF MOD	B. MOD ABST RECIPIENT ADP PT	C. DATE OF SIGNATURE MODIFICATION	D. CHANGE IN CONTRACT AMOUNT INCREASE (+) DECREASE (-)	E. LOSING PO/CAO ON TRANSFER	F. GAINING PO/CAO ON TRANSFER	G. SVC/AGENCY USE
C			$ SEE SECTION G			

16. ENTER ANY APPLICABLE CHANGES

A. PAY CODE	B. EFFECTIVE DATE OF AWARD	C. CONTRACT (1) TYPE (2) KIND	D. TYPE CONTR	E. SURV CRIT	F. SPL CONTR PROVISIONS	G. PAYING OFO CODE	H. DATE SIGNED	I. SECURITY (1) CLAS (2) DATE OF DD 254

17. REMARKS *(Except as provided herein, all items and conditions of the contract, as heretofore changed, remain unchanged and in full force and effect.)* SUBJECT: INCREASE CEILING AMOUNT/ FUND OVERRUN
PROJECT MANAGER: SAMER N. KARMI, AFCEE/ERDW, BROOKS AFB, TX 78235-5328
FINANCE OFFICE: (SC1030) DFAS-COLUMBUS CENTER, DFAS-CO/CHESAPEAKE DIV
COLUMBUS, OH 43218-2262

18. ☒ CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT ☐ CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE

19. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*
BY

20. NAME AND TITLE OF SIGNER *(Type or print)*

21. DATE SIGNED

22. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*
BY

23. NAME OF CONTRACTING OFFICER *(Type or print)*
DEAN M. CARSELLO

24. DATE SIGNED
20 SEP 1994

AFMC FORM 702, JUL 92 REPLACES AFSC FORM 702, AUG 84 WHICH IS OBSOLETE

1. Pursuant to FAR 52.232-7 Payment Under Time-and-Material and Labor-Hours Contracts and in accordance with the provisions of the Basic Contract F33615-90-D-4010 and Delivery Order 0022, Mod. 05 the above delivery order is amended. The purpose of this modification is to increase the ceiling amount of this order by $330,000.00 to cover the total cost of the efforts being requested. The ceiling is being increased to cover existing work.

2. As a result of paragraph 1 above, said order is more specifically modified as follows:

a. SECTION A Cover Page: The ceiling amount in Block 20 (cover page) is increased by $330,000.00 from $3,528,878.00 to $3,858,878.00.

b. SECTION B Supplies/Services: is amended as set forth below.

Item No.	Supplies Schedule	Qty Purch Unit	Unit Price
0001	CLIN Change Sec Class: U Noun: Sampling, Analysis, and Data Acm: XA nsn: N Sites Codes: pqa: D acp: D fob: D		N
0002	CLIN Change Sec Class: U Noun: Support Acm: XA nsn: N Sites Codes: pqa: D acp: D fob: D		N
0004	CLIN Change Sec Class: U Noun: Chemical Analysis & Data Acm: XA nsn: N Sites Codes: pqa: D acp: D fob: D pr/mipr data: FY7624-94-08822		N

b. SECTION G Accounting Classification Data: is amended as set forth below:

ACRN	Acct Class Data	Appropriation/Lmt Subhead/CPN Recip DODAAD Supplemental Accounting Classification	Obligation Amount
AD	Account Establish		$330,000.00
	Unclassified	5743400 F74400	
		304 7434 434419 040000 53475 000000 674400	

pr/mipr data: FY7624-94-08822 (PR Complete)

descriptive data: AF Form 616 H94-SR-365 dated: 18 Aug 94 expiration: 22 Sep 94

XA Special ACRN Establish

descriptive data: Special ACRN XA Funds CLINs 0001, 0002, and 0004 and includes the following:

AA: $ 299,855.00 (Basic DO)
AB: 99,986.00 (Mod. -01)
2,899,511.00 (Mod. -02)
AC: 229,526.00 (Mod. -04)
AD: 330,000.00 (Mod. -05)
TOTAL $3,858,878.00

Finance Officer: Pay funds in alphabetical order.

3. Concurrence to this Unilateral Agreement is evidenced by contractor's (ICF) letter dated 8 Jun 94, incorporated herein by reference.

4. All other terms and conditions remain unchanged and in full force and effect.

REF 68X 68X

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. PAGE 1 OF 4

2. PROC INSTRUMENT ID NO. (PIIN)	3. SPIIN	4. EFFECTIVE DATE	5. REQUISITION/PURCHASE REQUEST PROJECT NO.	6. SOC/DMS RATING
F33615-90-D-4010	002206	27MAR95	FY7624-95-08452	DO-C9

7. ISSUED BY CODE FA8900

DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND
HUMAN SYSTEMS CENTER
8005 9TH STREET
BROOKS AFB TX 78235-5353
Buyer: EDWIN CUSTODIO /PKVBA
Phone: (210) 536-4493

8. ADMINISTERED BY (IF OTHER THAN BLOCK 7) CODE S2404A

DCMAO BALTIMORE
ATTN: CHESAPEAKE
200 TOWSONTOWN BOULEVARD, WEST
TOWSON MD 21204-5299

9. CONTRACTOR NAME AND ADDRESS CODE 69418 FACILITY CODE

ICF TECHNOLOGY, INC.
9300 LEE HIGHWAY
FAIRFAX, VA 22301-3000

COUNTY: FAIRFAX
PHONE: (703)934-3000

IF "X" FOR MULTIPLE FACILITIES SEE SECT "K"

ADVANCE COPY

10. SECURITY CLAS U

11. DISCOUNT FOR PROMPT PAYMENT

1 ST	%	DAYS	NET DAYS
2 ND	%	DAYS	OTHER IF "X"
3 RD	%	DAYS	SEE SECT "E"

12. PURCHASE OFFICE POINT OF CONTACT MVH/M1U/MVH

13. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in block 17. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:

(a) By signing and returning _____ copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

14. THIS BLOCK APPLIES ONLY TO MODIFICATION OF CONTRACTS

☐ THIS CHANGE IS ISSUED PURSUANT TO _____
THE CHANGES SET FORTH HEREIN ARE MADE TO THE ABOVED NUMBERED CONTRACT/ORDER.

☐ THE ABOVE NUMBERED CONTRACT IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (SUCH AS CHANGES IN PAYING OFFICE, APPROPRIATION DATA, ETC.) SET FORTH HEREIN.

☐ THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF _____
IT MODIFIES THE ABOVE NUMBERED CONTRACT AS SET FORTH HEREIN.

☒ THIS MODIFICATION IS ISSUED PURSUANT TO IAW FAR 52.232-7 PAYMENT UNDER T&M AND LABOR HOURS

15. CONTRACT ADMINISTRATION DATA

A. KIND OF MOD	B. MOD ASST RECIPIENT ADP PT	C. DATE OF SIGNATURE MODIFICATION	D. CHANGE IN CONTRACT AMOUNT INCREASE (+) DECREASE (-)	E. LOSING PO/CAO ON TRANSFER	F. GAINING PO/CAO ON TRANSFER	G. SVC/AGENCY USE
B			$ SEE SECTION G			

16. ENTER ANY APPLICABLE CHANGES

A. PAY CODE	B. EFFECTIVE DATE OF AWARD	C. CONTRACT (1) TYPE (2) KIND	D. TYPE CONTR	E. SURV CRIT	F. SPL CONTR PROVISIONS	G. PAYING OFC CODE	H. DATE SIGNED	I. SECURITY (1) CLAS (2) DATE OF DD 254

17. REMARKS (Except as provided herein, all terms and conditions of the contract, as heretofore changed, remain unchanged and in full force and effect.) SUBJECT: INCREASE TO THE CONTRACT CEILING PRICE
PROJECT MANAGER: SAMER KARMI, AFCEE/ERD, BROOKS AFB TX 78235-5353
FINANCE OFFICE: (SC1030) DFAS-COLUMBUS CENTER, DFAS-CO/CHESAPEAKE DIV
P O BOX 182264, COLUMBUS OH 43218-2264

18. ☒ CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT ☐ CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE

19. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		22. UNITED STATES OF AMERICA (Signature of Contracting Officer)	
BY		BY Janelle J. Larrison	
20. NAME AND TITLE OF SIGNER (Type or print)	21. DATE SIGNED	23. NAME OF CONTRACTING OFFICER (Type or print) JANELLE J. LARRISON	24. DATE SIGNED 95 Mar 27

AFMC FORM 702, JUL 92 REPLACES AFSC FORM 702, AUG 84 WHICH IS OBSOLETE

1. Pursuant to FAR 52.232-7 Payment Under Time-and-Material and Labor-Hours Contracts and in accordance with the provisions of the Basic Contract F33615-90-D-4010 and Delivery Order 0022, Mod. 06 the above delivery order is amended. The purpose of this modification is to increase the ceiling amount of this order by $315,000.00 to cover the total cost of the efforts being requested. The ceiling is being increased to cover existing work in the revised Work Plan.

2. As a result of paragraph 1 above, said order is more specifically modifled as follows:

a. SECTION A Cover Page: The ceiling amount in Block 20 (cover page) is increased by $315,000.00 from $3,858,878.00 to $4,173,878.00.

b. SECTION B Supplies/Services: is amended as set forth below.

Item No.	Supplies Schedule	Qty Purch Unit	Unit Price
0001	CLIN Change Sec Class: U Noun: Sampling, Analysis, and Data Acm: XA nsn: N Sites Codes: pqa: D acp: D fob: D		N
0002	CLIN Change Sec Class: U Noun: Support Acm: XA nsn: N Sites Codes: pqa: D acp: D fob: D		N
0004	CLIN Change Sec Class: U Noun: Chemical Analysis & Data Acm: XA nsn: N Sites Codes: pqa: D acp: D fob: D		N
	pr/mipr data: FY76-95-08452		

c. SECTION F Supplies schedule Data: The delivery schedule is modified as set forth below:

Item No.	Supplies Schedule Data		Delivery Quantity	Schedule Date
0001	CLIN Del Sch Change acm: XA ship to: U	Sec Class: U	1	96 Jan 31
0002	CLIN Del Sch Change acm: XA ship to: U	Sec Class: U	1	96 Jan 31
0004	CLIN Del Sch Change acm: XA ship to: U	Sec Class: U	1	96 Jan 31

b. SECTION G Accounting Classification Data: is amended as set forth below:

ACRN	Acct Class Data	Appropriation/Lmt Subhead/CPN Recip DODAAD Supplemental Accounting Classification	Obligation Amount
AE	Account Establish Unclassified	5753400 F74400 305 7434 434419 040000 53440 000000 674400	$315,000.00

pr/mipr data: FY7624-95-08452 (PR Complete)

descriptive data: AF Form 616 H95-SR-298 dated: 1 Mar 95, expiration 15 Sep 95.

XA Special ACRN Establish

descriptive data: Special ACRN XA Funds CLINs 0001, 0002, and 0004 includes the following:

AA: $ 299,855.00 (Basic DO)
AB: 99,986.00 (Mod.-01)
2,899,511.00 (Mod.-02)
AC: 229,526.00 (Mod.-04)
AD: 330,000.00 (Mod.-05)
AE: 315,000.00 (Mod.-06)
$4,173,878.00

Finance Officer: Pay funds in alphabetical order.

3. Concurrence to this Unilateral Agreement is evidenced by contractor's (ICF) letter dated 18 Jan 95, incorporated herein by reference.

4. All other terms and conditions remain unchanged and in full force and effect.

APPENDIX D

SAMPLE COLLECTION LOGS

SAMPLE COLLECTION LOGS FOR THE LANDFILL AND WASTE ACCUMULATION AREA
(LF01)

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S01

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, slight breeze

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 750 MAGNETIC HEADING: 108°

FIXED POINT: Benchmark

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 11:15 DEPTH OF SAMPLE (feet): 12-16"

SAMPLE DESCRIPTION/COMMENTS: Taken from the interface of the gravel cover and the tundra, coarse, brown, sandy silt with significant amounts of organic material.

SAMPLING METHOD: Hand auger, grab sample

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S02

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, sunny, ~10 mph wind from the north, ~42°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 650 MAGNETIC HEADING: 114

FIXED POINT: Benchmark

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 11:30 DEPTH OF SAMPLE (feet): 8-12"

SAMPLE DESCRIPTION/COMMENTS: Taken at the gravel/tundra interface, sampled from the top of the water table, sandy silt and silty sand lenses.

SAMPLING METHOD: Hand auger, grab sample

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES	✓			TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓			TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S03

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, windy, 50°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 560 MAGNETIC HEADING: 86°

FIXED POINT: Benchmark

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, DN

TIME SAMPLED: 13:20 DEPTH OF SAMPLE (feet): 4' 4"

SAMPLE DESCRIPTION/COMMENTS: Gravelly sand. (GW). Very fine to coarse sand, gravel to 1/2 inch. Loose, wet, gray-brown. Collected just above water table, directly below water table is a pea gravel.

SAMPLING METHOD: Hand auger, grab sample

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S04

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, slight drizzle, 10 mph wind, 50°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 360 MAGNETIC HEADING: 82°

FIXED POINT: Benchmark

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 14:12 DEPTH OF SAMPLE (feet): 4

SAMPLE DESCRIPTION/COMMENTS: Dark brown, silty sand, moist to wet, at active zone - permafrost interface.

SAMPLING METHOD: Grab (bucket auger)

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓			TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S05

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, windy, 50°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 775 MAGNETIC HEADING: 240°

FIXED POINT: Benchmark

SAMPLE MATRIX:- ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: DN

TIME SAMPLED: 14:05 DEPTH OF SAMPLE (feet): 5"

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel (GP). Gravel to 2 inches, fine to coarse sand, firm, moist, brown/black. Sample is from a small stained area. Collected just over water table.

SAMPLING METHOD: Grab - soil scoop.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		
14:10	3 BH				

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S06

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, 10 mph wind, 50°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 935 MAGNETIC HEADING: 247°

FIXED POINT: Benchmark

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 14:57 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Black sludge soaked tundra.

SAMPLING METHOD: Grab (scoop)

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-S09

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		
14:57	11.1				

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S07

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, 50°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 935 MAGNETIC HEADING: 247°

FIXED POINT: Benchmark

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 15:20 DEPTH OF SAMPLE (feet): 10"

SAMPLE DESCRIPTION/COMMENTS: Black sludgy, gravelly silt sitting on water table; possibly some free product adhering to some gravel particles.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		
15:18	85 ppm				

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S08

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, windy, 50°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 297 MAGNETIC HEADING: 260°

FIXED POINT: Benchmark

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: DN, SS

TIME SAMPLED: 15:00 DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Peat, rich, brown, moist.

SAMPLING METHOD: Hand auger - grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS			
		WATER	SOIL			WATER		SOIL	
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz	
PCB	✓			SVOC (8270)		1 liter		8 oz	
PESTICIDES				TOTAL METALS		1 liter		8 oz	
HVOC 8010	✓	1 x 40 ml	4 oz	DISS METALS		1 liter		---	
VOC-BTEX 8020	✓			TDS		250 ml		---	
				TSS		250 ml		---	
				TOC		500 ml		4 oz	
				TCLP		2 liters		2 x 8 oz	

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-S09

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, 10 mph wind, 50°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Benchmark

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 15:02 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Black sludge soaked tundra.

SAMPLING METHOD: Grab (scoop)

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-S06

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		
15:02	11.1				

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-LF01-2S11

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 40°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 48 MAGNETIC HEADING: West

FIXED POINT: 48 feet west of 2SD10, 8 feet north of 2SD10.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 16:45 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Silty peat

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-LF01-3S12

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 23°, windy

SITE/AOC: Sludge/Tar Pile (LF01) FEET FROM FIXED POINT: Scarp MAGNETIC HEADING: N

FIXED POINT: 30 feet from where draiange pathway meets beach (scarp).

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 21:10 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Coarse sand with thin layer of dark silt on top.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-LF01-3S13-1

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 35°, windy

SITE/AOC: Sludge/Tar Pile (LF01) FEET FROM FIXED POINT: Scarp MAGNETIC HEADING: N

FIXED POINT: Same as 3S12 location. 30 feet north of scarp.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Coarse sand with some fine sands.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-LF01-3S14

RADAR STATION: Cape Lisburne WEATHER: Cold, windy

SITE/AOC: Sludge/Tar Pile (LF01) FEET FROM FIXED POINT: 10 MAGNETIC HEADING: N

FIXED POINT: Scarp at end of drainage, 10 feet north of metal at scarp.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Medium to fine sand.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		DISS METALS		1 liter		---
VOC-BTEX 8020			4 oz	TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-LF01-3S15-1

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 35°, windy

SITE/AOC: Sludge/Tar Pile (LF01) FEET FROM FIXED POINT: 10 MAGNETIC HEADING: N

FIXED POINT: Metal debris at end of drainage pathway and scarp.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Medium to fine, coarse sands.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S23

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 158 MAGNETIC HEADING: N

FIXED POINT: Power pole south of road and south of gravel area.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 18:35 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Dark, brown, silty gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
14:52				≥10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S24-2

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 158 MAGNETIC HEADING: N

FIXED POINT: Power pole south of road and south of gravel area.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 18:45 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Silty sand, peaty, highly organic.

SAMPLING METHOD: Shovel/scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PBC IA SCREENING	DATE
14:52				≥1, <10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S25

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 149' N, 45' E MAGNETIC HEADING: N

FIXED POINT: Power pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 19:00 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Blackish, redish brown, peaty, fine, sandy gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-3S33

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
17:10				≥10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S26-2

RADAR STATION: Cape Lisburne WEATHER: Clear, 45°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 149' N, 45' E MAGNETIC HEADING: N

FIXED POINT: Power pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 19:15 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS:

SAMPLING METHOD: Shovel/scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
10:50				≥1, 10	09/12/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
		FIELD TEST		TSS		250 ml	---
PCB I-A	✓		8 oz	TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S27

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 117 MAGNETIC HEADING: N

FIXED POINT: Pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 20:10 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Silty, fine sand, dark brown, sample taken one foot south of Woodward-Clyde sample 4014.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-3S32

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
17:10				≥1, <10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S28

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 90 MAGNETIC HEADING: N

FIXED POINT: Pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 19:30 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Brownish black, sandy, gravelly peat.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
17:10				≥1, <10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S29-2

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 90 MAGNETIC HEADING: N

FIXED POINT: Pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 19:40 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Black/brown, peaty, sandy gravel.

SAMPLING METHOD: Shovel/scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
17:10				<1	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		FIELD TEST		TSS		250 ml		---
PCB I-A	✓		8 oz	TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S30

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 90' N, 45' E MAGNETIC HEADING: N

FIXED POINT: Pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 19:50 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Grayish brown, sandy gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
21:55				≥1, <10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		FIELD TEST		TSS		250 ml		---
PCB I-A	✓		8 oz	TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S31-2

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 90' N, 45' E MAGNETIC HEADING: N

FIXED POINT: Pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 20:00 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Bluish gray, sandy gravel.

SAMPLING METHOD: Shovel/scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
21:55				≥10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S32

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 117 MAGNETIC HEADING: N

FIXED POINT: Pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 20:20 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Silty, fine sand, dark brown, sample taken one foot south of WC sample 4014

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-3S27

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
21:55				≥1, <10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB IA	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3S33

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: 149' N, 45' E MAGNETIC HEADING: N

FIXED POINT: Power pole

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 23:57 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: *Time was actually 19:00, but written differently for lab replicate purposes.) Blackish, redish brown, peaty, fine, sandy gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-3S25

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
21:55				≥10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		FIELD TEST		TSS		250 ml		---
PCB I-A	✓		8 oz	TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 05/07/95 SAMPLE ID: LIS-LF01-4S35-2

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Chris Cearlock, John Frerich

TIME SAMPLED: 18:40 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Collected from center of the east sidewall of the excavation near the base.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES*	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
DRPH (AK102)	✓	1 liter			TSS		250 ml		---
GRPH (AK101)	✓				TOC		500 ml		4 oz
RRPH (AK103)	✓				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 05/07/95 SAMPLE ID: LIS-LF01-4S40-5

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Chris Cearlock, John Frerich

TIME SAMPLED: 19:25 DEPTH OF SAMPLE (feet): 5

SAMPLE DESCRIPTION/COMMENTS: Collected from the bottom and center of the excavation.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)	✓	3 x 40 ml	4 oz
PCB	✓			SVOC (8270)	✓	1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
DRPH (AK102)	✓	1 liter		TSS		250 ml	---
GRPH (AK101)	✓			TOC		500 ml	4 oz
RRPH (AK103)	✓			TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 05/07/95 SAMPLE ID: LIS-LF01-4S44-4

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Chris Cearlock, John Frerich

TIME SAMPLED: 19:50 DEPTH OF SAMPLE (feet): 4

SAMPLE DESCRIPTION/COMMENTS: Collected at the base of the west side wall of the excavation, in the middle lengthwise.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
DRPH (AK102)	✓	1 liter			TSS		250 ml		---
GRPH (AK101)	✓				TOC		500 ml		4 oz
RRPH (AK103)	✓				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S51

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: S

FIXED POINT: Four feet from road edge.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected north of road across from gravel area #1; field screen only.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A Screening (ppm)	
				<1	

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S52-1

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: S

FIXED POINT: Four feet from edge of road.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): One

SAMPLE DESCRIPTION/COMMENTS: Collected below 5S51; field screen only; collected at peat/gravel interface

SAMPLING METHOD: Shovel, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				<1

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S53

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 40 feet north of road edge (also 29 feet east of 3S30 and 20 feet southwest of 5S55)

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson, John Frerich

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected from gravel pad at gravel area #1; field screen only.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
		1 liter		TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S54-2

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 40 feet north of road edge (also 29 feet east of 3S30 and 20 feet southwest of 5S55)

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Collected below 5S53; field screen only; oil intrusions, encountered drum, hit frozen ground

SAMPLING METHOD: Shovel, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S55

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 20 feet northwest of 5S53

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs, John Frerich

TIME SAMPLED: 07:47 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected from drainage pathway approximately five feet east of gravel pad at gravel area #1, in tundra area.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥1, ≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
		1 liter		TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S56

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 40 feet north of road edge (35 feet west of 3S30)

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson, John Frerich

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected from gravel pad at gravel area #1; field screen only.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S57-1.5

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson, John Frerich

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 1.5

SAMPLE DESCRIPTION/COMMENTS: Collected below 5S56; field screen only, water with sheen in hole, refusal depth due to hitting drum.

SAMPLING METHOD: Shovel, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S58

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson, John Frerich

TIME SAMPLED: 08:03 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected from gravel pad at gravel area #1.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥1, ≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S59-2

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Collected below 5S58; field screen only.

SAMPLING METHOD: Shovel, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S60

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 . FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 72 feet north of road edge; 26 feet east of 5S58.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected from gravel pad at gravel area #1; field screen only.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S61-2

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: Road MAGNETIC HEADING: _____

FIXED POINT: 72 feet north of road; 26 feet east of 5S58.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Collected below 5S60; field screen only. Water with sheen in hole.

SAMPLING METHOD: Shovel, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
		1 liter		TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S62

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 111 feet north of road edge (22 feet southwest of 5S65 and 11 feet north northwest of 3S33).

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected on gravel pad at gravel area #1; field screen only.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				≥10

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES*	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S63-2

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 111 feet north of road edge.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: _____

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Collected below 5S52; field screen only. Water with sheen in hole.

SAMPLING METHOD: Shovel, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				<1

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		1 liter		TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S64

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 20 feet north-northwest of 3S23.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 0.5

SAMPLE DESCRIPTION/COMMENTS: Collected in tundra drainage pathway north of gravel area #1; field screen only.

SAMPLING METHOD: Grab, dedicated scoop (shovel)

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				<1

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S65

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 22 feet northeast of 5S62.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 10:24 DEPTH OF SAMPLE (feet): 0.5

SAMPLE DESCRIPTION/COMMENTS: Collected in tundra in drainage pathway north of gravel area #1.

SAMPLING METHOD: Grab, dedicated scoop (shovel)

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				<1

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S66

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 64 feet north of 5S65.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): 0.5

SAMPLE DESCRIPTION/COMMENTS: Collected in tundra in drainage pathway north of gravel area #1; field screen only.

SAMPLING METHOD: Shovel, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				<1

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S67

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 30 feet north of road edge.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs

TIME SAMPLED: . DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected from stained area on the west edge of gravel area #2; field screen only.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				<1

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S68

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 27 feet north of road edge, 11 feet east of 5S67.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs

TIME SAMPLED: 11:05 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected from a stained area on gravel area #2.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				<1

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
DRPH (AK102)	✓	1 liter		8 oz	TSS		250 ml		---
GRPH (AK101)	✓				TOC		500 ml		4 oz
RRPH (AK103)	✓				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/24/95 SAMPLE ID: LIS-LF01-5S69

RADAR STATION: Cape Lisburne WEATHER: Overcast, cold

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 32 feet north of 5S68, 31 feet north of 5S67.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected at a small stained spot at the north end of gravel area #2; field screen only.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB I/A SCREENING (ppm)
				<1

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/25/95 SAMPLE ID: LIS-LF01-5S70

RADAR STATION: Cape Lisburne WEATHER: Overcast, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 30 feet north of 5S55.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson

TIME SAMPLED: 17:15 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected in tundra area downgradient of 5S55, contained lots of vegetation.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS				
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB 1/A SCREENING (ppm)
				<1, ??? (reading for 10 ppm was -0.00)

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/26/95 SAMPLE ID: LIS-LF01-5S71

RADAR STATION: Cape Lisburne WEATHER: Overcast, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 26 feet north of 5S70.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson

TIME SAMPLED: 11:30 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected in tundra in drainage pathway from gravel area #1.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/26/95 SAMPLE ID: LIS-LF01-5S72

RADAR STATION: Cape Lisburne WEATHER: Overcast, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 16 feet north of 5S70.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson

TIME SAMPLED: 11:35 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected in tundra drainage pathway in the south end of a large pond between gravel areas #1 and #2.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
		1 liter		TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/26/95 SAMPLE ID: LIS-LF01-5S73

RADAR STATION: Cape Lisburne WEATHER: Overcast, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 11 feet northeast of 5S65.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, Jeff Dawson

TIME SAMPLED: 11:39 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected in tundra north of gravel area #1.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SD01

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 40°F

SITE/AOC: LF01 - Landfill FEET FROM FIXED POINT: 575 MAGNETIC HEADING: 129°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC, JP

TIME SAMPLED: 09:40 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SW01. Brown, silty peat, saturated, heavy organics.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-LF01-SD02

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 40°F

SITE/AOC: LF01 - Landfill FEET FROM FIXED POINT: 730 MAGNETIC HEADING: 80°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, RC

TIME SAMPLED: 10:05 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SW02. Brown-gray, coarse to fine sand, saturated.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SD03

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 40°F

SITE/AOC: LF01 - Landfill FEET FROM FIXED POINT: 190 MAGNETIC HEADING: 83°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC

TIME SAMPLED: 10:50 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SW03. Silty sand, saturated, fine to coarse gravel.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-SD08

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SD04

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, windy, 50°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 30 MAGNETIC HEADING: 108°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: DN

TIME SAMPLED: 11:40 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Organic muck.

SAMPLING METHOD: Grab, soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES.	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓			TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SD05

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 45°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 71 MAGNETIC HEADING: 220°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC; JP

TIME SAMPLED: 13:25 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Brown, silty, saturated peat, trace sand.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SD06

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 45°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 950 MAGNETIC HEADING: 248°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC, JP

TIME SAMPLED: 14:35 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SW05. Black, gravelly silt, heavy organics, trace sand, saturated.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SD07

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 45°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 980 MAGNETIC HEADING: 260°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC, JP

TIME SAMPLED: 15:25 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SW06. Silty peat, saturated.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓			TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SD08

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, windy, 40°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 190 MAGNETIC HEADING: 83°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC, JP

TIME SAMPLED: 10:50 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Silty sand, saturated, fine to coarse gravel, brown to dark brown.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-SD03

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-LF01-2SD09

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, drizzle, 37°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 76° to benchmark, 251° to radome, 264° to POL Tank 1A

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 16:25 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-LF01-2SD10

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, drizzle, 37°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 132 MAGNETIC HEADING: _____

FIXED POINT: 132 feet north of LF01-SD09.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 16:35 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Organic muck and roots.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-LF01-2SD11

RADAR STATION: Cape Lisburne WEATHER: Overcast, breezy, 37°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 81° to benchmark, 244.5° to radome, 278° to Tank 1A

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 17:00 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Dark olive green muck with high organic content.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH	✓	1 liter	8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-LF01-2SD12

RADAR STATION: Cape Lisburne WEATHER: Overcast, breezy, 37°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 53 feet west of LF01-SD11.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 17:15 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Downstream of LF01-2SD11.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-LF01-2SD13

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, drizzle, 37°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 76° to benchmark, 251° to radome, 264° to POL Tank 1A

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 16:25 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-LF01-2SD09

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD01

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 (Beach) FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 50 yards west 5SD02.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, John Frerich

TIME SAMPLED: 10:08 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected at ocean shoreline (shore/ocean interface). Medium to coarse grained sand with some small well rounded gravel.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-LF01-3SD23

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 35°, windy

SITE/AOC: LF01 FEET FROM FIXED POINT: 174 MAGNETIC HEADING: N

FIXED POINT: End of drainage pathway at scarp.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 21:40 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Sediment of ocean sands, caught between waves, well sorted, coarse sand.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD02

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 (Beach) FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Collected north of drainage from excavation (approximately 50 yards).

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs, John Frerich

TIME SAMPLED: 10:09 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected at shore/ocean interface. Medium grained sand.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD03-1

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 (Beach) FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Approximately 2 yards south of 5SD02.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 10:13 DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Collected on beach near ocean/shore interface.

SAMPLING METHOD: Shovel, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD04

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 (Beach) FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Approximately 50 yards east of 5SD02.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Sophia Fuchs

TIME SAMPLED: 10:18 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected at ocean/shore interface.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD05

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 (Beach) FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Approximately 30 yards east of 5SD04.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Sophia Fuchs

TIME SAMPLED: 10:22 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected at ocean/shore interface.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD06

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 (Beach) FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Collected approximately 30 yds north of drainage/scarp from excavation drainage and 20 yds south of ocean.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 10:32 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Sample was collected from below approximately four feet of snow.

SAMPLING METHOD: Dig through snow, grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD07

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 (Beach) FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Approximately 100 yards east of 5SD05.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs

TIME SAMPLED: 09:52 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected at ocean/shore interface, north of containment cell.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD08

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Collected at scarp approximately 50 yards from ocean.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 10:50 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Fine sand with organic material, black

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-LF01-5SD09

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Collected at scarp approximately 50 yards from ocean.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 10:55 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Collected at scarp in drainage from gravel area #1.

SAMPLING METHOD: Grab, dedicated scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/27/95 SAMPLE ID: LIS-LF01-5SD11

RADAR STATION: Cape Lisburne WEATHER: Cloudy, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3 GPS points: 68°52'27N, 166°04'39W/68°52'27N, 166°04'40W/ and 68°52'24N, 166°04'44W

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW) ■ Ocean Sediment

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:15 DEPTH TO SAMPLE (feet): 4.66 meters

SAMPLE DESCRIPTION/COMMENTS: Fine to medium grained sand, very well sorted.

SAMPLING METHOD: Lamonts sampler into pie pan then dedicated scoop.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/27/95 SAMPLE ID: LIS-LF01-5SD12

RADAR STATION: Cape Lisburne WEATHER: Cloudy, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3 GPS points: 68°52'31N, 166°04'45W/68°52'29N, 166°04'42W/ and 68°52'25N, 166°04'41W

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW) ■ Ocean Sediment

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:42 DEPTH TO SAMPLE (feet): 5.7 meters

SAMPLE DESCRIPTION/COMMENTS: Fine to medium grained very well sorted sand.

SAMPLING METHOD: Lamonts sampler into pan then dedicated scoop.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/27/95 SAMPLE ID: LIS-LF01-5SD13

RADAR STATION: Cape Lisburne WEATHER: Cloudy, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3 GPS points: 68°52'27N, 166°04'28W/68°52'25N, 166°04'29W/ and 68°52'27N, 166°04'24W

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW) ■ Ocean Sediment

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 16:23 DEPTH TO SAMPLE (feet): 5.8 meters

SAMPLE DESCRIPTION/COMMENTS: Very coarse sand to gravel up to 1.5 inches.

SAMPLING METHOD: Lamonts sampler into pan then dedicated scoop.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WAI; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SW01

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 40°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 575 MAGNETIC HEADING: 129°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC

TIME SAMPLED: 09:30 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SD01.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
09:40	6.8	1,130 µS	4°C		

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SW02

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 40°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 730 MAGNETIC HEADING: 80°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC

TIME SAMPLED: 10:10 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SD02. Pond east of site.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
10:05	7.9	400	4°C	1,000	400

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020	✓				TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SW03

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 40°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 190 MAGNETIC HEADING: 83°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC

TIME SAMPLED: 10:45 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SD03. Stream runs across landfill and onto beach, south to north.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
10:45	7.6	240 µS	4°C	1.002	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SW04

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, windy, 40°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 71 MAGNETIC HEADING: 220°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC

TIME SAMPLED: 13:20 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SD05.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
13:10	8.0	470 µS	7°C	1.000	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020	✓				TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SW05

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 45°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 950 MAGNETIC HEADING: 248°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC, JP

TIME SAMPLED: 14:30 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SD06.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
14:25	7.7	980 µS	1°C	1.000	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)	✓	3 x 40 ml	4 oz
PCB	✓			SVOC (8270)	✓	1 liter	8 oz
PESTICIDES				TOTAL METALS	✓	1 liter	8 oz
HVOC 8010	✓	1 x 40 ml	4 oz	DISS METALS	✓	1 liter	---
VOC-BTEX 8020	✓			TDS	✓	250 ml	---
				TSS	✓	250 ml	---
				TOC	✓	500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SW06

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, windy, 45°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 980 MAGNETIC HEADING: 260°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC

TIME SAMPLED: 15:10 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SD07.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ■ Duplicate of Water Sample ID LIS-LF01-SW07

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
15:00	8.3	260 µS	4°C	1.002	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)	✓	3 x 40 ml	4 oz
PCB	✓			SVOC (8270)	✓	1 liter	8 oz
PESTICIDES				TOTAL METALS	✓	1 liter	8 oz
HVOC 8010	✓	1 x 40 ml	4 oz	DISS METALS	✓	1 liter	---
VOC-BTEX 8020	✓			TDS	✓	250 ml	---
				TSS	✓	250 ml	---
				TOC	✓	500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-LF01-SW07

RADAR STATION: Cape Lisburne WEATHER: Partly cloudy, windy, 45°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 980 MAGNETIC HEADING: 260°

FIXED POINT: Benchmark

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC

TIME SAMPLED: 15:15 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-LF01-SD07. Silty, peat, unsaturated.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ■ Duplicate of Water Sample ID LIS-LF01-SW06

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
15:00	8.3	260 µS	4°C	1.002	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020	✓				TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-LF01-2SW08

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, drizzle, 37°F

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 81° to benchmark, 244.5° to radome, 278° to Tank 1A

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: DN, AP, RT

TIME SAMPLED: 17:00 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Dark olive green muck with high organic content

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ■ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz
					VPH	✓			

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-LF01-2SW09

RADAR STATION: Cape Lisburne WEATHER: Cool, rained earlier

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 190 MAGNETIC HEADING: 83°

FIXED POINT: 30 feet downstream of SW03.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JF

TIME SAMPLED: 16:45 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Stream runs across landfill and onto beach, south to north.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ■ Duplicate of Water Sample ID LIS-LF01-2SW10

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz
					VPH	✓			

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 . SAMPLE ID: LIS-LF01-2SW10

RADAR STATION: Cape Lisburne WEATHER: Cool, rained earlier

SITE/AOC: Landfill LF01 FEET FROM FIXED POINT: 30' downstream from SW03 MAGNETIC HEADING: ____

FIXED POINT: SW03. From benchmark, 190 feet, 83°

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JF

TIME SAMPLED: 16:45 DEPTH OF SAMPLE (feet): ____

SAMPLE DESCRIPTION/COMMENTS: Stream runs across landfill and onto beach, north to south

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ■ Duplicate of Water Sample ID LIS-LF01-2SW09

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID ____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)	✓	3 x 40 ml	4 oz
PCB				SVOC (8270)	✓	1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOGS FOR THE WHITE ALICE SITE (SS03)

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS03-S01

RADAR STATION: Cape Lisburne WEATHER: Overcast, fog, windy, 35°F

SITE/AOC: White Alice Site SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 8 feet in building from doorway, 8 feet in from right doorway on northwest side of building (inside).

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SF

TIME SAMPLED: 10:35 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Black, sand material from floor in White Alice Building.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 8/30/93 SAMPLE ID: LIS-SS03-S02-0.33

RADAR STATION: Cape Lisburne WEATHER: Overcast, fog, 35°F, wind

SITE/AOC: White Alice Site SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 5 ft out from door of White Alice Bldg, double door on NW side of bldg 5 ft of RT doorway on NW side of bldg.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SF.

TIME SAMPLED: 10:45 DEPTH OF SAMPLE (feet): 0 - 0.33

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, 1/4" - 2" gravel, angular, brown, medium to coarse sand.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS03-S03

RADAR STATION: Cape Lisburne WEATHER: Overcast, fog, windy, 35°F

SITE/AOC: White Alice Site SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3 feet out from loading door on NE side of building, 1 foot outside right doorway on NE side of building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SF

TIME SAMPLED: 10:55 DEPTH OF SAMPLE (feet): 0 - 0.33

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, angular 1/4" - 1.5" gravel, medium to coarse sand.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 8/30/93 SAMPLE ID: LIS-SS03-S04-1.75

RADAR STATION: Cape Lisburne WEATHER: Overcast fog, windy, 35°F

SITE/AOC: White Alice Site SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 5 feet out from double door on NW side of White Alice Building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 11:10 DEPTH OF SAMPLE (feet): 1.75

SAMPLE DESCRIPTION/COMMENTS: Gravelly sand, 1/8" - 1.5" gravel, angular, medium to coarse brown sand.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 8/30/93 SAMPLE ID: LIS-SS03-S05-0.25

RADAR STATION: Cape Lisburne WEATHER: Overcast fog, windy, 35°F

SITE/AOC: White Alice Site SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3 ft W of bottom of stain outside door on NW side of building, 4' outside of L doorway on NW side of building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SF

TIME SAMPLED: 11:20 DEPTH OF SAMPLE (feet): 0 - 0.25

SAMPLE DESCRIPTION/COMMENTS: Brown sand gravel, 1/8" - 1" angular to rounded gravel medium to coarse sand.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 8/30/93 SAMPLE ID: LIS-SS03-S06-0.25

RADAR STATION: Cape Lisburne WEATHER: Overcast fog, windy, 35°F

SITE/AOC: Upper Transformer SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Midpoint between stairways on SE side of building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP

TIME SAMPLED: 11:15 DEPTH OF SAMPLE (feet): 0 - 0.25

SAMPLE DESCRIPTION/COMMENTS: Sand - gravel, fine - medium sand, 1/4" -1.5", angular gravel.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-SS03-2S07-2

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 32°F, snow

SITE/AOC: White Alice SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 15' feet outside double doors on N side of main building, 10 feet NW of LIS-SS03-S02.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SS

TIME SAMPLED: 14:40 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Gravelly sand, fine - coarse sand, 1/2" - 3" gravel, angular limestone, gravel larger than 1" removed from sample.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS03-2S13

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-SS03-2S08

RADAR STATION: Cape Lisburne WEATHER: Overcast, snow, 32°F, windy

SITE/AOC: White Alice Site SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 12 feet N of double door entrance to White Alice Building, 9 feet NE of LIS-SS03-S02.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, JD

TIME SAMPLED: 14:45 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, fine to coarse sand, 1/2" - >3" gravel, angular limestone, gravel larger than 1" removed from sample.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-SS03-2S09-2.5

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 32°F

SITE/AOC: White Alice SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 10 feet NE of south set of loading doors on east side of White Alice Building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, JD

TIME SAMPLED: 14:50 DEPTH OF SAMPLE (feet): 2.5

SAMPLE DESCRIPTION/COMMENTS: Silty gravel, 10% gravel, 1/4" to >3" angular limestone, gravel larger than 1" removed from sample, wet, overflow vent located near sample location, sample had sweet smell.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-SS03-2S10-1.5

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 32°F

SITE/AOC: White Alice SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 15 feet east of south set of double loading dock doors on east side of White Alice Building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, JD

TIME SAMPLED: 15:00 DEPTH OF SAMPLE (feet): 1.5

SAMPLE DESCRIPTION/COMMENTS: Silty gravel 1/4" to >3" angular limestone, moist, 90% gravel, gravel larger than 1" removed from sample, sample taken above bedrock.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-SS03-2S11-2.5

RADAR STATION: Cape Lisburne WEATHER: Overcast

SITE/AOC: White Alice SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 7 feet southeast of south set of double loading bay doors on east side of White Alice Building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, JD

TIME SAMPLED: 14:55 DEPTH OF SAMPLE (feet): 2.5

SAMPLE DESCRIPTION/COMMENTS: Silty gravel, 90% gravel, 1/4" to >3" angular limestone, moist, gravel larger than 1" removed from sample.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-SS03-2S13-2

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy 30°F, snow

SITE/AOC: White Alice SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 15' outside double doors on N side of White Alice Building, 10' NW of LIS-SS03-S02.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, JD

TIME SAMPLED: 15:05 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, fine to coarse sands, 1/2" to > 3" gravel, angular limestone, gravel > 1" removed from sample.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS03-2S07

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S14

RADAR STATION: Cape Lisburne WEATHER: Foggy and light rain, low wind

SITE/AOC: SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: West side of building, double doors - south side - see back.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 14:05 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Angular gravel (up to four inches), with sand.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
17:00				ND	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S15-1

RADAR STATION: Cape Lisburne WEATHER: Foggy and light rain, light north wind

SITE/AOC: SS03 FEET FROM FIXED POINT: 5 MAGNETIC HEADING: _____

FIXED POINT: Center of double doors, northwest side of White Alice Building (see back).

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 14:20 DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Angular gravel to one inch, some coarse sand.

SAMPLING METHOD: Shovel and scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS03-3S24-1

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
14:45				(>1) ≥10	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S16-0.5

RADAR STATION: Cape Lisburne WEATHER: Foggy; light rain; very light wind

SITE/AOC: SS03 FEET FROM FIXED POINT: 16 MAGNETIC HEADING: ____

FIXED POINT: Center of double doors, northwest side of the White Alice Building (see back).

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 14:00 DEPTH OF SAMPLE (feet): 0.5

SAMPLE DESCRIPTION/COMMENTS: Dark brown, silty gravel, 10 feet north of the old sample location.

SAMPLING METHOD: Shovel and scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID ____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID ____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
11:20				ND	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TOC		500 ml		4 oz
PCB I-A	✓			8 oz	TSS		250 ml		---
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S17-1

RADAR STATION: Cape Lisburne WEATHER: Foggy; light rain; light wind

SITE/AOC: SS03 FEET FROM FIXED POINT: 12' out MAGNETIC HEADING: _____

FIXED POINT: White Alice Building, twelve feet out from northwest side of building; 5 feet northeast of old sample location 2S08.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 14:55 DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Light, yellowish brown, angular sandy gravel.

SAMPLING METHOD: Shovel and scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
17:00				ND	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
		FIELD TEST		TOC		500 ml	4 oz
PCB I-A	✓			TSS		250 ml	---
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S18

RADAR STATION: Cape Lisburne WEATHER: Foggy; light rain; light wind

SITE/AOC: SS03 FEET FROM FIXED POINT: 3 MAGNETIC HEADING: _____

FIXED POINT: Perpendicular to the door of the center doorway on the NW side of the White Alice Building (doorway with stairs).

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 15:45 DEPTH OF SAMPLE (feet): Surface (3-inches)

SAMPLE DESCRIPTION/COMMENTS: Angular gravel up to four inches with a coarse sand, yellowish-brown color.

SAMPLING METHOD: Shovel and scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
11:20				≥10	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TOC		500 ml		4 oz
PCB I-A	✓			8 oz	TSS		250 ml		---
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S19

RADAR STATION: Cape Lisburne WEATHER: Foggy

SITE/AOC: SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Door of stairway in center of the northwest side of White Alice Building, 1' out perpendicular and 2' out towards stairs parallel to building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 15:30 DEPTH OF SAMPLE (feet): Surface (3-inches)

SAMPLE DESCRIPTION/COMMENTS: Medium, yellowish brown, angular, coarse, sandy gravel. (10% fines.)

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS03-3S23

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
22:00				≥10	09/07/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TOC		500 ml		4 oz
PCB I-A	✓			8 oz	TSS		250 ml		---
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S20-1

RADAR STATION: Cape Lisburne WEATHER: Foggy

SITE/AOC: SS03 FEET FROM FIXED POINT: 2/1 MAGNETIC HEADING: _____

FIXED POINT: Door of stairway in center of the northwest side of the White Alice Building; 1' perpendicular, 2' out towards stairs parallel to building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 15:35 DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Same location as SS03-3S19 and 3S23 but at depth of one foot.

SAMPLING METHOD: Shovel, scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
11:20				+1 (<10)	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TOC		500 ml		4 oz
PCB I-A	✓			8 oz	TSS		250 ml		---
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S21-1

RADAR STATION: Cape Lisburne WEATHER: Foggy; light wind

SITE/AOC: SS03 FEET FROM FIXED POINT: 9'3" Southeast, 4' Northeast MAGNETIC HEADING: ____

FIXED POINT: North corner of building. 9'3" southeast of the north corner parallel NE side of building; 4' out perpendicular to NE side of building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 15:10 DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Brown, angular gravel up to 1.5 inches with a sandy matrix.

SAMPLING METHOD: Shovel, scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID ____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID ____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
17:00				ND	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S22-0.5

RADAR STATION: Cape Lisburne WEATHER: Foggy

SITE/AOC: SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Southeast wall of building; just off the southernmost stairway door.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 15:20 DEPTH OF SAMPLE (feet): 0.5

SAMPLE DESCRIPTION/COMMENTS: Brown, angular gravel with coarse sand.

SAMPLING METHOD: Shovel and scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
14:45				≥10	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S23

RADAR STATION: Cape Lisburne WEATHER: Foggy

SITE/AOC: SS03 FEET FROM FIXED POINT: 1, 2 MAGNETIC HEADING: ____

FIXED POINT: Door of stairway in center of the northwest side of White Alice Building, 1' out perpendicular, 2' out towards stairs parallel to building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 15:30 DEPTH OF SAMPLE (feet): Surface (3-inches)

SAMPLE DESCRIPTION/COMMENTS: Medium, yellowish brown, angular, coarse, sandy gravel. (10% fines.)

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID ____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS03-3S19

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
22:00				≥10	09/07/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TOC		500 ml		4 oz
PCB I-A	✓			8 oz	TSS		250 ml		---
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S24-1

RADAR STATION: Cape Lisburne WEATHER: Foggy and light rain, light north wind

SITE/AOC: SS03 FEET FROM FIXED POINT: 5 MAGNETIC HEADING: _____

FIXED POINT: Center of double doors, northwest side of White Alice Building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 14:20 DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Angular gravel to one inch, some coarse sand.

SAMPLING METHOD: Shovel and scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS03-3S15-1

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
14:45				(>1) ≥10	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TOC		500 ml		4 oz
PCB I-A	✓			8 oz	TSS		250 ml		---
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3S25

RADAR STATION: Cape Lisburne WEATHER: Foggy, light wind

SITE/AOC: SS03 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 15:47 DEPTH OF SAMPLE (feet): Surface (3 inches)

SAMPLE DESCRIPTION/COMMENTS: Yellow brown, angular gravel with some coarse, angular sand.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
14:45				≥10	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
		FIELD TEST		TSS		250 ml	---
PCB I-A	✓		8 oz	TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S26-0.5

RADAR STATION: Cape Lisburne WEATHER: High clouds, light winds from the south, cool

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 4' perpendicular MAGNETIC HEADING: _____

FIXED POINT: Southeast side of White Alice Building, southern most stairway, southern most end of door frame.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:25 DEPTH OF SAMPLE (feet): 0.5 (6 inches)

SAMPLE DESCRIPTION/COMMENTS: Yellowish brown, silty, sandy gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
19:30				≥1 (<10)	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		FIELD TEST		TOC		500 ml		4 oz
PCB I-A	✓		8 oz	TSS		250 ml		---
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S27

RADAR STATION: Cape Lisburne WEATHER: High clouds, light winds from the south, cool

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 6' perpendicular, 3' parallel towards door

MAGNETIC HEADING: _____ FIXED POINT: Southeast side of White Alice Building (west stairway at foot of stairs)

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:10 DEPTH OF SAMPLE (feet): Surface to 1-inch

SAMPLE DESCRIPTION/COMMENTS: Silty, sandy gravel, dark gray brown.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
19:30				≥1 (<10)	09/08/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TOC		500 ml		4 oz
PCB I-A	✓			8 oz	TSS		250 ml		---
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S28

RADAR STATION: Cape Lisburne WEATHER: High clouds, light winds from the south, cool

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 6.5 MAGNETIC HEADING: ____

FIXED POINT: Center between stairways on southeast side of White Alice Building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:04 DEPTH OF SAMPLE (feet): Surface (1-3 inches)

SAMPLE DESCRIPTION/COMMENTS: Silty, sandy gravel, yellowish brown.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID ____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID ____

WATER PARAMETERS

TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS

TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
19:30				ND	09/11/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TOC		500 ml		4 oz
PCB I-A	✓			8 oz	TSS		250 ml		---
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S29

RADAR STATION: Cape Lisburne WEATHER: High clouds, light winds from the south, cool

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 3' perpendicular out/2' parallel towards doorway

MAGNETIC HEADING: _____ FIXED POINT: SE side of White Alice Building; northern most stairway at the foot of the stairs.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 14:53 DEPTH OF SAMPLE (feet): Surface to 3 inches

SAMPLE DESCRIPTION/COMMENTS: Brown, coarse, sandy gravel with some fines.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
19:30				ND	09/11/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S30

RADAR STATION: Cape Lisburne WEATHER: High clouds, cool, light winds from the south

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 6' SW parallel to building MAGNETIC HEADING: _____

FIXED POINT: Northwest side of building; center stairway of White Alice Building at the base of the stairs in the center.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 13:40 DEPTH OF SAMPLE (feet): Surface (3-6 inches)

SAMPLE DESCRIPTION/COMMENTS: Sandy, gravelly, pea gravel, yellowish gray.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
20:55				≥10	09/11/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S31

RADAR STATION: Cape Lisburne WEATHER: High clouds, cool, light winds from the south

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 10/8 MAGNETIC HEADING: ____

FIXED POINT: Northwest side of White Alice building, center stairway door.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 14:00 DEPTH OF SAMPLE (feet): Surface (3-4 inches)

SAMPLE DESCRIPTION/COMMENTS: Brown, sandy gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID ____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS03-3S34

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
20:55				≥10	09/11/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		FIELD TEST		TSS		250 ml		---
PCB I-A	✓		8 oz	TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S32

RADAR STATION: Cape Lisburne WEATHER: High clouds, partly cloudy, cool, light wind from the south

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 13/5.5 MAGNETIC HEADING: _____

FIXED POINT: Northewest side of White Alice Building / center stairway door frame (perpendicular from building).

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 14:09 DEPTH OF SAMPLE (feet): Surface (1-2 inches)

SAMPLE DESCRIPTION/COMMENTS: Dark grayish brown gravelly sand with some fines.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
20:55				≥10	09/11/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		FIELD TEST		TSS		250 ml		---
PCB I-A	✓		8 oz	TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S33

RADAR STATION: Cape Lisburne WEATHER: High clouds, partly cloudy

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 8 perpendicular MAGNETIC HEADING: 334°

FIXED POINT: Northwest side of White Alice Building, center stairway door frame.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 14:16 DEPTH OF SAMPLE (feet): Surface (2-4 inches)

SAMPLE DESCRIPTION/COMMENTS: Yellowish, gray-brown, gravelly, silty sand.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
20:55				≥10	09/11/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S34

RADAR STATION: Cape Lisburne WEATHER: High clouds, cool, light winds from the south

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 10/8 MAGNETIC HEADING: ____

FIXED POINT: NW side of White Alice Building, center stairway door.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 14:00 DEPTH OF SAMPLE (feet): Surface (3-4 inches)

SAMPLE DESCRIPTION/COMMENTS: Brown, sandy gravel

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID ____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS03-3S31

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
10:50				≥10	09/12/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		FIELD TEST		TSS		250 ml		---
PCB I-A	✓		8 oz	TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S35

RADAR STATION: Cape Lisburne WEATHER: High clouds, light wind from the south

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 3' NW/4' NE MAGNETIC HEADING: _____

FIXED POINT: Northwest side of White Alice Building, northwest stairway door frame.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 14:27 DEPTH OF SAMPLE (feet): Surface (4-5 inches)

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, dark brown.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
10:50				≥10	09/12/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/10/94 SAMPLE ID: LIS-SS03-3S36

RADAR STATION: Cape Lisburne WEATHER: High clouds, cool, light wind from the south

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 7' out NW MAGNETIC HEADING: _____

FIXED POINT: Northwest side of White Alice Building, center stairway at base of stairs, 7 feet under building, 7 feet parallel in the southern direction.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 14:35 DEPTH OF SAMPLE (feet): Surface to 1 inch

SAMPLE DESCRIPTION/COMMENTS: Sample collected from under northwest side of building; dark gray, gravelly sand.

METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
10:50				≥10	09/12/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		FIELD TEST		TSS		250 ml		---
PCB I-A	✓		8 oz	TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/12/94 SAMPLE ID: LIS-SS03-3S37

RADAR STATION: Cape Lisburne WEATHER: High cirrus clouds, calm

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 21' parallel to building in the SW MAGNETIC HEADING: _____

FIXED POINT: NW side of White Alice Building; center stairway door frame (9' perpendicular out from building wall).

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:37 DEPTH OF SAMPLE (feet): Surface (2-3 inches)

SAMPLE DESCRIPTION/COMMENTS: Dark, brown, silty gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
14:52				≥10	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/12/94 SAMPLE ID: LIS-SS03-3S38

RADAR STATION: Cape Lisburne WEATHER: High cirrus clouds, calm

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 3' SW 21' NW MAGNETIC HEADING: _____

FIXED POINT: Northwest side of White Alice Building, center stairway door frame, measurements are perpendicular and paralell to building.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:40 DEPTH OF SAMPLE (feet): Surface (2-3 inches)

SAMPLE DESCRIPTION/COMMENTS: Dark, brown, silty gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
14:52				ND	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/12/94 SAMPLE ID: LIS-SS03-3S39

RADAR STATION: Cape Lisburne WEATHER: High cirrus clouds, calm

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: 3' NW 26.5' NE MAGNETIC HEADING: _____

FIXED POINT: NW side of White Alice Building, center stairway door frame (measurements are at right angles to the building structures)

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:48 DEPTH OF SAMPLE (feet): Surface (2-3 inches)

SAMPLE DESCRIPTION/COMMENTS: Dark, brown, silty gravel.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)	PCB IA SCREENING	DATE
14:52				≥1 (<10)	09/13/94

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		FIELD TEST			TSS		250 ml		---
PCB I-A	✓			8 oz	TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOGS FOR THE SPILL/LEAK #3 (ST07)

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S01-1

RADAR STATION: Cape Lisburne WEATHER: Overcast, very windy (38 mph), 35°F

SITE/AOC: ST07, POL Area FEET FROM FIXED POINT: 60 MAGNETIC HEADING: ~30°

FIXED POINT: Sample collected west of road which runs along east end of runway

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC, JD

TIME SAMPLED: 15:35 DEPTH OF SAMPLE (feet): 1

SAMPLE DESCRIPTION/COMMENTS: Sample taken at depth of 1 foot, where sand meets a 2-inch layer at black, silty peat. Fine to coarse sand.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020	✓			TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S02-2.5

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 35°F

SITE/AOC: ST07, POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 146° to radome, 178° to north side of Tank 1, 121° to north side of Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 14:15 DEPTH OF SAMPLE (feet): 2.5

SAMPLE DESCRIPTION/COMMENTS: Gravelly sand, medium to coarse sand, gray-brown,1/8 to 1/2 inch gravel, 20% gravel.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S03-5.5

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 35°F

SITE/AOC: ST07, POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 250.5° to radome, 207° to north side of Tank 1, 131° to north side of Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 14:25 DEPTH OF SAMPLE (feet): 5.5

SAMPLE DESCRIPTION/COMMENTS: Silty gravel, some sand 1/8 to 5 inches gravel, gray, moist.

SAMPLING METHOD: Hand auger

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S04-2

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 35°F

SITE/AOC: ST07, POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 242° to radome, 150° to north side of Tank 1, 118.5° to north side of Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 15:00 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Silty clay, some gravel, trace sand, gray.

SAMPLING METHOD: Hand auger

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

		BARROW LAB					ANCHORAGE LAB		
ANALYSES	✓	CONTAINERS			ANALYSES	✓	CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S05-3

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, sleet, 35°F

SITE/AOC: ST07, POL Area FEET FROM FIXED POINT: 25 MAGNETIC HEADING: WSW

FIXED POINT: Approximately 25 feet WSW of ST07-S04

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 15:15 DEPTH OF SAMPLE (feet): 3

SAMPLE DESCRIPTION/COMMENTS: Silty clay, trace gravel, sand, gray, wet, medium to coarse sand.

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS

TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S06

RADAR STATION: Cape Lisburne WEATHER: Very windy, 34°F

SITE/AOC: ST07, POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 244° to radome, 198° to north side of Tank 1, 178° to north side of Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, DN

TIME SAMPLED: 15:10 DEPTH OF SAMPLE (feet): 3

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel (GP). SubR gravel to 1/4 inch. SubR F to C sand (beach deposit). Loose, moist, light brown.

SAMPLING METHOD: Hand auger-grab.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S07

RADAR STATION: Cape Lisburne WEATHER: Very windy, icy snow, 32°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 255° to radome, 260° to north side of Tank 1, 104° to north side of Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: DN

TIME SAMPLED: 15:55 DEPTH OF SAMPLE (feet): 4

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel. SubA to subR gravel to 3 inches. SubR F to C sand. Minor fines. Firm, moist, dark brown, diesel odor.

SAMPLING METHOD: Hand auger-grab.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S08

RADAR STATION: Cape Lisburne WEATHER: Very windy, icy snow, 34°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 235° to radome, 246° to north side of Tank 1, 83° to north side of Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: DN

TIME SAMPLED: 15:30 DEPTH OF SAMPLE (feet): 1.5

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel. SubA to subR gravel to 4-inches. SubA to subR, F to C sand. Minor fines. Firm, moist brown, slight diesel odor.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S09

RADAR STATION: Cape Lisburne WEATHER: Very windy, icy snow, 32°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 242° to radome, 226° to Tank 1, 149° to Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: DN

TIME SAMPLED: 16:15 DEPTH OF SAMPLE (feet): 3

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel. SubA to subR gravel to 2-inches. SubA to subR, F to C sand. Firm, wet, dark brown.

SAMPLING METHOD: Hand auger, grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-S10-1.5

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy (30-40 mph), 35°F

SITE/AOC: ST07, POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 241° to radome, 208° to north side of Tank 1, 187° to north side of Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, RC

TIME SAMPLED: 16:10 DEPTH OF SAMPLE (feet): 1.5

SAMPLE DESCRIPTION/COMMENTS: Sample taken immediately above tundra. Brown-dark brown, sandy silt, moderate organics, loose.

SAMPLING METHOD: Hand auger

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-ST07-S11

RADAR STATION: Cape Lisburne WEATHER: 45 mph wind, sleet, 33°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: 60 MAGNETIC HEADING: ~30°

FIXED POINT: Sample collected west of road which runs along east end of runway

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC, JD, SS

TIME SAMPLED: 15:50 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Same site as S01 except 2 feet depth. Top 12-inches gravelly sand fill, 12-16-inches black-gray to dark gray organic clay lacustrine soil (sewage outfall sand), 16-24-inches brown, gravelly sand to permafrost.

SAMPLING METHOD: Scoop, grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S12

RADAR STATION: Cape Lisburne WEATHER: Overcast, breeze, 37°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 177° to north side of POL Tank 1A, 234° to north side of Tank 1, 259° to windsock.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 14:40 DEPTH OF SAMPLE (feet): 4.5 feet below grade

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel with cobbles. Brown, moist.

SAMPLING METHOD: Shovel

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LF01-ST07-2S17

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S13

RADAR STATION: Cape Lisburne WEATHER: Overcast, breeze, 37°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 110.5° to Tank 1A, 153° to Tank 1, 250° to windsock.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 16:00 DEPTH OF SAMPLE (feet): 1.5

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel. Moist, brown. Rocks to six inches.

SAMPLING METHOD: Shovel

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES*	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S14

RADAR STATION: Cape Lisburne WEATHER: Overcast, breeze, 37°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 152° to Tank 1A, 204° to Tank 1, 247.5° to windsock.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 15:35 DEPTH OF SAMPLE (feet): 5 feet below grade

SAMPLE DESCRIPTION/COMMENTS: Gravelly, silty sand. Hole dug in testpit.

SAMPLING METHOD: Shovel

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S15

RADAR STATION: Cape Lisburne WEATHER: Overcast, breeze, 37°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 167° to Tank 1A, 204° to Tank 1, 245° to windsock.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 15:05 DEPTH OF SAMPLE (feet): 6"

SAMPLE DESCRIPTION/COMMENTS: Sand with clay, no gravel. Saturated. Water perched above a welded, sandy, clayey gravel.

SAMPLING METHOD: Shovel

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S16

RADAR STATION: Cape Lisburne WEATHER: Overcast, breezy, 30°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 171° to Tank 1A, 213° to Tank 1, 248° to wind sock.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 14:55 DEPTH OF SAMPLE (feet): 3"

SAMPLE DESCRIPTION/COMMENTS: Sand with clay, no gravel. Saturated. Just above clay layer which acts as an aquitard, perching water, diesel odor.

SAMPLING METHOD: Shovel

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S17

RADAR STATION: Cape Lisburne WEATHER: Overcast, breezy, 37°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 177° to North side of POL Tank 1A, 234° to north side of Tank 1. 259° to windsock

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 14:40 DEPTH OF SAMPLE (feet): 4.5

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel with cobbles. Brown, moist.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LF01-ST07-2S12

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S18

RADAR STATION: Cape Lisburne WEATHER: Breezy, overcast, 37°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: 30 MAGNETIC HEADING: East

FIXED POINT: 30 feet east of center of Tank 1A. Along north berm.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JF

TIME SAMPLED: 15:45 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Sample taken from bottom of trenched area, ~3 feet below grade.

SAMPLING METHOD: Disposable spoon

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S19

RADAR STATION: Cape Lisburne WEATHER: Breezy, overcast, 37°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: 3 MAGNETIC HEADING: NE

FIXED POINT: 3 feet northeast of vault at northeast corner of berm around Tank 1A.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JF

TIME SAMPLED: 15:50 DEPTH OF SAMPLE (feet): 0-2"

SAMPLE DESCRIPTION/COMMENTS: Low area at northeast corner of POL berm.

SAMPLING METHOD: Disposable trowel

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2S20

RADAR STATION: Cape Lisburne WEATHER: Breezy, overcast, 37°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: 40 MAGNETIC HEADING: NW

FIXED POINT: 40 feet northwest of Tank 1.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JF

TIME SAMPLED: 16:00 DEPTH OF SAMPLE (feet): 0-3"

SAMPLE DESCRIPTION/COMMENTS: Gravel, sand, very little fines.

SAMPLING METHOD: Disposable trowel

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

		BARROW LAB					ANCHORAGE LAB		
ANALYSES	✓	CONTAINERS			ANALYSES	✓	CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-ST07-3S21

RADAR STATION: Cape Lisburne WEATHER: Cold, windy, overcast

SITE/AOC: ST07 FEET FROM FIXED POINT: 52' MAGNETIC HEADING: W

FIXED POINT: Sump

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 19:36 DEPTH OF SAMPLE (feet): 4

SAMPLE DESCRIPTION/COMMENTS: Orangish brown, gravelly silt.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
DRPH AK102	✓			8 oz	TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/08/94 SAMPLE ID: LIS-ST07-3S22

RADAR STATION: Cape Lisburne WEATHER: Cold, windy, overcast

SITE/AOC: ST07 FEET FROM FIXED POINT: 35 MAGNETIC HEADING: W

FIXED POINT: Sump

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 19:25 DEPTH OF SAMPLE (feet): 5.5

SAMPLE DESCRIPTION/COMMENTS: Dark, reddish brown, gravelly silt.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ■ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS			
		WATER		SOIL				WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
DRPH AK102	✓			8 oz	TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-ST07-3S23

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy (20 mph from NE), 34°F

SITE/AOC: ST07 FEET FROM FIXED POINT: 30 MAGNETIC HEADING: E

FIXED POINT: Sump

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 16:48 DEPTH OF SAMPLE (feet): 1 to 3 feet composite

SAMPLE DESCRIPTION/COMMENTS: Brown, gravelly silt composited from side of trench. Soil mixed up by backhoe operation.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-ST07-3S25

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020	✓			TDS		250 ml	---
DRPH AK102	✓		8 oz	TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-ST07-3S24

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy (20 mph from NE), 35°F

SITE/AOC: ST07 FEET FROM FIXED POINT: 68 MAGNETIC HEADING: E

FIXED POINT: Sump

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 16:25 DEPTH OF SAMPLE (feet): 1 to 2 feet composite

SAMPLE DESCRIPTION/COMMENTS: Sample taken 60 feet out east trench from sump in orange, sandy gravel (diesel odor) above dark, gray-brown, silty, fine sand with 1/2 inch black organic lens.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓			TDS		250 ml		---
DRPH AK102	✓		8 oz	TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-ST07-3S25

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy (20 mph from NE), 34°F

SITE/AOC: ST07 FEET FROM FIXED POINT: 30 MAGNETIC HEADING: E

FIXED POINT: Sump

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 16:48 DEPTH OF SAMPLE (feet): 1 to 3 feet composite

SAMPLE DESCRIPTION/COMMENTS: Brown, gravelly silt composited from side of trench. Soil mixed up by backhoe operation.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-ST07-3S23

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020	✓			TDS		250 ml	---
DRPH AK102	✓		8 oz	TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/08/94 SAMPLE ID: LIS-ST07-3S26

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, overcast

SITE/AOC: ST07 FEET FROM FIXED POINT: 120 MAGNETIC HEADING: ~W

FIXED POINT: Sump (same location as 3S27 but different depth)

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 19:48 DEPTH OF SAMPLE (feet): 5

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel directly above permafrost layer, diesel odor.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
DRPH AK102	✓				TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/08/94 SAMPLE ID: LIS-ST07-3S27

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, overcast

SITE/AOC: ST07 FEET FROM FIXED POINT: 120 MAGNETIC HEADING: ~W

FIXED POINT: Sump (same location as 3S26 but different depth)

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 19:57 DEPTH OF SAMPLE (feet): 2.5

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel just above silty gravel layer. This is the last of the seeping water at the west end of the trench.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020	✓			TDS		250 ml	---
DRPH AK102	✓		8 oz	TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/08/94 SAMPLE ID: LIS-ST07-3S28

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, overcast

SITE/AOC: ST07 FEET FROM FIXED POINT: 42 MAGNETIC HEADING: ~E

FIXED POINT: End of east trench (measured from center of the end).

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 21:25 DEPTH OF SAMPLE (feet): 6.5

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel.

SAMPLING METHOD: Hand auger/scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓			TDS		250 ml		---
DRPH AK102	✓		8 oz	TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/08/94 SAMPLE ID: LIS-ST07-3S29

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, overcast

SITE/AOC: ST07 FEET FROM FIXED POINT: 75 MAGNETIC HEADING: E

FIXED POINT: East end of ditch at center (end of trench is 74' E of sump)

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 21:21 DEPTH OF SAMPLE (feet): 3.5

SAMPLE DESCRIPTION/COMMENTS: Same pit as 3S30; sandy gravel

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020	✓			TDS		250 ml	---
DRPH AK102	✓		8 oz	TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/08/94 SAMPLE ID: LIS-ST07-3S30

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, overcast

SITE/AOC: ST07 FEET FROM FIXED POINT: 75 MAGNETIC HEADING: E

FIXED POINT: East end of ditch at center (end of trench is 74' E of sump). Same location as 3S29 but different depth.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 21:00 DEPTH OF SAMPLE (feet): 6.5

SAMPLE DESCRIPTION/COMMENTS: Same pit as 3S29; sandy gravel

SAMPLING METHOD: Auger/scoop.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS			
		WATER	SOIL			WATER		SOIL	
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz	
PCB				SVOC (8270)		1 liter		8 oz	
PESTICIDES				TOTAL METALS		1 liter		8 oz	
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---	
VOC-BTEX 8020	✓			TDS		250 ml		---	
DRPH AK102	✓		8 oz	TSS		250 ml		---	
				TOC		500 ml		4 oz	
				TCLP		2 liters		2 x 8 oz	

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-ST07-3S31

RADAR STATION: Cape Lisburne WEATHER: Cool, ~55°, clear with high cirrus clouds, no wind

SITE/AOC: ST07 FEET FROM FIXED POINT: 185 MAGNETIC HEADING: W

FIXED POINT: Sump

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 11:25 DEPTH OF SAMPLE (feet): 5

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel; sample was collected at the west end of the trench at the base of the trench.

SAMPLING METHOD: Scoop.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020	✓			TDS		250 ml	---
DRPH	✓		8 oz	TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SD01

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, snow, 40°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 192° to radome, 150° to north side of Tank 1, 237° to north side of Tank 1A.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Water (W) ☐ Groundwater (GW)

SAMPLERS: JP, RC, SS

TIME SAMPLED: 10:05 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-ST07-SW01. Sand, gravel, 50-50. Saturated, fine to coarse sand, 1/8 to 1-inch gravel, sheen.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SD02

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 45°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 194° to radome, 165° to north side of Tank 1, 246° to north side of Tank 1A.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 09:20 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Gravelly sand, 40% gravel, fine to coarse sand, 1/8 to 3/4-inch gravel.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SD03

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 45°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 187° to radome, 155° to north side of Tank 1A, 241° to north side of Tank 1.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC, JP

TIME SAMPLED: 09:10 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Gravelly sand, brown-gray, saturated, fine to coarse sand, 30% gravel, 1/8 to 1-inch gravel.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SD04

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 40°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 243° to radome, 133° to north side of Tank 1, 114° to north side of Tank 1A.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RC, JP

TIME SAMPLED: 11:15 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, saturated, sheen, black, medium to coarse sand, 1/8 to 1-inch gravel.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ■ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SD05

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 40°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 242° to radome, 109° to north side of Tank 1, 101.5° to north side of Tank 1A.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, SS, RC

TIME SAMPLED: 11:30 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Black, silty sand, some gravel, fine to coarse sand, saturated.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SD06

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, snow, 40°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 192° to Radome, 150° to North side of tank 1, 237° to north side of tank 1A.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, SS, RC

TIME SAMPLED: 10:00 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-ST07-SW01. Sandy gravel, 50-50. Fine to coarse sand, 1/8 to 1-inch gravel, sheen, saturated.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-ST07-SD01

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2SD07

RADAR STATION: Cape Lisburne WEATHER: Breezy overcast, 37°F

SITE/AOC: ST07 POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 107° to Tank 1A, 121° to windsock, 206.5° to northeast corner of sewage treatment building.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 15:30 DEPTH OF SAMPLE (feet): 8"

SAMPLE DESCRIPTION/COMMENTS: Brown, silty, organics.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-ST07-2SD08

RADAR STATION: Cape Lisburne WEATHER: Breezy overcast, 37°F

SITE/AOC: ST07-POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 95° to Tank 1A, 108° to windsock, 169° to northeast corner of sewage treatment building.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: RT

TIME SAMPLED: 15:40 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Black, silty, organics.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SW01

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, snow, 40°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 192° to radome, 150° to north side of Tank 1, 237° to north side of Tank 1A.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, SS, RC

TIME SAMPLED: 09:35 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Pool at base of POL Area. Sand, gravel, 50-50. Saturated, fine to coarse sand, 1/8 to 1 inch gravel, sheen.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ■ Duplicate of Water Sample ID LIS-ST07-SW03

☐ Ambient Condjtion Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
09:35	7.4	490 µS	2°C	1.000	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SW02

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, 40°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 194° to radome, 165° to north side of Tank 1A, 246° to north side of Tank 1.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC

TIME SAMPLED: 10:00 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
10:17	7.2	700 μS	3°C	1.003	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-ST07-SW03

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, snowy, 40°F

SITE/AOC: ST07 - POL Area FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 192° to radome, 150° to north side of Tank 1A, 237° to north side of Tank 1.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, RC, SS

TIME SAMPLED: 09:30 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Pool at base of POL area. Sand, gravel, 50-50. Saturated, fine to coarse sand, 1/8 to 1 inch gravel, sheen.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ■ Duplicate of Water Sample ID LIS-ST07-SW01

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
09:35	7.4	490 µS	2°C	1.000	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOGS FOR THE UPPER CAMP TRANSFORMER BUILDING (SS08)

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS08-S01-0.33

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, fog, 35°F

SITE/AOC: SS08 Upper Transformer FEET FROM FIXED POINT: NE, NW wall MAGNETIC HEADING: ____

FIXED POINT: 3' NE wall, 6' from NW wall

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD

TIME SAMPLED: 9:50 DEPTH OF SAMPLE (feet): 0 - 0.33'

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, 1/4" - 2" gravel angular to rounded gravel, coarse to very coarse sand

SAMPLING METHOD: ____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID ____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID ____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS08-S02-0.25

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, fog, 35°F

SITE/AOC: SS08 Upper Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3' NE wall, 6' from SE wall

SAMPLE MATRIX:. ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD

TIME SAMPLED: 9:50 DEPTH OF SAMPLE (feet): 0.1' - 0.25'

SAMPLE DESCRIPTION/COMMENTS: Brown, sandy gravel, 1/4" - 2" gravel, angular to rounded gravel, medium - coarse sand, staining.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS08-S03-0.1

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, fog, 35°F

SITE/AOC: SS08 Upper Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3 feet from NW wall, 10 feet from SW wall.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD

TIME SAMPLED: 10:00 DEPTH OF SAMPLE (feet): 0' - 0.1'

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, medium sand, orange brown (iron staining?), rounded to angular 1/4" to 2" gravel.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS08-S07-0.1

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/28/93 SAMPLE ID: LIS-SS08-S04-0.25

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, fog, 35°F

SITE/AOC: SS08 Upper Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3' outside doorway.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD

TIME SAMPLED: 10:05 DEPTH OF SAMPLE (feet): 0' - 0.25'

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, medium to coarse sand, 1/4" - 2" angular gravel

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS08-S05-2

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, fog, 35°F

SITE/AOC: SS08 Upper Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3' from NE wall, 6' from NW wall

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 10:10 DEPTH OF SAMPLE (feet): 2'

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, coarse reddish sand (iron?) angular gravel 1/4" to 2"

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/28/93 SAMPLE ID: LIS-SS08-S07-0.1

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, fog, 35°F

SITE/AOC: SS08 Upper Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 3 feet from NW wall, 10 feet from SW wall

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD

TIME SAMPLED: 10:00 DEPTH OF SAMPLE (feet): 0' - 0.5'

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, medium sand, 1/4" - 2" angular to rounded gravel, orange-brown staining (iron ?).

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS08-S03-0.1

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-SS08-2S08-1.5

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, snowing, 37°F

SITE/AOC: SS08 Upper Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 6' outside door of transformer building, 3' SE of LIS-SS08-S04.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SS

TIME SAMPLED: 15:10 DEPTH OF SAMPLE (feet): 1.5'

SAMPLE DESCRIPTION/COMMENTS: Gravelly sand - fine to coarse sand, 1/2" to 3" gravel (limestone) gravel above 1" removed from sample, sample taken above bedrock.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-SS08-2S09

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, snowing, 37°F

SITE/AOC: SS08 Upper Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 12' NE of transformer building, 10' NE of LIS-SS08-S04.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SS

TIME SAMPLED: 15:15 DEPTH OF SAMPLE (feet): 1.5'

SAMPLE DESCRIPTION/COMMENTS: Gravelly sand - fine to coarse sand, 1/2" to 3" gravel, gravel above 1" removed from sample, gravel composed of limestone chips.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS08-3S12

RADAR STATION: Cape Lisburne WEATHER: 40°, cloudy, calm

SITE/AOC: SS08 FEET FROM FIXED POINT: 1' south MAGNETIC HEADING: _____

FIXED POINT: S02

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 16:00 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Pea gravelly, course sand, angular.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOGS FOR THE LOWER CAMP TRANSFORMER BUILDINGS (SS09)

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S01

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: In West Transformer Building, 2 feet from center of east wall.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 14:25 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Stained area, sandy gravel, subR gravel to 1/4 inch, GP, F to C sand, loose, oily, gray.

SAMPLING METHOD: Grab - soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES	✓				TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S03

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: In West Transformer Building, 1 foot from north wall, 10 feet from east wall.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 14:20 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Stained area, sandy gravel (GP), gravel to 1/4 inch, F to C sand, minor fines, loose, moist, gray.

SAMPLING METHOD: Soil scoop - grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S04

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: In West Transformer Building, 2 feet in from doorway.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 14:15 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel (GP), gravel to 1/4", F to C sand, minor fines, loose, dry, gray.

SAMPLING METHOD: Grab - soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES*	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S05

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 45°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: In West Transformer Building, 2 feet from center of west wall.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 14:10 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, gravel to 1/4", GP, F to C sand, minor fines, loose, dry, gray.

SAMPLING METHOD: Soil scoop - grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		3 x 40 ml	8 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S06

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 46°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Outside West Transformer Building, 5 feet from doorway.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 13:25 DEPTH OF SAMPLE (feet): 3"

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel (GP) subA to subR gravel to 1/4", subA to subR F to C sand, loose, moist, dark brown.

SAMPLING METHOD: Grab - soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES	✓				TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S07

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Outside West Transformer Building, 3 feet south, 20 feet west of southwest corner.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 13:20 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel sub R gravel to 1/4", subA to subR C to F sand, loose, moist, dark brown.

SAMPLING METHOD: Grab - soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S08

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: In East Transformer Building, 6 feet from west wall, 4 feet from south wall.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 13:40 DEPTH OF SAMPLE (feet): 2" to 7"

SAMPLE DESCRIPTION/COMMENTS: Stained area, construction fill, (GP), subR to subA gravel to 3/4 inch, loose, dry, dark gray, also contains some underlying sandy gravel.

SAMPLING METHOD: Grab - soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS09-S12

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S09

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: In East Transformer Building, 6 inches from west wall, 4 feet from south wall.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 13:45 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Stained area, sandy gravel (GP), subR gravel to 1/4 inch, F to C sand, loose, dry, brown.

SAMPLING METHOD: Grab - soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		3 x 40 ml	8 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S10

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: In East Transformer Building, 1.5 feet west of doorway.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 13:30 DEPTH OF SAMPLE (feet): 2"

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel (GP), subA to subR gravel to 1/2 inch, F to C sand, minor fines, loose, dry, gray.

SAMPLING METHOD: Grab - soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S11

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Outside East Transformer Building, 3 feet east of doorway.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 13:10 DEPTH OF SAMPLE (feet): 3"

SAMPLE DESCRIPTION/COMMENTS: Sandy gravel, subA to subR gravel to 1/4", F to C subA to subR sand, loose, moist, dark brown.

SAMPLING METHOD: Grab - soil scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-SS09-S12

RADAR STATION: Cape Lisburne WEATHER: Foggy, windy, 40°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JP, DN

TIME SAMPLED: 13:10 (13:45 on bottles) DEPTH OF SAMPLE (feet): 2" to 7"

SAMPLE DESCRIPTION/COMMENTS: Stained area, construction fill, (GP), subR to subA gravel to 3/4 inch, loose, dry, dark gray, also contains some underlying sandy gravel

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS09-S08

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS09-3S13

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 45°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Location = 6 inches from south center edge of concrete

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 18:55 DEPTH OF SAMPLE (feet): Surface to 3 inches

SAMPLE DESCRIPTION/COMMENTS: Well rounded, small gravel and coarse sand. Sample taken at first round S01 location (time logged as 18:35 so as not to let lab know it is a replicate).

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS09-3S14

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml		8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS09-3S14

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 45°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: N/A

FIXED POINT: Location = 6 inches from south center edge of concrete

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 18:55 DEPTH OF SAMPLE (feet): Surface to 3 inches

SAMPLE DESCRIPTION/COMMENTS: Well rounded, small gravel and coarse sand. Sample collected at same location as S01 from first round.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ■ Replicate of Soil Sample ID LIS-SS09-3S13

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓			SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		3 x 40 ml	8 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS09-3S15

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 45°F

SITE/AOC: SS09 Lower Transformer FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: South transformer building, northwest corner just off concrete.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 18:55 DEPTH OF SAMPLE (feet): Surface to 3 inches

SAMPLE DESCRIPTION/COMMENTS: Taken next to where S08 (first round) was collected.

SAMPLING METHOD: Scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		3 x 40 ml	8 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOGS FOR THE WATER GALLERY (AOC3)

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-AOC3-SW01

RADAR STATION: Cape Lisburne WEATHER: Cloudy, drizzle, 30 mph wind, 37°F

SITE/AOC: Water Gallery AOC3 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Taken from discharge pool located west of gravel roadway.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 13:20 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Clear stream water.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
13:15	8.3	280	4°C	1	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020					TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-AOC3-GW01

RADAR STATION: Cape Lisburne WEATHER: Cloudy, 25 mph, wind, rain, 38°F

SITE/AOC: Water Gallery AOC3 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: From pump house, located east of gravel roadway.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ■ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 14:22 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Clear

SAMPLING METHOD: Grab (bailer, polyethylene disposable)

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
14:20	8.2	280	5°C	1	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020					TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-AOC3-GW02

RADAR STATION: Cape Lisburne WEATHER: Cloudy, drizzle, 25 mph, 38°F

SITE/AOC: Water Gallery AOC3 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: From vertical corrugated steel tubing/pipe.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ■ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 15:00 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Clear

SAMPLING METHOD: Grab (bailer, polyethylene disposable)

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
14:55	8.2	280	4°C	1	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020					TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: • Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-AOC3-GW03

RADAR STATION: Cape Lisburne WEATHER: Cloudy, drizzle, 25 mph, 38°F

SITE/AOC: Water Gallery AOC3 FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ■ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 15:30 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Clear, taken from old well, southeast of pump house on west side of Selin Creek.

SAMPLING METHOD: Grab (bailer, polyethylene disposable)

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
15:36	8.1	270	2°C	1	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020					TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-AOC3-2GW04

RADAR STATION: Cape Lisburne WEATHER: Rainy, 30°F

SITE/AOC: AOC3 Water Gallery FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ■ Groundwater (GW)

SAMPLERS: RT, JF

TIME SAMPLED: 14:20 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Water from treatment plant, just prior to chlorination. Sample collected from inside treatment building.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
14:20	8	220 µS	10°C		

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)	✓	3 x 40 ml	4 oz
PCB	✓			SVOC (8270)	✓	1 liter	8 oz
PESTICIDES	✓			TOTAL METALS	✓	1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOGS FOR BACKGROUND (BKGD)

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-BKGD-S01-0.5

RADAR STATION: Cape Lisburne WEATHER: Overcast, drizzle, windy, 40°F

SITE/AOC: BKGD FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 318° to SE corner of abandoned composite building 150, 326° to NE corner of service building 151, 356° to satellite dish east of facility.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 14:50 DEPTH OF SAMPLE (feet): 0-0.5

SAMPLE DESCRIPTION/COMMENTS: Brown, silt, heavy organics, wet

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-BKGD-S02-0.5

RADAR STATION: Cape Lisburne WEATHER: Overcast, drizzle, windy, 40°F

SITE/AOC: BKGD FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 20° to satellite dish east of facility, 338° to corner of abandoned composite buiding 150, 328° to top-center of southernmost old storage tank.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 15:45 DEPTH OF SAMPLE (feet): 0-0.5

SAMPLE DESCRIPTION/COMMENTS: Gray-brown silty clay, trace organics, trace shale, moist, firm.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-BKGD-S03-0.5

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, 40°F

SITE/AOC: BKGD FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 34° to southwest corner of abandoned composite building 150, 14° to southernmost old tank, 51° to satellite dish east of facility.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 16:20 DEPTH OF SAMPLE (feet): 0-0.5

SAMPLE DESCRIPTION/COMMENTS: Dark brown, silty peat, moderate organics, trace gravel, wet.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-BKGD-S04

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, drizzle, 40°F

SITE/AOC: BKGD FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 26° to old southernmost storage tank, 43° to SW corner of abandoned composite bldg 150, 55° to satellite dish.

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 16:35 DEPTH OF SAMPLE (feet): 0-0.5

SAMPLE DESCRIPTION/COMMENTS: Dark brown-black, silty peat, wet, roots.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-BKGD-SD01

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, drizzle, 40°F

SITE/AOC: BKGD FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 324° to SE corner of abandoned composite building 150, 333° to NE corner of maintenance and service building 151, 316° to top-center of southernmost old storage tank.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 14:10 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-BKGD-SW01. Gravelly sand, coarse to fine sand, 30% 1/4 to 1-inch gravel, saturated.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-BKGD-5SD01

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: Background beach FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: Approximately one mile east of installation on beach.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich

TIME SAMPLED: 08:52 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Medium grained sand with some small well rounded gravel. Collected at the water/beach interface.

SAMPLING METHOD: Grab, scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-BKGD-5SD02

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: Background beach FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: Approximately one mile east of installation on beach.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich

TIME SAMPLED: 08:54 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Fine to coarse grained sand with some small well rounded gravel. Collected at the water beach interface.

SAMPLING METHOD: Grab, scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-BKGD-5SD03-2

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: Background beach FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: Approximately one mile east of installation on beach.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 08:54 DEPTH OF SAMPLE (feet): 2

SAMPLE DESCRIPTION/COMMENTS: Medium to coarse grained sand with some small well rounded gravel.

SAMPLING METHOD: Grab, scoop, dug to two feet with deconned shovel

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		1 liter		TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-BKGD-5SD04

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: Background beach FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: Approximately one mile east of installation on beach.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: John Frerich

TIME SAMPLED: 08:56 DEPTH OF SAMPLE (feet): Surface

SAMPLE DESCRIPTION/COMMENTS: Medium to coarse grained sand with some small well rounded gravel. Collected at the water/beach interface.

SAMPLING METHOD: Grab, scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED								
ANALYSES	✓	CT&E LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS	
		WATER		SOIL			WATER	SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB	✓				SVOC (8270)		1 liter	8 oz
PESTICIDES					TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020					TDS		250 ml	---
		1 liter			TSS		250 ml	---
					TOC		500 ml	4 oz
					TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-BKGD-5SD05

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: Background beach FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: Approximately one mile east of installation on beach.

SAMPLE MATRIX: ☐ Soil (S) ■ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Sophia Fuchs

TIME SAMPLED: 08:55 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Collected at base of scarp surface. Medium to coarse grained sand with some small well rounded grave.

SAMPLING METHOD: Grab, scoop

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/27/95 SAMPLE ID: LIS-BKGD-5SD08

RADAR STATION: Cape Lisburne WEATHER: Cloudy, cool

SITE/AOC: Background FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: 3 GPS readings: 68°52'20N, 166°02'22W/68°52'21N, 166°02'22W/ and 68°52'21N, 166°02'22W

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW) ■ Ocean Sediment

SAMPLERS: Sophia Fuchs, Jeff Dawson

TIME SAMPLED: 20:08 DEPTH TO SAMPLE: 4.1 meters

SAMPLE DESCRIPTION/COMMENTS: Fine to medium grained, well sorted sand, 30% lithic materials.

SAMPLING METHOD: Lamonts sampler to pan then dedicated scoop.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/27/95 SAMPLE ID: LIS-BKGD-5SD09

RADAR STATION: Cape Lisburne WEATHER: Cloudy and clear

SITE/AOC: Background FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: 3 GPS readings: 68°52'25N, 166°02'34W/68°52'25N, 166°02'28W/ and 68°52'25N, 166°02'26W

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW) ■ Ocean Sediment

SAMPLERS: Sophia Fuchs, Jeff Dawson

TIME SAMPLED: 20:31 DEPTH TO SAMPLE: 6.1 meters

SAMPLE DESCRIPTION/COMMENTS: Very well sorted, very fine to fine grained sand, one small clam and one small polychaete worm found in pan.

SAMPLING METHOD: Lamonts sampler to pan then dedicated scoop.

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-BKGD-SW01

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, drizzle, 40°F

SITE/AOC: BKGD FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 316° to southeast corner of abandoned composite building, 333° from northeast corner of service building 15, 316° to top center of southernmost old tank.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 13:40 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Same location as LIS-BKGD-SD01. Gravelly sand, coarse to fine sand, 30% 1/4 to 1 inch, gravel, saturated.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
13:38	8.3	260	5°C	1.000	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020	✓				TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-BKGD-SW02

RADAR STATION: Cape Lisburne WEATHER: Overcast, windy, drizzle, 40°F

SITE/AOC: BKGD FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: 320° to southeast corner of abandoned building 150, 326° to northeast corner of service building 151, 342° to satellite dish east of facility.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: SS, RC

TIME SAMPLED: 14:40 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY
13:45	8.0	190	4°C	1.001	

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS	✓	1 liter		---
VOC-BTEX 8020	✓				TDS	✓	250 ml		---
					TSS	✓	250 ml		---
					TOC	✓	500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOGS FOR QA/QC

SAMPLE COLLECTION LOG

DATE: 09/12/94 SAMPLE ID: LIS-LF01-AB01

RADAR STATION: Cape Lisburne WEATHER: Cloudy, calm, 38°

SITE/AOC: Sludge/Tar Pile (LF01) FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: Due south of sludge pile edge.

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Water (W) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 13:05 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: Grap/pour

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

■ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-EB01

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: _____

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-EB02

RADAR STATION: Cape Lisburne WEATHER:

SITE/AOC: EB02 FEET FROM FIXED POINT: MAGNETIC HEADING:

FIXED POINT:

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: JD, SF

TIME SAMPLED: 08:56 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Baker analyzed, poured through bailer.

SAMPLING METHOD: Grab (direct pour)

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-EB03

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: _____

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: _____

_____

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS	✓	1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-2EB04

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: AP

TIME SAMPLED: 17:00 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz
					VPH	✓			

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/07/94 SAMPLE ID: LIS-SS03-3EB01

RADAR STATION: Cape Lisburne WEATHER: Foggy, light rain, low wind

SITE/AOC: White Alice (SS03) FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich

TIME SAMPLED: 14:00 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS: EB - This sample was actually collected over a span of sampling time as a composite - taken at the White Alice location.

SAMPLING METHOD: Composite/pour over decontaminated sampling equipment

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3EB02

RADAR STATION: Cape Lisburne WEATHER: Clear, 40°

SITE/AOC: Gravel Covered Area (LF01) FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Water (W) ☐ Groundwater (GW)

SAMPLERS: John Frerich, Jeff Dawson

TIME SAMPLED: 19:55 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS: Equipment rinsate on shovel and scoop.

SAMPLING METHOD: Poured lab water over sampling equipment after deconning between sampling.

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓			SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
				TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/94 SAMPLE ID: LIS-ST07-3EB03

RADAR STATION: Cape Lisburne WEATHER: High cirrus clouds, light wind, cool, 10°C

SITE/AOC: ST07 FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Water (W) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 09:37 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS: Water poured over sampling equipment after decon.

SAMPLING METHOD: Grab/pour

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
DRPH AK102	✓	1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-5EB01

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: Decon pad FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 15:45 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS: Poured D.I. water over the dried glue used to adhere pipes together.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER	SOIL			WATER		SOIL
TPH		1 liter	8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB				SVOC (8270)		1 liter		8 oz
PESTICIDES				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020				TDS		250 ml		---
		1 liter		TSS		250 ml		---
				TOC		500 ml		4 oz
				TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/27/95 SAMPLE ID: LIS-5EB02

RADAR STATION: Cape Lisburne WEATHER: Cloudy, cool

SITE/AOC: LF01 FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 19:17 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS: Poured DI water over Lamont's sampler after it had been deconned and rinsed in ocean water.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ■ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)		3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/30/93 SAMPLE ID: LIS-TB01

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: TB prepared by Barrow lab.

TIME SAMPLED: 08:30 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Trip blank.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 08/31/93 SAMPLE ID: LIS-TB02

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: TB prepared by Barrow lab.

TIME SAMPLED: 08:30 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: Trip blank.

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS WATER		BARROW LAB CONTAINERS SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		ANCHORAGE LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010	✓	1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020	✓				TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/01/93 SAMPLE ID: LIS-TB03

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: _____

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)	✓	3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010	✓	1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020	✓			TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-2TB04

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: AP

TIME SAMPLED: 11:00 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)	✓	3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/11/94 SAMPLE ID: LIS-LF01-3TB01

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, 32°

SITE/AOC: Sludge/Tar Pile (LF01) FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Water (W) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 08:00 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS:

SAMPLING METHOD:

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8240)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/13/94 SAMPLE ID: LIS-ST07-3TB02

RADAR STATION: Cape Lisburne WEATHER: Cloudy, windy, cool

SITE/AOC: ST07 FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Water (W) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson

TIME SAMPLED: 08:00 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS: NA

SAMPLING METHOD: NA

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL	ANALYSES	✓	ANCHORAGE LAB CONTAINERS WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
					TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 05/06/95 SAMPLE ID: LIS-LF01-4TB1

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: QA/QC FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: _____

TIME SAMPLED: _____ DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: _____

SAMPLING METHOD: _____

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
DRPH (AK102)		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-5TB01

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: QA/QC FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT:

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: ICF

TIME SAMPLED: 15:20 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS:

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 06/26/95 SAMPLE ID: LIS-5TB02

RADAR STATION: Cape Lisburne WEATHER: Overcast, cool

SITE/AOC: QA/QC FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: ICF KE

TIME SAMPLED: 13:00 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS:

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

■ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	CT&E LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB					SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
		1 liter			TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-W01

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: AP

TIME SAMPLED: 18:00 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: PCB and pesticide analyses at Anchorage lab.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH	✓	1 liter	8 oz	VOC (8260)	✓	3 x 40 ml	4 oz
PCB	✓			SVOC (8270)	✓	1 liter	8 oz
PESTICIDES	✓			TOTAL METALS	✓	1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
				TSS		250 ml	---
				TOC		500 ml	4 oz
				TCLP		2 liters	2 x 8 oz
				HERBICIDES	✓		

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/09/93 SAMPLE ID: LIS-W02

RADAR STATION: Cape Lisburne WEATHER: _____

SITE/AOC: _____ FEET FROM FIXED POINT: _____ MAGNETIC HEADING: _____

FIXED POINT: _____

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: AP

TIME SAMPLED: 18:10 DEPTH OF SAMPLE (feet): _____

SAMPLE DESCRIPTION/COMMENTS: PCB, pesticides, and VPH done at Anchorage. VPH and VOC 8260 in same bottle.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID _____

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID _____

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	BARROW LAB CONTAINERS			ANALYSES	✓	ANCHORAGE LAB CONTAINERS		
		WATER		SOIL			WATER		SOIL
TPH	✓	1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)	✓	1 liter		8 oz
PESTICIDES	✓				TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
VPH	✓				TSS		250 ml		---
					TOC		500 ml		4 oz
					TCLP		2 liters		2 x 8 oz
					HERBICIDES	✓			

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

SAMPLE COLLECTION LOG

DATE: 09/12/94 SAMPLE ID: LIS-LF01-3W04

RADAR STATION: Cape Lisburne WEATHER: Cloudy, calm and cool

SITE/AOC: Sludge/Tar Pile (LF01) FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ■ Soil (S) ☐ Sediment (SD) ☐ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, Sophia Fuchs

TIME SAMPLED: 13:30 DEPTH OF SAMPLE (feet):

SAMPLE DESCRIPTION/COMMENTS: Composite of waste in the waste wranglers taken near the road south of the sludge pile (out of Bucket).

SAMPLING METHOD: Composite

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	ANCHORAGE LAB CONTAINERS		ANALYSES	✓	ANCHORAGE LAB CONTAINERS	
		WATER	SOIL			WATER	SOIL
TPH		1 liter	8 oz	VOC (8260)		3 x 40 ml	4 oz
PCB				SVOC (8270)		1 liter	8 oz
PESTICIDES				TOTAL METALS		1 liter	8 oz
HVOC 8010		1 x 40 ml	4 oz	DISS METALS		1 liter	---
VOC-BTEX 8020				TDS		250 ml	---
		WASTE DISPOSAL COMPANY		TSS		250 ml	---
Profile for disposal	✓		2-8 oz	TOC		500 ml	4 oz
				TCLP*	✓	2 liters	4 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

* TCLP SW1311 run on target analytes of VOC, SVOC, metals, PCBs, and pesticides.

SAMPLE COLLECTION LOG

DATE: 06/23/95 SAMPLE ID: LIS-5IDW1

RADAR STATION: Cape Lisburne WEATHER: Clear, calm, cool

SITE/AOC: Decon pad FEET FROM FIXED POINT: NA MAGNETIC HEADING: NA

FIXED POINT: NA

SAMPLE MATRIX: ☐ Soil (S) ☐ Sediment (SD) ■ Surface Water (SW) ☐ Groundwater (GW)

SAMPLERS: Jeff Dawson, John Frerich, Sophia Fuchs

TIME SAMPLED: 15:37 DEPTH OF SAMPLE (feet): NA

SAMPLE DESCRIPTION/COMMENTS: Sample was effluent from carbon treatment drum after running decon pad water through it.

SAMPLING METHOD: Grab

QA/QC SAMPLES COLLECTED: ☐ Equipment Blank (EB) ☐ QA/QC Extra Volumes

☐ Trip Blank (TB) ☐ Duplicate of Water Sample ID

☐ Ambient Condition Blank (AB) ☐ Replicate of Soil Sample ID

WATER PARAMETERS					
TIME	PH	CONDUCTIVITY	TEMPERATURE	SPECIFIC GRAVITY	TURBIDITY

MONITORING READINGS					
TIME	PID READING (ppm)	CG/LEL (%)	HANBY SCREENING (standard/ppm)		

BG=Background; BZ=Breathing Zone; BH=Borehole; NR=No Readings; HS=Headspace; S=Sample (uncontained)

✓ CHECK ANALYSES REQUESTED

ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL	ANALYSES	✓	CT&E LAB CONTAINERS WATER		CT&E LAB CONTAINERS SOIL
TPH		1 liter		8 oz	VOC (8260)	✓	3 x 40 ml		4 oz
PCB	✓				SVOC (8270)		1 liter		8 oz
PESTICIDES					TOTAL METALS		1 liter		8 oz
HVOC 8010		1 x 40 ml		4 oz	DISS METALS		1 liter		---
VOC-BTEX 8020					TDS		250 ml		---
DRPH (AK102)	✓	1 liter			TSS		250 ml		---
GRPH (AK101)	✓				TOC		500 ml		4 oz
					TCLP Metals (4)	✓	2 liters		2 x 8 oz

Preservation: HVOC and VOC: HCl to pH <2; metals: HNO_3 to pH <2; Ice all samples to 4°C

Sample ID Format: Radar Station - site identifier - matrix + sample number - depth (feet)
(i.e., BUL-ST05-SW07, BTR-EB04, WRT-SS08-S09-5.0)

Radar Station Codes: Bullen=BUL; Oliktok=OLI; Barter=BTR; Lonely=LON; Barrow=BRW; Wainwright=WRT; Lay=LAY; Lisburne=LIS

APPENDIX E

CHAIN-OF-CUSTODY FORMS

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0561

PROJ. NO.	PROJECT NAME
411096411201	DEW LINE RI/FS

SAMPLERS: (Signature) Robert C Cartwright

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	HVOC 8010	VOC 8020	PCB	TPH	Pesticides			REMARKS
Cape Lis	8/30				LIS-TB01	2	2→							
✓		1450		X	LIS-BK6D-S01	1	1→							
		1545		X	BK6D-S02	2	1→	←1→						
✓		1450		X	BK6D-SD01	1	1→							
✓		1530			LIS-EB01	4	3→	←1→						
✓		1340			-BK6D-SW01	4	3→	←1→						
✓		1440			-BK6D-SW02	4	3→	←1→						
✓		1422			LIS-AOC3-GW01	1		1		↗				
✓		1500			AOC3-GW02	1		1		↗				
✓		1530			AOC3-GW03	1		1		↗				
✓		1635			BK6D-S03	2	1→	←1→						
✓		1635			BK6D-S04	2	1→	←1→						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert C Cartwright	8/30/88 1700	Alex Palonsky	Alex Palonsky	1900 8/30	Cape Smythe
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0562

PROJ. NO.	PROJECT NAME
4110964201	DEW LINE RI/FS

SAMPLERS: (Signature) Robert C Cartwright, Jeffrey D. Pearson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	SVOC 8270	Total Metals	Dissolved Metals	TSS	TDS	TOC	REMARKS
Cape Lis	8/30				LIS-TRØ1	2	2							
		1450		X	LIS-BKGD-SØ1	1	1							
				X	-BKGD-SØ2									
		1410		X	-BKGD-SDØ1	1	1							
		1320			LIS-AOC3-SWØ1	3	3							VOC to be analyzed for 8240 + please rush all AOC3 VOA analyses.
		1530			LIS-EBØ1	6	3	2	1					
		1340			LIS-BKGD-SWØ1	5	3	2						
		1440			-BKGD-SWØ2	5	3	2						
		1422			-AOC3-GWØ1	3	3							rush - 8240
		1508			-AOC3-GWØ2	4	3	1						rush - 8240
		1530			-AOC3-GWØ3	5	3	1	1					rush - 8240

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert C Cartwright	8/31/93 1700	Alex Palansky	Alex Palansky	8/31/93 2100	Gold Star Air
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0563

PROJ. NO.	PROJECT NAME
4109641201	DEW LINE RI/FS

SAMPLERS: (Signature) Robert C Cartwright

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH	PCB	Pesticides	REMARKS
Cape Lis	8/30	14:25		X	LIS-SS09-S01	1	→			
		14:20			-SS09-S03	1	→			
		1415			-SS09-S04	1	→			
		1410			-SS09-S05	1	→			
		1325			-SS09-S06	1	→			
		1320			-SS09-S07	1	→			
		1340			-SS09-S08	1	→			
		1350			-SS09-S09	1	→			
		1330			-SS09-S10	1	→			
		1310			-SS09-S11	1	→			
		1340			-SS09-S12	1	→			
		1450			LIS-BKGD-S01	1	→			
					~~BKGD S02~~	~~1~~				ASP
		1410			BKGD-SD01	1	→			
		1320			LIS-AOC3-SW01	1	→			
		1035			LIS-SS03-S01	1	→			

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert C Cartwright	8/31/13 1700	Alex Palonsky	Alex Palonsky	1900 8/30	Cape Smythe
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0564

PROJ. NO.	PROJECT NAME
4/1096 4/201	DEW LINE RI/FS

SAMPLERS: (Signature) Robert C Cartwright, Jeff J. Dawson

YR MO NO.

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC # 8240	SVOC # 8270	total Metals	T.O.C.	TSS	TDS	Dissolved Metals	REMARKS
Cape-LIS	8/30	1450		X	LIS-BKGD-SØ1	3		1	1	1				
		1545			-BKGD-SØ2	1		1						
		1410			-BKGD-SDØ1	3		1	1	1				
		1320			LIS-AOC3-SWØ1	7		2	1	1	1	1	1	
		1010			LIS-SSØ8-SØ7	1				1				
		1340			LIS BKGD-SWØ1	5			1	1	1	1	1	
		1490			BKGD-SWØ2	5			1	1	1	1	1	
		1417			LIS-AOC3-GWØ1	1					1			
		1500			AOC 3-GWØ2	1						1		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert C Cartwright	8/31/93 17:00	Alex Palonsky	Alex Palonsky	1900 8/30	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	
					C

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0565

PROJ. NO.	PROJECT NAME
4109641201	DEW LINE RI/FS

SAMPLERS: (Signature) D Pond J.J. Dawson

YR MO NO.

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH	PCB	Pesticides	REMARKS
CapeLis	8/30	1045		X	LIS-SSØ3-SØ2	1	1→			
		1055			LIS-SSØ3-SØ3	1	1→			
		1110	1		SSØ3-SØ4	1	1→			
		1100	1		SSØ3-SØ5	1	1→			
		1115	1		SSØ3-SØ6	1	1→→			
		0950			LIS-SSØ8-SØ1	1	1→			
		0850			SSØ8-SØ2	1	1→			
		1000			SSØ8-SØ3	1	1→			
		1005			SSØ8-SØ4	1	1→			
		1010			SSØ8-SØ5	1	1→			
		1000			SSØ8-SØ7	1	1→			

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
D Pond	8/31/93 1700	Alex Palonsky	Alex Palonsky	1900 8/30	Cape Smythe
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

4

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0566

PROJ. NO.	PROJECT NAME
4110964201	DEW LINE RIFS

SAMPLERS: (Signature) Jeff J. Dawson

YR MO NO.

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	SVOC 8270	total metals	diss metals	TSS	TDS	TOC	REMARKS
Copp L15	8/30	1422		X	L15-AOC3-GW01	7		2	1	1	3	1	1	
		1500			-AOC3-GW02	5		2	1	1	1	1		
		1530			-AOC3-GW03	5		2		1	1	1		
		1545			BKGD-S02	3	1	1	1					
		1620			BKGD-S03	3	1	1	1					
		1635			BKGD-S04	3	1	1	1					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Jeff J. Dawson		Alex Palousky	Alex Palousky	8/30 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0567

PROJ. NO.	PROJECT NAME
4109641201	DEW LINE RI/FS

SAMPLERS (Signature): Jeff Y. Dawson

YR/MO NO.

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA 8260	SVOA 8270	Total Metals	Dissolve Metals	T.D.S.	T.S.S.	T.O.C.	REMARKS
Cape Lis	8/31	0856			LIS-EBØ2 /	3	3							
					LIS-TBØ2 /	2	2							
		0848			LIS-ABØ1 /	3	3							
		1010		X	LIS-LFØ1-SWØ2 /	5	3				1	1		
		1325			LFØ1-SWØ4 /	13	9				2	2		MS/MSD extra volumes
		1435			LFØ1-SWØ5 /	2					1	1		
		1510			LFØ1-SWØ6 /	6	3	1			1	1		
		1515			LFØ1-SWØ7 /	7	3	2			1	1		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Jeff Y. Dawson	31 Aug 95 1700	Alex Palonsky	Alex Palonsky	8/31 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0568

PROJ. NO.	PROJECT NAME
410964120	DEW LINE RI/FS

SAMPLERS: (Signature) Jeff J. Dawson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	SVOA 8270	Total Metals	Dissolved Metals	T.D.S.	T.S.S.	T.O.C.	VOC 8260	REMARKS
Cape Lis	8/31	1010		X	LIS - LFØ1 - SWØ2							1		
		1050			- LFØ1 - SDØ3	3	1	1					1	MS/MSD sample
		1325			- LFØ1 - SDØ5	3	1	1					1	
		1050			- LFØ1 - SDØ8	3	1	1					1	
		1325			- LFØ1 - SWØ4	3						3		MS/MSD extra volumes
		1405			- LFØ1 - SØ5	3	1	1					1	
		1457			- LFØ1 - SØ6	3	1	1					1	possible high values
		1502			- LFØ1 - SØ9	3	1	1					1	possible high values
		1435			LFØ1 - SWØ5	3	2					1		
		1510			LFØ1 - SWØ6	1	[redacted]					1		
		1515			LFØ1 - SWØ7	1						1		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Jeff J. Dawson	8/31/93 1700	Alex Palansky	Alex Palansky	8/31 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0569

PROJ. NO.	PROJECT NAME
4109641291	DEW LINE RI/FS

SAMPLERS (Signature): Jeff J. Dawson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	5 VOA 8270	Total Metals	Dissolved Metals	T.D.S.	T.S.S.	T.O.C.	REMARKS
Cape LIS	8/31	0856			LIS-EB02	2	2						
	8/31	1010		X	LIS-LF01-SW02	2	2						
	8/31	1325		X	LF01-SW04	6	6						MS/MSD extra volumes
					~~LF01-SW05~~								
	8/31	1510		X	LF01-SW06	4	2						
		1515			~~LF01-SW07~~		2						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Jeff J. Dawson	08/31/93 1700	Alex Palowsky	Alex Palowsky	8/31 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0570
w/ 572

PROJ. NO.	PROJECT NAME
41096412.01	DEW LINE RI/FS

SAMPLERS (Signature): Jeff J. Dawson JPaw

YR MO NO.

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	HVOC 8010	VOC 8020	PCBs	TPHs	Pesticides	REMARKS
CapeLK	8/31	0940		X	LK-LFØ1-SDØ1 /	2	1→	1→				
		1025			LFØ1-SDØ2 /	2	1→	1→				
		1050			LFØ1-SDØ3 /	2	1→	1→				
		1140			LFØ1-SDØ4 /	2	1→	1→				
		1325			LFØ1-SDØ5 /	2	1→	1→				
		1435			LFØ1-SDØ6 /	2	1→	1→				
		1525			LFØ1-SDØ7 /	2	1→	1→				
		1050			LFØ1-SDØ8 /	2	1→	1→				
		1115			LFØ1-SØ1 /	2	1→	1→				
		1130			LFØ1-SØ2 /	2	1→	1→				
		1320			LFØ1-SØ3 /	2	1→	1→				
		1412			LFØ1-SØ4 /	2	1→	1→				
		1405			LFØ1-SØ5 /	2	1→	1→				
		1457			LFØ1-SØ6 /	2	1→	1→				expect high values (TPH)
		1520			LFØ1-SØ7 /	2	1→	1→				expect high values (TPH)
		1500			LFØ1-SØ8 /	2	1→	1→				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Jeff J. Dawson	08/31/92 1700	Alex Palonsky	Alex Palonsky	8/31 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0571

PROJ. NO.	PROJECT NAME
1109641201	DEW LINE RI/FS

SAMPLERS: (Signature) Jeff V. Dawson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	SVOA 8270	total metals	dissolved metals	T.D.S.	T.S.S.	T.O.C.	REMARKS
Cape L15	8/31	0856			L15-EB02	2		1	1				
		1010		X	L15-LF01-SW02	2		1	1				
		1325			LF01-SW04	4		2	2				MS/MSD extra volumes
		1435			LF01-SW05	2		1	1				
		1510			LF01-SW06	2		1	1				
		1515			LF01-SW07	2		1	1				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Jeff V. Dawson	8-31-93 1405	Alex Palonsky	Alex Palonsky	8/31 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0572
w/570

PROJ. NO.	PROJECT NAME
411096 4/201	DEW LINE RI/FS

SAMPLERS: *(Signature)* Jeff J. Dawson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	HVOC 8010	VOC 8020	PCBs	TPHs	Pesticides			REMARKS
CapeLis	8/31	1502		X	LIS-LF01-509	2	1→	1→						expect high TPH values

YR MO NO.

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	8-31-93 1412			8/31 1900	
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0573

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	VOA 8020	HVOA - 8010	PCBs	TPHs	Pesticides			REMARKS
4109641201	DEW LINE RI/FS									YR MO NO. 9309

SAMPLERS: (Signature)
Robert C Castagllo

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	CONTAINERS								
Capelis	9/1				LIS-TBØ3 ✓	2	2→							
		1600			LIS-EBØ3 ✓	3	3→							
		0930		X	LIS-STØ7-SWØ1 ✓	4	3			1→				
		1000			-STØ7-SWØ2 ✓	4	3			1				free product in samples
		0935			-STØ7-SWØ3 ✓	4	3			1→				
		1005			-STØ7-SDØ1 ✓	2	1			1→				
		0920			-STØ7-SDØ2 ✓	2	1			1				
		0910			-STØ7-SDØ3 ✓	2	1			1				
		1115			-STØ7-SDØ4 ✓	2	1			1				
		1130			-STØ7-SDØ5 ✓	2	1			1				
		1000			-STØ7-SDØ6 ✓	2	1			1→				
		1535			-STØ7-SØ1 ✓	2	1			1				
		1415			-STØ7-SØ2 ✓	2	1			1				
		1425			-STØ7-SØ3 ✓	2	1			1				
		1500			-STØ7-SØ4 ✓	2	1			1				
					-STØ7-SØ5 ✓									QSP

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert C Castagllo	9/1/93 1700	Alex Palonsky	Alex Palonsky	9/1 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0574

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	VOC 8260	SVOC 8270	total metals	dissolve metals	T.P.H.	T.P.H.	T.P.H.	REMARKS
4109641201	DEW LINE RI/FS									YR MO NO. 9309
SAMPLERS: (Signature) Robert C Goldsmith										
STAT. NO. / DATE / TIME / COMP. / GRAB / STATION LOCATION										
Cape Lis 9/1		2	2							
1600	LIS-TB Ø3 ✓	3	3							
~~0933~~	X LIS-ST Ø7-SW Ø1	8	3	2			1	1	1	
1000	ST Ø7-SW Ø2	8	3	2			1	1	1	free product in samples
0935	ST Ø7-SW Ø3	8	3	2			1	1	1	
1005	ST Ø7-SD Ø1	2	1	1						
1115	ST Ø7-SD Ø4	2	1	1						
1000	ST Ø7-SD Ø6	2	1	1						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert C Goldsmith	9/1/93 1700	Ally Palonsky	Ally Palonsky	9/1 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0575

PROJ. NO.	PROJECT NAME
4110964120	DEW LINE RI/FS

SAMPLERS: (Signature)
Robert C Cartwright

YR MO
NO. 9309

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	5VOC	REMARKS
~~Cape Lis~~	~~9/1~~				~~LIS-ST07-50~~			QSP
Cape Lis	9/1	1600			LIS-EB03	2	2	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert C Cartwright	9/1 1700	Alex Palansky	Alex Palansky	9/1 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0577

PROJ. NO.	PROJECT NAME
4109641201	DEW LINE RI/FS

SAMPLERS: (Signature) Robert C Cartagallo

YR MO NO. 93 09

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8020	HVOC	PCB	TPH	pesticides			REMARKS
Capelis	9/1	1515		X	LIS-ST07-S05	2	1			1				
		1510			ST07-S06	2	1			1				
		1555			ST07-S07	2	1			1				
		1530			ST07-S08	2	1			1				
		1615			ST07-S09	2	1			1				
		1610			ST07-S10	2	1			1				
		1550			ST07-S11	2	1			1				
		1600			LIS-EB03 ✓	1			← 1 →					only water sample in cooler

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert C Cartagallo	9/1 1700	Alex Palansky	Alex Palansky	9/1 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS — CHAIN OF CUSTODY RECORD

NO. 0591

PROJ. NO.	PROJECT NAME
A1096-412-GA	DEW Line RI/FS

SAMPLERS: (Signature) Alex Palonsky

YR MO NO.

STAT. NO.	DATE 1993	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	SVOC 8270	Total metals	VPH	Pesticides/PCBs herbicides		REMARKS
Cape Lisb.	9/9	1420		X	LIS-AOC3-2GW04	6	3	2	1				
↓		1515			LIS-ST07-SW03	2		2					
		1510			LIS-ST07-SW01	2		2					
		1700			LIS-LF01-2SW08	9							change: not running VPH
		1645			2SW09	6	6						↓
		1700			2SW10	6	6						
		1100			LIS-2TB04	2	2						
		1300			LIS-2EB04	5	3		2				
↓	↓	1800		↓	LIS-W01	3	3						
					LIS-W02?		1	1	→	1	1		VPH & VOC 8260 in same bottle
					9/24 wasn't written on								

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Alex Palonsky	9/9 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0592

1 of 2

PROJ. NO.	PROJECT NAME
112941-412-01	DEW Line RI/FS

SAMPLERS: (Signature) Alex Palonsky

YR MO NO.

STAT. NO.	DATE 1993	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	SVOC 8270	VPH				REMARKS
Pt Pelic	9-9	1530		X	LIS-ST07-2SD07	1	1						
		1540			2SD08	1	1						
		1440			-2S12	1	1						
		1600			2S13	1	1						
		1535			2S14	1	1						
		1505			2S15	1	1						
		1455			2S16	1	1						
		1445			2S17	1	1						
					~~LIS-SS08-2S08~~								
					~~2S09~~								
					~~LIS-SS03-2S03~~								
					~~2S08~~								
					~~2S02~~								
					~~2S10~~								
					~~2S11~~								
					~~2S13~~								

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Alex Palonsky	9/9 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS — CHAIN OF CUSTODY RECORD

NO. 0593
1 of 2

PROJ. NO.	PROJECT NAME
41096-412-01	DEW Line RI/FS

SAMPLERS: (Signature) Alec Polonsky

YR MO NO.

STAT. NO.	DATE 1993	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Pesticides	PCB	TPH				REMARKS
Cape Lisburne 9/8		1420		X	LIS-AOC3-26W04	1	1→						QA/QC
		1440			LIS-ST07-SW01 (SOIL) 2S12	1			1				# LIS-ST07-2S12
		1600			LIS-ST07 2S13 SW03	1			1				LIS-ST07-2S13
		1535			LIS-ST07-2S14	1			1				
		1505			-2S15	1			1				
		1455			-2S16	1			1				
		1445			-2S17	1			1				
		1540			-2S18	1			1				
		1545			-2S19	1			1				
		1600			-2S20	1			1				
					~~-2S21~~	1							NA SD
					~~-2S22~~	1							NA SD
		1530			-2SD07	1			1				
		1540			-2SD08	1			1				
		1510			LIS-SS08-2S08	1	1→						
		1515			2S09	1	1→						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Alec Polonsky	9/9 1700	[illegible]			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0594

2 of 2

PROJ. NO.	PROJECT NAME
41896.412.01	DEW Line RI/FS

SAMPLERS: (Signature) Alex Polansky

YR MO NO.

STAT. NO.	DATE 1993	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Pesticides	PCB	TPH	REMARKS
Cape Lz	9-9	1440		X	LIS-SS03-2501	1	1→			
		1445			2508	1	1→			
		1450			2509	1	1→			
		1500			2510	1	1→			
		1455			2511	1	1→			
					~~2512~~	~~1~~	~~1→~~			NH Sof
		1505			2513	1	1→			

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Alex Polansky	9/9 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0595

2 of 2

PROJ. NO.	PROJECT NAME
41896-H12-01	DEW Line RI/FS

SAMPLERS: (Signature) Alex Palonsky

YR MO NO.

STAT. NO.	DATE 1993	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB VOC 8260	SVOC 8270	VPH	VOC 8260	Metals	Pesticides Herbicides	REMARKS
Cape Lab	9-9	1625		X	LIS-LF01-2SD09	2		1	1				
		1635			2SD10	2		1	1				
		1700			2SD11	2		1	1				
		1715			2SD12	2		1	1				
		1725			2SD13	2		1	1				
					2S10	2		1	1				N/S
		1645			2S11	2		1	1				
		1700			LIS-W01	6	1	2		1	1	1	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Alex Palonsky	9/9 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0596

PROJ. NO.	PROJECT NAME
41096-412-41	DEW Line RI/FS

SAMPLERS: *(Signature)* Alex Palonsky

STAT. NO.	DATE 1993	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Pesticides	PCB	TPH	REMARKS
Pre Lish.	9-9	1700		X	LIS-LF01-2SW00	3			3	
		1645			-2SW09	1			1	
		1700			-2SW10	1			1	
		1625			-2SD09	1			X	DUPS 9/24 NA SD
					~~-2SD10~~	1				
		1700			-2SD11	1			1	
		1715			-2SD12	1			X	DUPS 9/24
		1725			-2SD13	1			X	
					~~-2S10~~	1				SD NA
		1645			-2S11	1			1	
		1700			LIS-2EB004	1			1	
		1800			LIS-W01	1			1	
		1810			LIS-W02	1			1	
		1635			LIS-LF01-2SD10	1			1	

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Alex Palonsky	9/9 1700				

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*

Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks:

4

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0597

PROJ. NO.	PROJECT NAME
41096-412-01	DEW Line RI/FS

SAMPLERS: (Signature) Alex Polonsky

YR MO NO.

STAT. NO.	DATE 1993	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	SVOC B270 Tot	REMARKS
Cape Lis	9-9	1700		X	LIS-LF01-2SW08	6 2 8	6	QA/QC (will not be written when sent)
		1645			2SW09	2	2	
		1700			2SW10	2	2	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Alex Polonsky	9/9 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0614

PROJ. NO.	PROJECT NAME
4109641120	DFW LIVE RI/FS

SAMPLERS: (Signature) Jeff J. Dawson

YR MO NO. 9308

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA - BTEX 8020	BVOC 8010	PCBs	TPHs	Pesticides			REMARKS
CapeLis	8/31	0856			LIS-EBØ2 /	3	3							
					LIS-TBØ2 /	2	2							
		0930		X	LIS-LFØ1-SWØ1	3	3							
		1010			-LFØ1-SWØ2	3	3							
		1045			-LFØ1-SWØ3	3	3							
		1325			-LFØ1-SWØ4	9.	9							MS/MSD extra volumes
		1435			LFØ1-SWØ5	3	3							
		1510			LFØ1-SWØ6	3	3							
		1515		V	LFØ1-SWØ7	3	3							

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	8-31-93 1410	Alex Palonsky	Alex Palonsky	8/31 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

ICF KAISER ENGINEERS

CHAIN OF CUSTODY RECORD

NO. 0615

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS	PCBs	TPH's	Pesticides				REMARKS
4109641201	DEW LINE RI/FS								YR MO NO. 93 08

SAMPLERS: (Signature) Jeff D. Dawson

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	CON-TAINERS								REMARKS
Cape Lis	8/31	0856			LIS-EB02	1	←	1	→					
		0930		X	LIS-LF01-SW01	1	←	1						
		1010			LIS-LF01-SW02	1	←	1						
		1045			-LF01-SW03	1	←	1						
		1325			LF01-SW04	3	←	1	→					MS/MSD extra volumes
		1435			LF01-SW05	1	←	1						
		1510			LF01-SW06	1	←	1						
		1515			LF01-SW07	1	←	1						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Jeff Dawson	8/31/93 1400	Alex Polansky	Alex Polansky	8/31 1900	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks:	

4

CHAIN OF CUSTODY RECORD

PROJ. NO. 41016-514-02

PROJECT NAME: DEW Line Cp. Lisburne IRA

SAMPLERS: (Signature) Jeff Y. Dawson, John Francis

YRMO NO. 94 08 1

REMARKS: 94.4608

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB 8080	VOA 624	SMF
Lisburne	9/7/94	1910		X	LIS-SS09-3S15	1	✓		
"	"	1855		X	LIS-SS09-3S14	1	✓		
"	"	1835		X	LIS-SS09-3S13	1	✓		
"	"	1600		X	LIS-SS08-3S12	1	✓		
"	"	1400	X	~~X~~ SMF	LIS-SS03-3EB01	1	✓		
~~"~~	~~"~~	~~2000~~		~~X~~	~~LIS-ST01-3TB01~~	~~3~~		~~✓~~	NA SMF
"	"	2140		X	LIS-LF01-3SD23	1	✓		
"	"	2110		X	LIS-LF01-3S12	1	✓		
"	"	2120		X	LIS-LF01-3S13-1	1	✓		
"	"	2105		X	LIS-LF01-3S14	1	✓		
"	"	2135		X	LIS-LF01-3S15-1	1	✓		
"	"	1530		X	LIS-SS03-3S19	1	✓		
~~"~~	~~"~~	~~1530~~		~~X~~	~~LIS-SS03-LF01-3S23~~	~~1~~	~~✓~~		NA SMF
"	"	1520		X	LIS-SS03-3S22-015	1	✓		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
John Francis	9-7-94 22:00	S M Tuchy	S M Tuchy	9-8-94 13:55	
	Sep 8 1994				

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
		John L Mann	9/9/94 1130	

CHAIN OF CUSTODY RECORD

PROJ. NO. 41c96-514-02

PROJECT NAME: DEW Line Cape Lisburne IRA

SAMPLERS: (Signature) S M Hucy Jeff J. Dawson

YRMO NO. 94 - 002

STAT. NO.	DATE 1994	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	DRPH	AK102	BTEX	8020			REMARKS
Lisburne	9/9/94	958		X	LIS-ST07-35W04	4	✓						Quick turn around please
	↓	955		X	-35W05	4	✓	✓					Quick turn around please
	9/7/94	2000		X	-37B01	3		✓					
	9/9/94	937		X	-3EB03	4	✓	✓					
	9/9/94	1136		X	-3521	2	✓	✓					
	9/8	1125		X	-3522	2	✓	✓					QA/QC
	9/8	1648	X		-3523	2	✓	✓					
	9/8	1625	X		-3524	2	✓	✓					
	9/8	1648	X		-3525	2	✓	✓					
	9/8	1948		X	-3526	2	✓	✓					
	9/8	1957		X	-3527	2	✓	✓					
	9/8	2105		X	-3528	2	✓	✓					
	9/8	2112		X	-3529	2	✓	✓					
	9/8	2100		X	-3530	2	✓	✓					
↓	9/9	1125		X	-3531	2	✓	✓					

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Jeff J. Dawson	9 Sep 94 1302	Goldstreak			

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks

003

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
411516 514-02	DEW Line CapeLisburne/RA

SAMPLERS: (Signature) Jeff J. Dawson

YRMO NO. 94 09 - 003

STAT. NO.	DATE 1994	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	TCLP (VOC, SVOC, PCB, pest, Hg, Pb)	DRPH AK102	GRPH AK101	RRPH AK103	SVOC 8270	PCB 8080	total metals	Pesticides	REMARKS
Lisburne	9/12	1305		X	LIS-LF01-AR01	3	✓									
		1330	X		-3W04	4		✓								high concentrations KRT
		1315		X	-3S16	6	✓		✓	✓	✓	✓	✓		○	high concentrations
	↓	1630		X	LIS-AOC17-3S01	7	✓		✓	✓	✓	✓	✓	✓	✓	possible high conc. ms/s
	9/10	1416		X	LIS-SS03-3S33	1							✓			possible high conc PCB
↓	9/11	0900		X	LIS-LF01-3TB01	3	✓									Bottles incorrectly labeled for 8240
	9/11	1125		X	LIS-LF01-3FP01	~~4~~ 3 SMC	✓		✓	✓		✓	✓		✓	very High conc.) KRT
					SMC								SMC			please ~~sample~~ analyze product
					SMC											not for GRPH VOC
Lisburne	9/11	10:23		X	LIS-LF01-3SW11	7 ~~6~~ 8 SMC	✓		✓	✓		✓	✓		✓	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	9/13/94 10:35	[signature]	[signature]	9-13-94 14:30	Fed Ex Air Bill # 8041406800
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

004

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
4109651402	DEW Line Cape Lisburne IRA

SAMPLERS: *(Signature)* S M Fuchs Jeff D. Dawson

YRMO NO. 94 09 1 - 004

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Waste Drilling	REMARKS
LISBURNE	9/12	1330	X		LIS-LF01-3W04	2	X	

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
S M Fuchs	9/13/94 10:35	John P. Towers	John P. Towers	9/13/94 14:30	Fed. Ex. airbill # 986999673 Suit
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
					Airbill # 986999662
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

005

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
41-90-5M-02	DEW Line Cape Lisburne IRA

SAMPLERS: *(Signature)* S. M. Fuchs Jeff L. Dawson

YRMO NO. 94 09 – 005

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	DRPH AK102	SVOC 8270				REMARKS
Lisburne	9/13	[illegible]		Y	LIS-STA07-371302	3	✓						
↓	9/13	0932		X	LIS-STA07-350106	13	✓	✓	✓				QA/QC ✓

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
S. M. Fuchs	9/13/94 10:35	John Franck	John Franck	9-13-94 14:30	FedEX Airbill # 986999666 84
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

206

PROJ. NO.	PROJECT NAME
41096-54-02	DEW Line Cape Lisburne IRA

SAMPLERS: *(Signature)* Jeff J. Dawson

NO. YRMO 94 09 – 006

STAT. NO.	DATE 1994	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCLP (VOCs, SVOCs, Pest, Herb)					NO TUSD (4 sample containers adequate)	REMARKS
Lisburne	9/11	1125		X	LIS-LF01-3FP01	7	✓						analyze free product

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
[signature]	9/13/94 10:35	[signature]	[signature]	9-13-94 14:30	FedEx airbill # 9869996695
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
6112.96-514 02.	DEW Line IRA

YR MO NO. 9409-667

SAMPLERS: (Signature) [signature]

STAT. NO.	DATE 1994	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB 8080	REMARKS
Listburne	9/11	2000		X	LIS-LF01-3531-2	1	✓	
↓	↓	↓		X	LIS-LF01-3EB02	1	✓	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	9/19/94	Fed Ex. Airbill # 986999665 1			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

Anchorage, AK

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
41096-614 -02	Cape Lisburne -LFØ1

SAMPLERS: (Signature)

YR MO NO. 0595-002

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	GRPH AFFGT DRPH AK103 RRPH AK103	SVOCs 8270	PCBs 8080			REMARKS
	5-6-95	—		X	LIZ-LFØ1-4TB1	2	X						
	5-7-95	1840		X	LIZ-LFØ1-4535	3	X	X	X	X			
	5-7-95	1925		X	LIZ-LFØ1-4540	~~3~~ 4	X	X	X	X			QA/QC
X	5-7-95	1950		X	LIZ-LFØ1-4544	~~3~~ 4	X	X	X	X			
	5-8-95	0900	X		LIZ-LFØ1-4546	4	X	X	X	X			High Concentrations
	5-8-95	0910	X		LIZ-LFØ1-4547	4	X	X	X	X			High Concentrations
	5-8-95	0920	X		LIZ-LFØ1-4548	4	X	X	X	X			High Concentrations
	5-8-95	0930	X		LIZ-LFØ1-4549	4	X	X	X	X			High Concentrations
	5-8-95	0940	X		LIZ-LFØ1-4550	4	X	X	X	X			High Concentrations

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	05-09-95 1400				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
41096	Cape Fisburne - IRA

SAMPLERS: *(Signature)* John F. Hicks

YR MO NO. 95 05 – 003

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Waste Mgt. Profile	REMARKS
1	5/10/95	0830	✓		LI2-LFØ1-FP1	1	✓	unknown liquids, possible used motor oils & solvents; high ash.
2		0900	✓		LI2-LFØ1-FP2	1	✓	
3		0935	✓		LI2-LFØ1-FP3	1	✓	
4		1005	✓		LI2-LFØ1-FP4	1	✓	
5		1030	✓		LI2-LFØ1-FP5	1	✓	
6	↓	11:00	✓		LI2-LFØ1-FP6	1	✓	
7	5/10/95	14:05	✓		LI2-LFØ1-FP7	1	✓	QP4

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
John F. Hicks	5-1-95 12:01				
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
411016-614-02	DEW Line Cape Lisburne IRA

SAMPLERS: (Signature) Jeff W. Pearson

NO. YR MO 95 05 002

REMARKS 1 of 2

STAT. NO.	DATE 1995	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB 8080						
Lisburne	23 June	0852		✓	LIS-~~LF~~BKgd-5SD01	1	✓						
		0854		✓	LIS-BKgd-5SD02	1	✓						
		0854		✓	LIS-BKgd-5SD03-2	1	✓						
		0856		✓	LIS-BKgd-5SD04	1	✓						
		0855		✓	LIS-BKgd-5SD05	1	✓						
		0910		✓	LIS-BKgd-5SD06	1	✓						
		0910		✓	LIS-BKgd-5SD07	1	✓						
		1008		✓	LIS-LF01-5SD01	1	✓						
		1009		✓	LIS-LF01-5SD02	1	✓						
		1013		✓	LIS-LF01-5SD03-1	1	✓						
		1018		✓	LIS-LF01-5SD04	1	✓						
		1022		✓	LIS-LF01-5SD05	1	✓						
		1032		✓	LIS-LF01-5SD06	1	✓						
		0952		✓	LIS-LF01-5SD07	1	✓						
		1050		✓	LIS-LF01-5SD08	1	✓						

Quick Turn around: QA/QC (MS/MSD)

Hold ONLY - do not analyze

Hold ONLY - do not analyze

QUICK TURN around

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Jeff W. Pearson	23 June 95 1145	Gold Streak			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
41096-614 02	DEW Line Cape Lisburne IRA

SAMPLERS: *(Signature)* Timothy Jeffrey Dawson

YRMO NO. 9695-003

REMARKS 2 of 2

STAT. NO.	DATE 1995	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB 8080						
Lisburne	23 June	1055		X	LIS-LF01-55D09	1	✓						Quick turn around

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Timothy Jeffrey Dawson	23 June 95 1145	Cold Streak			
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
41016-104-02	DEW Line Cape Lisburne IRA

SAMPLERS: *(Signature)*

YRMO NO. 9605-004

REMARKS NO MS/MSD

STAT. NO.	DATE 1995	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	DRPH AK101	DRPH AK102	PCB 8080	TCLP Metals (4)		
Lisburne	23 June 95	1537		✓	LIS-5IDW01	9	2	2	2	2	1		
↓	↓	1545		✓	LIS-5EB01	2	2						
↓	↓	1520		✓	LIS-5TB01	2	2						

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
	24 June 95 1710	GoldStreak			
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
41048-614-02	DEW Line Cape Lisburne IRA

SAMPLERS: *(Signature)*

YR MO NO. 0695-005

STAT. NO.	DATE 1995	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCBs 8080	VOC 8260	GRPH AK 101	DRPH/ARPH AK101/AK	DRPH ARPH SGC AK	REMARKS
Lisburne	24 June	07:47		✓	LIS-LF01-5555	1	✓					≥10 ppm
↓	↓	0803		✓	-5558	1	✓					≥10 ppm
		1024		✓	-5565	1	✓					<1 ppm
	↓	11:05		✓	-5568	2	✓	✓	✓	✓		PCBs <1 ppm
↓	25 June	17:15		✓	-5570	1	✓					
	26 June	11:20		✓	-5571	1	✓					
		11:29		✓	-5572	1	✓					
		11:39		✓	-5573	1	✓					
↓	↓	13:10		✓	-AL01	8	✓	✓	✓		✓	
↓	↓	12:[illegible]		✓	LIS-5TB42	2		✓				

RECEIVED JUL 17 1995

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
[signature]	30 June 1995 1200	[signature] Fed Ex via Prudhoe Bay Aeronautics			
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)* Jody C Muse	Date/Time 6/27/95 0810	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
411076-614-02	Cape Lisburne (DEW Line) IRP

SAMPLERS: *(Signature)*

YRMO NO. 95-006

STAT. NO.	DATE 1995	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCBs (8080)	Waste Management 4 + Parameter					REMARKS
Lisburne	26 June	1435		✓	LIS-LF01-5FP08	1		✓					} NO MS/MSD water phase
	↓	1430		✓	-5FP09	1		✓					} NO IRPMS oil phase
	27 June	1917		✓	LIS-~~LIS~~ 5EB02	2	✓						
		~~1335~~		~~✓~~	~~LIS-LF01-5SD10~~	~~1~~	~~✓~~						
		1515		✓	LIS-LF01-5SD11	1	✓						
		1542		✓	-5SD12	1	✓						
		1623		✓	-5SD13	1	✓						QA/QC (IRP
		2008		✓	LIS-Bkgd-5SD08	1	✓						
↓	↓	2031		✓	LIS-Bkgd-5SD09	1	✓						

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
	27 Jun 95 0925				
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

004

PROJ. NO.	PROJECT NAME
411961314.02	DEW Line Cape Lisburne IRA

NO. YR MO — 004

SAMPLERS: *(Signature)* S M Fuchs Jeff D. Dawson

STAT. NO.	DATE 1994	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Waste Packaging						REMARKS
LISBURNE	9/12	1330	X		LIS-LF01-3W04	2	X						

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
S M Fuchs	9/13/94 10:35	John P. Francis	John P. Francis	9/13/94 14:30	Fed. Ex. airbill # ~~9814419673~~ 9814419673
John P. Francis					Airbill # 986999666 2
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

206

PROJ. NO.	PROJECT NAME	NO.	YR/MO/NO.
41191-534-02	DEW Line Cape Lisburne IRA	OF CON-TAINERS	94091-006

SAMPLERS: *(Signature)* Jeff J. Dawson

STAT. NO.	DATE 1994	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	TCLP (VOC, SVOC, Pest, Herb, Metals)					NO MSD (if sample adequate)	REMARKS
Lisburne	9/11	1125		X	LIS-LF01-3FP01	7	✓						NO Fuel analyze free product

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Jeff Mackay	9/13/94 10:35	John Francis	John Francis	9-13-94 11:30	Fed Ex airbill # 9816996695
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

Anchorage, AK

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	YRMO NO.
41096-614 -02	Cape Lisburne -LFØ1	9505-002

SAMPLERS: (Signature)

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	GRPHAFETGI DRPH AK102 RRPH AK103	SVOCs 8270	PCBs 8080			REMARKS
	5-6-95	—		X	LIZ-LFØ1-4TB1	2	X						
	5-7-95	1840		X	LIZ-LFØ1-4535	3	X	X	X	X			
	5-7-95	1925		X	LIZ-LFØ1-4540	~~3~~ 4	X	X	X	X			QA/QC
X	5-7-95	1950		X	LIZ-LFØ1-4544	~~3~~ 4	X	X	X	X			
	5-8-95	0900	X		LIZ-LFØ1-4546	4	X	X	X	X			High Concentrations
	5-8-95	0910	X		LIZ-LFØ1-4547	4	X	X	X	X			High Concentrations
	5-8-95	0920	X		LIZ-LFØ1-4548	4	X	X	X	X			High Concentrations
	5-8-95	0930	X		LIZ-LFØ1-4549	4	X	X	X	X			High Concentrations
	5-8-95	0940	X		LIZ-LFØ1-4550	4	X	X	X	X			High Concentrations

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Chris Cantwell	05-09-95 1400				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
411016-011-02	DEW Line Cape Lisburne IRA

SAMPLERS: (Signature) [signature]

NO. YR MO 95 09 – 002

REMARKS 1 of 2

STAT. NO.	DATE 1995	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB 8080						
Lisburne	22 June	0852		✓	LIS - ~~LF~~ BKgd-55D01	1	✓						
		0854		✓	LIS - BKgd-55D02	1	✓						
		0854		✓	LIS - BKgd - 55D03-2	1	✓						
		0856		✓	LIS - BKgd - 55D04	1	✓						
		0855		✓	LIS - BKgd - 55D05	1	✓						
		0910		✓	LIS - BKgd - 55D06	1	✓						
		0910		✓	LIS - BKgd - 55D07	1	✓						
		1008		✓	LIS - LF01 - 55D01	1	✓						
		1009		✓	LIS - LF01 - 55D02	1	✓						
		1013		✓	LIS - LF01 - 55D03-1	1	✓						
		1018		✓	LIS - LF01 - 55D04	1	✓						
		1022		✓	LIS - LF01 - 55D05	1	✓						
		1032		✓	LIS - LF01 - 55D06	1	✓						
		0952		✓	LIS - LF01 - 55D07	1	✓						
↓	↓	1050		✓	LIS - LF01 - 55D08	1	✓						

Quick Turn around: QA/QC (MS/MSD)

Hold ONly - do not analyze

Hold ONly - do not analyze

Quick Turn around

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	23 June 95 1145	Gold Streak			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
41016-114-02	DEW Line Cape Lisburne IRA

SAMPLERS: *(Signature)*

YRMO NO. 9505-007

REMARKS NO MS/MSD

STAT. NO.	DATE 1995	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC 8260	BRPH AK101	DRPH AK102	PCB 8080	TCLP Metals (4)		
Lisburne	23 June 95	1537		✓	LIS-5IDW01	9	2	2	2	2	1		
↓	↓	1545		✓	LIS-5EB01	2	2						
↓	↓	1520		✓	LIS-5TB01	2	2						

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
	24 June 95 0710	GoldStreak			
Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Remarks	

CHAIN OF CUSTODY RECORD

YRMO NO. 95-06

PROJ. NO.	PROJECT NAME
411676-614-02	Capt Lisburne (DEW Line) IRP

SAMPLERS: (Signature)

STAT. NO.	DATE 1995	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCBs (8082)	Waste Management Characteristics					REMARKS
Lisburne	26 June	1435		✓	LIS-LF01-5FP08	1		✓					No MS/MSD water phase
	↓	1430		✓	-5FP09	1		✓					No IRPMS oil phase
	27 June	1917		✓	LIS-~~LIS~~ 5EB02	2	✓						
		~~1335~~		✓	~~LIS-LF01-5SD10~~	~~1~~	✓						
		1515		✓	LIS-LF01-5SD11	1	✓						
		1542		✓	-5SD12	1	✓						
		1623		✓	-5SD13	1	✓						QA/QC IRP
		2008		✓	LIS-Bkgd-5SD08	1	✓						
↓	↓	2031		✓	LIS-Bkgd-5SD09	1	✓						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	27 JUN 95				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

APPENDIX F

ANALYTICAL DATA

1. SUMMARY TABLES OF ANALYTICAL DATA (presented in Sections 3.0 and 4.0)
2. CROSS-REFERENCE TABLE FOR SAMPLE IDENTIFICATION
3. ANALYTICAL DATA (for each site CT&E Data is presented first followed by F&B Data)

1. SUMMARY TABLES OF ANALYTICAL DATA (presented in Sections 3.0 and 4.0)

2. CROSS-REFERENCE TABLE FOR SAMPLE IDENTIFICATION

CROSS-REFERENCE SAMPLE IDENTIFICATION

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Landfill & Waste Accumulation Area (LF01)									
LIS-LF01-S01	LIS-LF01-S01	LF01		570		1594		#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-S02	LIS-LF01-S02	LF01		570		1596		#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-S03	LIS-LF01-S03	LF01		570		1598		#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-S04	LIS-LF01-S04	LF01		570		1600		#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-S05	LIS-LF01-S05	LF01	568	570	93.4514-11	1602	93.4514	#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-S06	LIS-LF01-S06	LF01	568	570	93.4514-12	1604	93.4514	#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-S07	LIS-LF01-S07	LF01		570		1606		#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-S08	LIS-LF01-S08	LF01		570		1608		#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-S09	LIS-LF01-S09	LF01	568	572	93.4514-13	1610	93.4514	#6-09/05/93 #3&4-09/04/93	Soil
LIS-LF01-2S11	LIS-LF01-2S11	LF01	595	596	93.4728-8	1923	93.4728	#6-09/13/93	Soil
LIS-LF01-3S12	LIS-LF01-3S12	LF01	94-001		94.4608-7		94.4608		Soil
LIS-LF01-3S13-1	LIS-LF01-3S13-1	LF01	94-001		94.4608-8		94.4608		Soil
LIS-LF01-3S14	LIS-LF01-3S14	LF01	94-001		94.4608-9		94.4608		Soil
LIS-LF01-3S15-1	LIS-LF01-3S15-1	LF01	94-001		94.4608-10		94.4608		Soil

CT&E - Commercial Testing and Engineering Co.
F&B - Friedman and Bruya, Inc.

CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Landfill & Waste Accumulation Area (LF01) (Continued)									
LIS-LF01-3S16	LIS-LF01-3S16	LF01	94-003		94.4762-3		94.4762		Soil
LIS-LF01-3S31-2	LIS-LF01-3S31-2	LF01	94-007		94.4742-1		94.4742		Soil
LIZ-LF01-4S35	LIZ-LF01-4S35	LF01	0595-002		95.1850-2		95.1850		Soil
LIZ-LF01-4S40-5	LIZ-LF01-4S40-5	LF01	0595-002		95.1850-3		95.1850		Soil
LIZ-LF01-4S40DS	LIZ-LF01-4S40	LF01	0595-002		95.1850-10		95.1850		Soil Spike
LIZ-LF01-4S40SD	LIZ-LF01-4S40SD	LF01	0595-002		95.1850-11		95.1850		Soil Spike Duplicate
LIZ-LF01-4S44-4	LIZ-LF01-4S44-4	LF01	0595-002		95.1850-4		95.1850		Soil
LIZ-LF01-4S46	LIZ-LF01-4S46	LF01	0595-002						Soil
LIZ-LF01-4S47	LIZ-LF01-4S47	LF01	0595-002						Soil
LIZ-LF01-4S48	LIZ-LF01-4S48	LF01	0595-002						Soil
LIZ-LF01-4S49	LIZ-LF01-4S49	LF01	0595-002						Soil
LIS-LF01-4S50	LIS-LF01-4S50	LF01	0595-002						Soil
LIS-LF01-5S52-1	LIS-LF01-5S52-1	LF01	0595-002						Soil
LIS-LF01-5S53	LIS-LF01-5S53	LF01	0595-002						Soil
LIS-LF01-5S54-2	LIS-LF01-5S54-2	LF01	0595-002						Soil
LIS-LF01-5S55	LIS-LF01-5S55	LF01	0695-005		95.2610-1		95.2610		Soil
LIS-LF01-5S58	LIS-LF01-5S58	LF01	0695-005		95.2610-2		95.2610		Soil
LIS-LF01-5S55S	LIS-LF01-5S58	LF01	0695-005		95.2610-12		95.2610		Soil Spike
LIS-LF01-5S58SD	LIS-LF01-5S58SD	LF01	0695-005		95.2610-13		95.2610		Soil Spike Duplicate

CT&E - Commercial Testing and Engineering Co.
F&B - Friedman and Bruya, Inc.

CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Landfill & Waste Accumulation Area (LF01) (Continued)									
LIS-LF01-5S65	LIS-LF01-5S65	LF01	0695-005		95.2610-3		95.2610		Soil
LIS-LF01-5S68	LIS-LF01-5S68	LF01	0695-005		95.2610-4		95.2610		Soil
LIS-LF01-5S70	LIS-LF01-5S70	LF01	0695-005		95.2610-5		95.2610		Soil
LIS-LF01-5S71	LIS-LF01-5S71	LF01	0695-005		95.2610-6		95.2610		Soil
LIS-LF01-5S72	LIS-LF01-5S72	LF01	0695-005		95.2610-7		95.2610		Soil
LIS-LF01-5S73	LIS-LF01-5S73	LF01	0695-005		95.2610-8		95.2610		Soil
LIS-LF01-SD01	LIS-LF01-SD01	LF01		570		1578		#6-09/05/93 #3&4-09/04/93	Sediment
LIS-LF01-SD02	LIS-LF01-SD02	LF01		570		1580		#6-09/05/93 #3&4-09/04/93	Sediment
LIS-LF01-SD03	LIS-LF01-SD03	LF01	568	570	93.4514-2	1582	93.4514	#6-09/05/93 #3&4-09/04/93	Sediment
LIS-LF01-SD03DP	LIS-LF01-SD03	LF01	568		93.4514-5		93.4514		Sediment Duplicate
LIS-LF01-SD03S	LIS-LF01-SD03	LF01	568		93.4514-3		93.4514		Sediment Spike
LIS-LF01-SD03SD	LIS-LF01-SD03	LF01	568		93.4514-4		93.4514		Sediment Spike Duplicate
LIS-LF01-SD04	LIS-LF01-SD04	LF01		570		1584		#6-09/05/93 #3&4-09/04/93	Sediment
LIS-LF01-SD05	LIS-LF01-SD05	LF01	568	570	93.4514-6	1586	93.4514	#6-09/05/93 #3&4-09/04/93	Sediment
LIS-LF01-SD06	LIS-LF01-SD06	LF01		570		1588		#6-09/05/93 #3&4-09/04/93	Sediment

CT&E - Commercial Testing and Engineering Co.
F&B - Friedman and Bruya, Inc.

CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Landfill & Waste Accumulation Area (LF01) (Continued)									
LIS-LF01-SD07	LIS-LF01-SD07	LF01		570		1590		#6-09/05/93 #3&4-09/04/93	Sediment
LIS-LF01-SD08	LIS-LF01-SD08	LF01	568	570	93.4514-7	1592	93.4514	#6-09/05/93 #3&4-09/04/93	Sediment
LIS-LF01-2SD09	LIS-LF01-2SD09	LF01	595		93.4728-1		93.4728		Sediment
LIS-LF01-2SD09	LIS-LF01-2SD09	LF01	595		93.4728-2		93.4728		Sediment Spike
LIS-LF01-2SD09SD	LIS-LF01-2SD09SD	LF01	595		93.4728-3		93.4728		Sediment Spike Duplicate
LIS-LF01-2SD10	LIS-LF01-2SD10	LF01	595	596	93.4728-4	1927	93.4728	#6-09/05/93	Sediment
LIS-LF01-2SD11	LIS-LF01-2SD11	LF01	595	596	93.4728-5	1920	93.4728	#6-09/05/93	Sediment
LIS-LF01-2SD12	LIS-LF01-2SD12	LF01	595		93.4728-6		93.4728		Sediment
LIS-LF01-2SD13	LIS-LF01-2SD13	LF01	595		93.4728-7		93.4728		Sediment
LIS-LF01-3SD23	LIS-LF01-3SD23	LF01	94-001		94.4608-6		94.4608		Sediment
LIS-LF01-5SD01	LIS-LF01-5SD01	LF01	0695-002						Soil
LIS-LF01-5SD02	LIS-LF01-5SD02	LF01	0695-002		95.2592-9		95.2592		Soil
LIS-LF01-5SD03-1	LIS-LF01-5SD03-1	LF01	0695-002		95.2592-10		95.2592		Soil
LIS-LF01-5SD04	LIS-LF01-5SD04	LF01	0695-002		95.2592-11		95.2592		Soil
LIS-LF01-5SD05	LIS-LF01-5SD05	LF01	0695-002		95.2592-12		95.2592		Soil

CT&E - Commercial Testing and Engineering Co.
F&B - Friedman and Bruya, Inc.

CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Landfill & Waste Accumulation Area (LF01) (Continued)									
LIS-LF01-5SD06	LIS-LF01-5SD06	LF01	0695-002		95.2592-13		95.2592		Soil
LIS-LF01-5SD07	LIS-LF01-5SD07	LF01	0695-002		95.2592-14		95.2592		Soil
LIS-LF01-5SD08	LIS-LF01-5SD08	LF01	0695-002		95.2592-15		95.2592		Soil
LIS-LF01-5SD09	LIS-LF01-5SD09	LF01	0695-003		95.2592-16		95.2592		Soil
LIS-LF01-5SD11	LIS-LF01-5SD11	LF01	0695-006		95.2714-4		95.2714		Soil
LIS-LF01-5SD12	LIS-LF01-5SD12	LF01	0695-006		95.2714-5		95.2714		Soil
LIS-LF01-5SD13	LIS-LF01-5SD13	LF01	0695-006		95.2714-6		95.2714		Soil
LIS-LF01-SW01	LIS-LF01-SW01	LF01		614 615		1516 1543			Surface Water
LIS-LF01-SW02	LIS-LF01-SW02	LF01	567 568 569 571	614 615	93.4511-2 93.4512-4 93.4513-2 93.4514-1	1518 1544	93.4511 93.4512 93.4513 93.4514		Surface Water
LIS-LF01-SW03	LIS-LF01-SW03	LF01		614 615		1522 1545			Surface Water
LIS-LF01-SW04	LIS-LF01-SW04	LF01	567 568 569 571	614 615	93.4511-3 93.4512-5 93.4513-3 93.4514-8	1524 1546	93.4511 93.4512 93.4513 93.4514		Surface Water
LIS-LF01-SW04DP	LIS-LF01-SW04	LF01	568 571		93.4511-4 93.4514-9		93.4511 93.4514		Surface Water Duplicate
LIS-LF01-SW04S	LIS-LF01-SW04	LF01	567/568 569/571		93.4511-5 93.4512-6 93.4513-4 93.4514-10		93.4511 93.4512 93.4513 93.4514		Surface Water Spike

CT&E - Commercial Testing and Engineering Co.
F&B - Friedman and Bruya, Inc.

CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Landfill & Waste Accumulation Area (LF01) (Continued)									
LIS-LF01-SW04SD	LIS-LF01-SW04	LF01	567/569		93.4512-7 93.4513-5		93.4512 93.4513		Surface Water Spike Duplicate
LIS-LF01-SW05	LIS-LF01-SW05	LF01	567 568 571	61 615	93.4511-6 93.4512-8 93.4514-14	1534 1549	93.4511 93.4512 93.4514		Surface Water
LIS-LF01-SW06	LIS-LF01-SW06	LF01	567 568 569 571	614 615	93.4511-7 93.4512-9 93.4513-6 93.4514-15	1536 1550	93.4511 93.4512 93.4513 93.4514		Surface Water
LIS-LF01-SW07	LIS-LF01-SW07	LF01	567 568 571	614 615	93.4511-8 93.4512-10 93.4514-16	1540 1551	93.4511 93.4512 93.4514		Surface Water
LIS-LF01-2SW08	LIS-LF01-2SW08	LF01	591 597	596	93.4727-4 93.4729-1	1915	93.4727 93.4729		Surface Water
LIS-LF01-2SW08S	LIS-LF01-2SW08	LF01	591		93.4727-5		93.4727		Surface Water Spike
LIS-LF01-2SW08SD	LIS-LF01-2SW08	LF01	591		93.4727-6		93.4727		Surface Water Spike Duplicate
LIS-LF01-2SW09	LIS-LF01-2SW09	LF01	591 597	596	93.4727-7 93.4729-2	1917	93.4727 93.4729		Surface Water
LIS-LF01-2SW10	LIS-LF01-2SW10	LF01	591 597	596	93.4727-8 93.4729-3	1918	93.4727 93.4729		Surface Water
LIS-LF01-3SW11	LIS-LF01-3SW11	LF01	94-003		94.4762-7		94.4762		Surface Water
LIS-LF01-3FP01	LIS-LF01-3FP01	LF01	94-006		94.4761-1		94.4761		Free Product

CT&E - Commercial Testing and Engineering Co.
F&B - Friedman and Bruya, Inc.

CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
White Alice Site (SS03)									
LIS-SS03-S01	LIS-SS03-S01	SS03		563		1379		#6-09/02/93	Soil
LIS-SS03-S02	LIS-SS03-S02	SS03		565		1394		#6-09/02/93	Soil
LIS-SS03-S03	LIS-SS03-S03	SS03		565		1395		#6-09/02/93	Soil
LIS-SS03-S04	LIS-SS03-S04	SS03		565		1396		#6-09/02/93	Soil
LIS-SS03-S05	LIS-SS03-S05	SS03		565		1397		#6-09/02/93	Soil
LIS-SS03-S06	LIS-SS03-S06	SS03		565		1398		#6-09/02/93	Soil
LIS-SS03-2S07	LIS-SS03-2S07	SS03		594		1908		#6-09/13/93	Soil
LIS-SS03-2S08	LIS-SS03-2S08	SS03		594		1909		#6-09/13/93	Soil
LIS-SS03-2S09	LIS-SS03-2S09	SS03		594		1910		#6-09/13/93	Soil
LIS-SS03-2S10	LIS-SS03-2S10	SS03		594		1911		#6-09/13/93	Soil
LIS-SS03-2S11	LIS-SS03-2S11	SS03		594		1912		#6-09/13/93	Soil
LIS-SS03-2S13	LIS-SS03-2S13	SS03		594		1913		#6-09/13/93	Soil
LIS-SS03-3S19	LIS-SS03-3S19	SS03	94-001		94.4608-11		94.4608		Soil
LIS-SS03-3S19S	LIS-SS03-3S19	SS03	94-001		94.4608-14		94.4608		Soil Spike
LIS-SS03-3S19SD	LIS-SSO3-3S19	SS03	94-001		94.4608-15		94.4608		Soil Spike Duplicate
LIS-SS03-3S22-0.5	LIS-SS03-3S22-0.5	SS03	94-001		94.4608-13		94.4608		Soil
LIS-SS03-3S23	LIS-SS03-3S23	SS03	94-001		94.4608-12		94.4608		Field Replicate Soil
LIS-SS03-3533	LIS-SS03-3S33	SS03	94-003		94.4762-5		94.4762		Soil

CT&E - Commercial Testing and Engineering Co.
F&B - Friedman and Bruya, Inc.

CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Spill/Leak #3 (ST07)									
LIS-ST07-S01	LIS-ST07-S01	ST07		573		1656		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S02	LIS-ST07-S02	ST07		573		1658		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S03	LIS-ST07-S03	ST07		573		1660		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S04	LIS-ST07-S04	ST07		573		1662		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S05	LIS-ST07-S05	ST07		577		1612		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S06	LIS-ST07-S06	ST07		577		1614		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S07	LIS-ST07-S07	ST07		577		1616		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S08	LIS-ST07-S08	ST07		577		1618		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S09	LIS-ST07-S09	ST07		577		1620		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S10	LIS-ST07-S10	ST07		577		1622		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-S11	LIS-ST07-S11	ST07		577		1624		#6-09/03/93 #3&4-09/04/93	Soil
LIS-ST07-2S12	LIS-ST07-2S12	ST07	592	593	93.4728-15	1929	93.4728	#6-09/13/93	Soil
LIS-ST07-2S13	LIS-ST07-2S13	ST07	592	593	93.4728-16	1930	93.4728	#6-09/13/93	Soil
LIS-ST07-2S14	LIS-ST07-2S14	ST07	592	593	93.4728-17	1931	93.4728	#6-09/13/93	Soil

CT&E - Commercial Testing and Engineering Co.
F&B - Friedman and Bruya, Inc.

CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Spill/Leak #3 (ST07) (Continued)									
LIS-ST07-2S15	LIS-ST07-2S15	ST07	592	593	93.4728-18	1932	93.4728	#6-09/13/93	Soil
LIS-ST07-2S16	LIS-ST07-2S16	ST07	592	593	93.4728-19	1933	93.4728	#6-09/13/93	Soil
LIS-ST07-2S17	LIS-ST07-2S17	ST07	592	593	93.4728-20	1934	93.4728	#6-09/13/93	Soil
LIS-ST07-2S18	LIS-ST07-2S18	ST07		593		1935		#6-09/13/93	Soil
LIS-ST07-2S19	LIS-ST07-2S19	ST07		593		1936		#6-09/13/93	Soil
LIS-ST07-2S20	LIS-ST07-2S20	ST07		593		1937		#6-09/13/93	Soil
LIS-ST07-3S21	LIS-ST07-3S21	ST07	94-002		94.4639-5		94.4639		Soil
LIS-ST07-3S22	LIS-ST07-3S22	ST07	94-002		94.4639-6		94.4639		Soil
LIS-ST07-3S22S	LIS-ST07-3S22	ST07	94-002		94.4639-16		94.4639		Soil Spike
LIS-ST07-3S22SD	LIS-ST07-3S22	ST07	94-002		94.4639-17		94.4639		Soil Spike Duplicate
LIS-ST07-3S23	LIS-ST07-3S23	ST07	94-002		94.4639-7		94.4639		Soil
LIS-ST07-3S24	LIS-ST07-3S24	ST07	94-002		94.4639-8		94.4639		Soil
LIS-ST07-3S25	LIS-ST07-3S25	ST07	94-002		94.4639-9		91.4639		Soil
LIS-ST07-3S26	LIS-ST07-3S26	ST07	94-002		94.4639-10		91.4639		Soil
LIS-ST07-3S27	LIS-ST07-3S27	ST07	94-002		94.4639-11		91.4639		Soil
LIS-ST07-3S28	LIS-ST07-3S28	ST07	94-002		94.4639-12		91.4639		Soil
LIS-ST07-3S29	LIS-ST07-3S29	ST07	94-002		94.4639-13		91.4639		Soil
LIS-ST07-3S30	LIS-ST07-3S30	ST07	94-002		94.4639-14		91.4639		Soil
LIS-ST07-3S31	LIS-ST07-3S31	ST07	94-002		94.4639-15		91.4639		Soil

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CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Spill/Leak #3 (ST07) (Continued)									
LIS-ST07-SD010	LIS-ST07-SD01	ST07	574	573	93.4614-8	1644	39.4614	#3&4-09/04/93 #6-09/03/93	Sediment
LIS-ST07-SD02	LIS-ST07-SD02	STO7		573		1646		#3&4-09/04/93 #6-09/03/93	Sediment
LIS-STO7-SD03	LIS-STO7-SD03	ST07		573		1648		#3&4-9/04/93 #6-09/03/93	Sediment
LIS-ST07-SD04	LIS-ST07-SD04	ST07	574	573	93.4614-9	1650	93.4614	#6-09/03/93 #6-09/10/93 #3&4-09/04/93	Sediment
LIS-ST07-SD05	LIS-ST07-SD05	ST07		573		1652		#3&4-09/04/93 #6-09/03/93	Sediment
LIS-ST07-SD06	LIS-ST07-SD06	ST07	574	573	93.4614-10	1654	93.4614	#3&4-09/04/93 #6-09/03/93	Sediment
LIS-ST07-2SD07	LIS-ST07-2SD07	ST07	592	593	93.4738-13	1938	93.4738	#6-09/13/93	Sediment
LIS-ST07-2SD08	LIS-ST07-2SD08	ST07	592	593	93.4738-14	1939	93.4738	#6-09/13/93	Sediment
LIS-ST07-SW01	LIS-ST07-SW01	ST07	574 591	573	93.4614-3	1631 1632	93.4614	#6-09/03/93 #1&2-09-04-93	Surface Water
LIS-ST07-SW02	LIS-ST07-SW02	ST07	574	573	93.4614-4	1635	93.4614	#6-09/03/93	Surface Water
LIS-ST07-SW03	LIS-ST07-SW03	ST07	574	573	93.4614-5	1639 1640	93.4614	#6-09/03/93 #1&2-09-04-93	Surface Water

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CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Upper Camp Transformer Buildings (SS08)									
LIS-SS08-S01	LIS-SS08-S01	SS08		565		1399		#6-09/02/93	Soil
LIS-SS08-S02	LIS-SS08-S02	SS08		565		1400		#6-09/02/93 #6-09/05/93	Soil
LIS-SS08-S03	LIS-SS08-S03	SS08		565		1401		#6-09/02/93 #6-09/05/93	Soil
LIS-SS08-S04	LIS-SS08-S04	SS08		565		1402		#6-9/02/93	Soil
LIS-SS08-S05	LIS-SS08-S05	SS08		565		1403		#6-9/02/93	Soil
LIS-SS08-S07	LIS-SS08-S07	SS08	564	565	93.4477-4	1404	93.4477	#5-09/04/93	Soil
LIS-SS08-2S08	LIS-SS08-2S08	SS08		593		1940		#6-09/13/93	Soil
LIS-SS08-2S09	LIS-SS08-2S09	SS08		593		1941		#6-09/13/93	Soil

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CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Lower Camp Transformer Buildings (SS09)									
LIS-SS09-S01	LIS-SS09-S01	SS09		563		1383		#6-09/02/93 #6-09/05/93	Soil
LIS-SS09-S03	LIS-SS09-S03	SS09		563		1384		#6-09/02/93 #6-09/05/93	Soil
LIS-SS09-S04	LIS-SS09-S04	SS09		563		1385		#6-09/02/93	Soil
LIS-SS09-S05	LIS-SS09-S05	SS09		563		1386		#6-09/02/93	Soil
LIS-SS09-S06	LIS-SS09-S06	SS09		563		1387		#6-09/02/93	Soil
LIS-SS09-S07	LIS-SS09-S07	SS09		563		1388		#6-09/02/93	Soil
LIS-SS09-S08	LIS-SS09-S08	SS09		563		1389		#6-09/02/93	Soil
LIS-SS09-S09	LIS-SS09-S09	SS09		563		1390		#6-09/02/93	Soil
LIS-SS09-S10	LIS-SS09-S10	SS09		563		1391		#6-09/02/93	Soil
LIS-SS09-S11	LIS-SS09-S11	SS09		563		1392		#6-09/02/93	Soil
LIS-SS09-S12	LIS-SS09-S12	SS09		563		1393		#6-09/02/93	Soil

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CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Water Gallery System (AOC3)									
LIS-AOC3-SW01	LIS-AOC3-SW01	AOC3	564	563	93.4477-5 93.4476-4 93.4477-3	1380	93.4477 93.4476 93.4477	#5-09/01/93	Surface Water
LIS-AOC3-GW01	LIS-AOC3-GW01	AOC3	566	561	93.4481-1 93.4477-7 93.4476-8	1570	93.4481 93.4477 93.4476	#6-09/03/93	Ground Water
LIS-AOC3-GW02	LIS-AOC3-GW02	AOC3	566	561	93.4481-2 93.4476-9	1571	93.4481 93.4476	#6-09/03/93	Ground Water
LIS-AOC3-GW03	LIS-AOC3-GW03	AOC3	562	561	93.4476-10	1572	93.4476	#6-09/03/93	Ground Water
LIS-AOC3-2GW04	LIS-AOC3-2GW04	AOC3	591	593	93.4727-1	1928	93.4727	#6-09/13/93	Ground Water

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CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Background (BKGD)									
LIS-BKGD-S01	LIS-BKGD-S01	BKGD	562 564	561 563	93.4476-2 93.4477-1	1382 1554	93.4476 93.4477	#3&4-09/04/93 #6-09/02/93	Soil
LIS-BKGD-S02	LIS-BKGD-S02	BKGD	564 566	561	93.4481-4	1555 1556	93.4481	#3 & 4 09/04/93 #6-09/05/93	Soil
LIS-BKGD-S03	LIS-BKGD-S03	BKGD	566	561	93.4481-5	1574	93.4481	#3 & 4 09/04/93 #6-09/05/93	Soil
LIS-BKGD-S04	LIS-BKGD-S04	BKGD	566	561	93.4481-6	1576	93.4481	#3 & 4 09/04/93 #6-09/05/93	Soil
LIS-BKGD-SD01	LIS-BKGD-SD01	BKGD	562 564	561 563	93.4477-2 93.4476-3	1381 1557	93.4477 93.4476	#6-09/02/93 3&4-09/04	Sediment
LIS-BKGD-5SD01	LIS-BKGD-5SD01	BKGD	0695-002		95.2592-1		95.2592		Soil
LIS-BKGD-5SD02	LIS-BKGD-5SD02	BKGD	0695-002		95.2592-2		95.2592		Soil
LIS-BKGD-5SD02S	LIS-BKGD-5SD02	BKGD	0695-002		95.2592-3		95.2592		Soil
LIS-BKGD-5SD02SD	LIS-BKGD-5SD02SD	BKGD	0695-002		95.2592-17		95.2592		Sediment
LIS-BKGD-5SD03-2	LIS-BKGD-5SD03-2	BKGD	0695-002		95.2592-18		95.2592		Sediment
LIS-BKGD-5SD04	LIS-BKGD-5SD04	BKGD	0695-002		95.2592-4		95.2592		Soil
LIS-BKGD-5SD05	LIS-BKGD-5SD05	BKGD	0695-002		95.2592-5		95.2592		Soil
LIS-BKGD-5SD08	LIS-BKGD-5SD08	BKGD	0695-006		95.2714-7		95.2714		Soil
LIS-BKGD-5SD09	LIS-BKGD-5SD09	BKGD	0695-006		95.2714-8		95.2714		Soil
LIS-BKGD-SW01	LIS-BKGD-SW01	BKGD	562 564	561	93.4477-5 93.4476-6	1562 1564	93.4477 93.4476	#6-09/03/93 #1&2-09/04/93	Surface Water

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CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
Background (BKGD)									
LIS-BKGD-SW02	LIS-BKGD-SW02	BKGD	562 564	561	93.4477-6 93.4476-7	1566 1568	93.4477 93.4476	#6-09/03/93 #1&2-09/04/93	Surface Water

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CROSS-REFERENCE SAMPLE IDENTIFICATION (CONTINUED)

RI/FS TEXT AND TABLE SAMPLE IDENTIFICATION	FIELD CHAIN-OF-CUSTODY AND DATA VALIDATION SAMPLE IDENTIFICATION	SITE IDENTIFICATION	FIELD BATCH IDENTIFICATION		LABORATORY IDENTIFICATION		LABORATORY BATCH IDENTIFICATION		SAMPLE DESCRIPTION
			CT&E	F&B	CT&E	F&B	CT&E	F&B	
QA/AC									
LIS-AB01	LIS-AB01	QA/QC	567		93.4512-3		93.4512		Ambient Blank
LIS-EB01	LIS-EB01	QA/QC	562	561	93.4511-2 93.4476-5	1558 1561	93.4511 93.4476	#6-09/03-93 #1&2-09/04/93	Equipment Blank
LIS-EB02	LIS-EB02	QA/QC	567 569 571	614 615	93.4511-1 93.4513-1 93.4512-1	1510 1542	93.4511 93.4513 93.4512	#6-09/03-93 #1&2-09/04/93	Equipment Blank
LIS-EB03	LIS-EB03	QA/QC	574	573 577	93.4614-2	1625 1628	93.4614	#6-09/03-93 #1&2-09/04/93	Equipment Blank
LIS-2EB04	LIS-2EB04	QA/QC	591	596	93.4727-10	1924	93.4727	#6-09/13/93	Equipment Blank
LIS-5EB01	LIS-5EB01	QA/QC		0695-004	95.2593-2		95.2593		Liquid
LIS-5EB02	LIS-5EB02	QA/QC		0695-006	95.2714-3		95.2714		Liquid
LIS-TB01	LIS-TB01	QA/QC	562	561	93.4476-1	1552	93.4476	#6-09/13/93	Trip Blank
LIS-TB02	LIS-TB02	QA/QC	567	614	93.4512-2	1514	93.4512	#6-09/13/93	Trip Blank
LIS-TB03	LIS-TB03	QA/QC	574	573	93.4614-1	1626	93.4614	#6-09/13/93	Trip Blank
LIS-2TB04	LIS-2TB04	QA/QC	591		93.4727-9		93.4727		Trip Blank
LIS-4TB01	LIS-4TB01	QA/QC		0595-002	95.1850-1		95.1850		Water
LIS-5TB01	LIS-5TB01	QA/QC		0695-004	95.2593-3		95.2593		Liquid
LIS-5TB02	LIS-5TB02	QA/QC		0695-005	95.2610-10		95.2610		Water
LIS-W01	LIS-W01	IDW	591 595	596	93.4727-11 93.4728-9	1925	93.4727 93.4728	#6-09/13/93	Waste Sample
LIS-W02	LIS-W02	IDW	591	596	93.4727-12	1926	93.4727	#6-09/13/93	Waste Sample
LIS-SIDW01	LIS-SIDW01	IDW		0695-004					

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F&B - Friedman and Bruya, Inc.

3. ANALYTICAL DATA

ANALYTICAL DATA SHEETS FOR THE LANDFILL AND WASTE ACCUMULATION AREA (LF01)

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-11
Client Sample ID :LIS-LF01-S05 CAPE LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 14:05 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN, C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. THE HIGH DETECTION LIMIT FOR 8270 IS DUE TO CONTAMINATION IN SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics								
Benzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
cis-1,2-Dichloroethene	[illegible]		mg/Kg	EPA 8260		09/02	09/06	SGM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Ethylbenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Isopropylbenzene	0.025	U	mg/Kg	EPA 8260		09/02	09/06	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1958

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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-11
Client Sample ID :LIS-LF01-S05 CAPE LIS
Matrix :SOIL

p-Isopropyltoluene	0.113		mg/Kg	EPA 8260	09/02 09/06	SGM
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Napthalene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
n-Propylbenzene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Styrene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Toluene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Trichloroethene	0.390		mg/Kg	EPA 8260	09/02 09/06	SGM
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,4-Trimethylbenzene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,3,5-Trimethylbenzene	0.285		mg/Kg	EPA 8260	09/02 09/06	SGM
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
p+m-Xylene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
o-Xylene	0.025	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Semivolatile Organics				EPA 8270		
Phenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroethyl)ether	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Chlorophenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,3-Dichlorobenzene	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,4-Dichlorobenzene	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzyl Alcohol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,2-Dichlorobenzene	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Methylphenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroisopropyl)e	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Methylphenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
n-Nitroso-di-n-Propylam	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachloroethane	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
Nitrobenzene	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
Isophorone	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Nitrophenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4-Dimethylphenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzoic Acid	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroethoxy)Meth	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4-Dichlorophenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,2,4-Trichlorobenzene	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
Naphthalene	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Chloroaniline	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachlorobutadiene	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Chloro-3-Methylphenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Methylnaphthalene	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachlorocyclopentadie	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4,6-Trichlorophenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4,5-Trichlorophenol	7.98	U	mg/Kg	EPA 8270	09/14 10/16	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1928

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-11
Client Sample ID :LIS-LF01-S05 CAPE LIS
Matrix :SOIL

					Qualifier/Comment		
2-Chloronaphthalene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
2-Nitroaniline	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dimethylphthalate	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthylene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,6-Dinitrotoluene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
3-Nitroaniline	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrophenol	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitrophenol	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenzofuran	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrotoluene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Diethylphthalate	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Chlorophenyl-Phenylet	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Fluorene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitroaniline	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
4,6-Dinitro-2-Methylphe	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
n-Nitrosodiphenylamine	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Bromophenyl-Phenyleth	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Hexachlorobenzene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pentachlorophenol	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Phenanthrene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Anthracene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Butylphthalate	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Fluoranthene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pyrene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Butylbenzylphthalate	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
3,3-Dichlorobenzidine	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(a)Anthracene	7.98	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Chrysene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
bis(2-Ethylhexyl)Phthal	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Octylphthalate	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(b)Fluoranthene	7.98	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Benzo(k)Fluoranthene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(a)Pyrene	7.98	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Indeno(1,2,3-cd)Pyrene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenz(a,h)Anthracene	7.98	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(g,h,i)Perylene	7.98	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
						09/14 10/16	GV
Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	6000		mg/Kg	EPA 6010		09/10 09/23	DFL
Antimony	59	U	mg/Kg	EPA 6010	(R) - J.1	09/10 09/23	DFL
Arsenic	59	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Barium	230		mg/Kg	EPA 6010		09/10 09/23	DFL
Beryllium	3.0	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Cadmium	30	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Calcium	41000		mg/Kg	EPA 6010		09/10 09/23	DFL
Chromium	9.8		mg/Kg	EPA 6010		09/10 09/23	DFL
Cobalt	5.9	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Copper	8.5		mg/Kg	EPA 6010		09/10 09/23	DFL

originated by CB 4-14-94

Compiled: SMF 11-16-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1958

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-11
Client Sample ID :LIS-LF01-S05 CAPE LIS
Matrix :SOIL

Qualifier Comments

Iron	8100		mg/Kg	EPA 6010		09/10 09/23	DFL
Lead	59	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Magnesium	11000		mg/Kg	EPA 6010		09/10 09/23	DFL
Manganese	150		mg/Kg	EPA 6010		09/10 09/23	DFL
Molybdenum	3.0	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Nickel	12		mg/Kg	EPA 6010		09/10 09/23	DFL
Potassium	1370		mg/Kg	EPA 6010		09/10 09/24	DFL
Selenium	59	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Silver	30	U	mg/Kg	EPA 6010	(R)-J.1	09/10 09/23	DFL
Sodium	150		mg/Kg	EPA 6010		09/10 09/24	DFL
Thallium	0.29	U	mg/Kg	EPA 7841	(J)-B.1	09/10 09/13	KAW
Vanadium	17		mg/Kg	EPA 6010		09/10 09/23	DFL
Zinc	73		mg/Kg	EPA 6010		09/10 09/23	DFL

4-14-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5533 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-8
Client Sample ID :LIS-LF01-2S11 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 16:45 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. 8270 DETECTION LIMIT IS ELEVATED DUE TO LOW % SOLID. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	33.5		%	SM17 2540G			09/15	
Hydrocarbons VPH	1.80	U	mg/Kg	EPA 5030/8015M		09/14	09/18	WLS
Volatile Organics				EPA 8260				
Benzene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Bromobenzene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Bromochloromethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Bromodichloromethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Bromoform	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Bromomethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
n-Butylbenzene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
sec-Butylbenzene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
tert-Butylbenzne	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Carbon Tetrachloride	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Chlorobenzene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Chloroethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Chloroform	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Chloromethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
2-Chlorotoluene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
4-Chlorotoluene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Dibromochloromethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
12Dibromo3Chloropropane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,2-Dibromoethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Dibromomethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,2-Dichlorobenzene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,3-Dichlorobenzene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,4-Dichlorobenzene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
Dichlorodifluoromethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,1-Dichloroethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,2-Dichloroethane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,1-Dichloroethene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
cis-1,2-Dichloroethene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
transi,2-Dichloroethene	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,2-Dichloropropane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
1,3-Dichloropropane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM
2,2-Dichloropropane	0.090	U	mg/Kg	EPA 8260		09/15	10/04	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1909

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-8
Client Sample ID :LIS-LF01-2S11 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

1,1-Dichloropropene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Ethylbenzene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Hexachlorobutadiene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Isopropylbenzene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
p-Isopropyltoluene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Methylene Chloride	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Napthalene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
n-Propylbenzene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Styrene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
1112-Tetrachloroethane	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
1122-Tetrachloroethane	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Tetrachloroethene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Toluene	0.300		mg/Kg	EPA 8260	09/15	10/04	KWM
1,2,3-Trichlorobenzene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
1,2,4-Trichlorobenzene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
1,1,1-Trichloroethane	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
1,1,2-Trichloroethane	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Trichloroethene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Trichlorofluoromethane	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
1,2,3-Trichloropropane	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
1,2,4-Trimethylbenzene	0.305		mg/Kg	EPA 8260	09/15	10/04	KWM
1,3,5-Trimethylbenzene	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
Vinyl Chloride	0.090	U	mg/Kg	EPA 8260	09/15	10/04	KWM
p+m-Xylene	0.334		mg/Kg	EPA 8260	09/15	10/04	KWM
o-Xylene	0.188		mg/Kg	EPA 8260	09/15	10/04	KWM
	522						
Semivolatile Organics				EPA 8270			
Phenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
bis(2-Chloroethyl)ether	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2-Chlorophenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
1,3-Dichlorobenzene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
1,4-Dichlorobenzene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Benzyl Alcohol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
1,2-Dichlorobenzene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2-Methylphenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
bis(2-Chloroisopropyl)e	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
4-Methylphenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
n-Nitroso-di-n-Propylam	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Hexachloroethane	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Nitrobenzene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Isophorone	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2-Nitrophenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2,4-Dimethylphenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Benzoic Acid	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
bis(2-Chloroethoxy)Meth	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2,4-Dichlorophenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
1,2,4-Trichlorobenzene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Naphthalene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
4-Chloroaniline	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Hexachlorobutadiene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
4-Chloro-3-Methylphenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-8
Client Sample ID :LIS-LF01-2S11 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2-Methylnaphthalene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Hexachlorocyclopentadie	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2,4,6-Trichlorophenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2,4,5-Trichlorophenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2-Chloronaphthalene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2-Nitroaniline	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Dimethylphthalate	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Acenaphthylene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2,6-Dinitrotoluene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
3-Nitroaniline	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Acenaphthene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2,4-Dinitrophenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
4-Nitrophenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Dibenzofuran	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
2,4-Dinitrotoluene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Diethylphthalate	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
4-Chlorophenyl-Phenylet	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Fluorene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
4-Nitroaniline	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
4,6-Dinitro-2-Methylphe	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
n-Nitrosodiphenylamine	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
4-Bromophenyl-Phenyleth	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Hexachlorobenzene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Pentachlorophenol	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Phenanthrene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Anthracene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
di-n-Butylphthalate	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Fluoranthene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Pyrene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Butylbenzylphthalate	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
3,3-Dichlorobenzidine	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Benzo(a)Anthracene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Chrysene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
bis(2-Ethylhexyl)Phthal	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
di-n-Octylphthalate	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Benzo(b)Fluoranthene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Benzo(k)Fluoranthene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Benzo(a)Pyrene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Indeno(1,2,3-cd)Pyrene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Dibenz(a,h)Anthracene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV
Benzo(g,h,i)Perylene	11.8	U	mg/Kg	EPA 8270	09/17	10/24	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

Commercial Testing & Engineering Co.

Environmental Laboratory Services

SINCE 1908

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-7
Client Sample ID	LIS-LF01-3S12
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@21:10 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.044		mg/Kg	EPA 8080		09/21/94	09/26/94	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712(0-10)/94

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

Commercial Testing & Engineering Co.

SINCE 1908

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-8
Client Sample ID	LIS-LF01-3S13-1
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@21:20 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.10	U	mg/Kg	EPA 8080		09/21/94	09/26/94	DSM
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712/046/94

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Commercial Testing & Engineering Co.

Environmental Laboratory Services

SINCE 1908

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-9
Client Sample ID	LIS-LF01-3S14
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING
Ordered By	JEFF DAWSON
Project Name	DEW LINE SP. LISBURNE IRA
Project#	41096-514-02
PWSID	UA

WORK Order	82118		
Printed Date	10/07/94	@20:36	hrs.
Collected Date	09/07/94	@21:25	hrs.
Received Date	09/09/94	@11:30	hrs.

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F. J- INDICATES AN ANALYTE DETECTED BELOW THE CALIBRATION RANGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.018	J	mg/Kg	EPA 8080		09/21/94	09/26/94	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-71/10/08/94

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Commercial Testing & Engineering Co.

Environmental Laboratory Services

SINCE 1908

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-10
Client Sample ID	LIS-LF01-3S15-1
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@21:35 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F. J- INDICATES AN ANALYTE DETECTED BELOW THE CALIBRATION RANGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.029	J	mg/Kg	EPA 8080		09/21/94	09/26/94	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712/04/03/94

5633 B Street, **Anchorage, AK 99518-1600** — Tel: (907) 562-2343 Fax: (907) 561-5301

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4742-1
Client Sample ID	LIS-LF01-3S31-2
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82363	
Ordered By	JEFF DAWSON	Printed Date	09/27/94	@ 10:07 hrs.
Project Name	DEW LINE IRA	Collected Date	09/11/94	@ 20:00 hrs.
Project#	41096-514-02	Received Date	09/15/94	@ 15:45 hrs.
PWSID	UA	Technical Director	STEPHEN C. EDE	

Released By: S. Hamm Preston

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	999	D	mg/Kg	EPA 8080		09/16/94	09/22/94	DSM
------Aroclor	1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712(0-10)/94

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-2
Matrix SOIL
Client Sample ID LIZ-LF01-4S35

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE-LF01
Project# 41095-514-02
PWSID UA

WORK Order 14633
Printed Date 05/31/95 @ 14:58 hrs.
Collected Date 05/07/95 @ 18:40 hrs.
Received Date 05/11/95 @ 12:30 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: C.C. AND JOHN P. FRERICH. DRO & RRO - UNKNOWN HYDROCARBON WITH SEVERAL PEAKS. DRO - HEAVIER HYDROCARBONS CONTRIBUTING TO DIESEL RANGE QUANTITATION. MORE SAMPLE REMARKS BELOW.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	45.4		%	SM17 2540G			05/12/95	SLS
Gasoline Range Organics	4.88		mg/Kg	AK 101.0 (1-93)		05/12/95	05/16/95	SPM
Diesel Range Organics	441	D	mg/Kg	AK 102.0 (2-93)		05/13/95	05/16/95	JDG
Residual Range Organics	2000	D	mg/Kg	AK 103.0		05/16/95	05/18/95	JDG
Volatile Organics				EPA 8260				
Benzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromochloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromodichloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromoform	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromomethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
n-Butylbenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
sec-Butylbenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
tert-Butylbenzne	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Carbon Tetrachloride	0.110	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroform	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
2-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
4-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromochloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
12Dibromo3Chloropropane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dibromoethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromomethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,3-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,4-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dichlorodifluoromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
cis-1,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
trans1,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-2
Matrix SOIL
Client Sample ID LIZ-LF01-4S35

1,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
2,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1-Dichloropropene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Ethylbenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Hexachlorobutadiene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Isopropylbenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p-Isopropyltoluene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Methylene Chloride	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Napthalene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
n-Propylbenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Styrene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1112-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1122-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Tetrachloroethene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Toluene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,1-Trichloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,2-Trichloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichloroethene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichlorofluoromethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trimethylbenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3,5-Trimethylbenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Vinyl Chloride	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p+m-Xylene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
o-Xylene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Semivolatile Organics				EPA 8270			
Phenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroethyl)ether	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Chlorophenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,3-Dichlorobenzene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,4-Dichlorobenzene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzyl Alcohol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,2-Dichlorobenzene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Methylphenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroisopropyl)e	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Methylphenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
n-Nitroso-di-n-Propylam	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachloroethane	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Nitrobenzene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Isophorone	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Nitrophenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dimethylphenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzoic Acid	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroethoxy)Meth	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dichlorophenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,2,4-Trichlorobenzene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Naphthalene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Chloroaniline	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-2
Matrix SOIL
Client Sample ID LIZ-LF01-4S35

Hexachlorobutadiene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Chloro-3-Methylphenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Methylnaphthalene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachlorocyclopentadie	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4,6-Trichlorophenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4,5-Trichlorophenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Chloronaphthalene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Nitroaniline	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dimethylphthalate	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Acenaphthylene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,6-Dinitrotoluene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
3-Nitroaniline	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Acenaphthene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dinitrophenol	1.41	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Nitrophenol	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dibenzofuran	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dinitrotoluene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Diethylphthalate	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Chlorophenyl-Phenylet	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Fluorene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Nitroaniline	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4,6-Dinitro-2-Methylphe	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
n-Nitrosodiphenylamine	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Bromophenyl-Phenyleth	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachlorobenzene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Pentachlorophenol	1.41	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Phenanthrene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Anthracene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
di-n-Butylphthalate	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Fluoranthene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Pyrene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Butylbenzylphthalate	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
3,3-Dichlorobenzidine	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(a)Anthracene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Chrysene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Ethylhexyl)Phthal	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
di-n-Octylphthalate	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(b)Fluoranthene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(k)Fluoranthene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(a)Pyrene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Indeno(1,2,3-cd)Pyrene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dibenz(a,h)Anthracene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(g,h,i)Perylene	0.353	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
PCBs in Soil	0.08	U	mg/Kg	EPA 8080	05/12/95	05/16/95	DSM
------Aroclor	---						

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

CT&E REF.# 95.1850-2

SAMPLE REMARKS CONTINUED:

8270: LIBRARY SEARCH WAS PERFORMED ON THREE PROMINENT UNKNOWNS:
RT. 10:42 MIN - 2,4-DIHYDROXY-6-METHYL-BENZOIC ACID METHYL ESTER
RT. 15:30 MIN - 1-OCTADECENE
RT. 21:76 MIN - GAMMA-SITOSTEROL

200 W. Potter Drive, Anchorage, AK 99518-1605 — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-3
Matrix SOIL
Client Sample ID LIZ-LF01-4S40

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE-LF01
Project# 41096-514-02
PWSID UA

WORK Order 14633
Printed Date 06/01/95 @ 09:53 hrs.
Collected Date 05/07/95 @ 19:25 hrs.
Received Date 05/11/95 @ 12:30 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: COLLECTED BY:C.C. & JOHN P.FRERICH. QA/QC. RRO-TYPICAL PATTERN FOR OIL BLEND & LIGHTER HYDROCARB.DRO-TYPICAL PATTERN FOR MIDDLE DISTILLATE FUEL. HEAVIER HYDROCARBONS CONTRIBUTING TO DIESEL RANGE QUANTITATION. SURR. RECOV. OUTSIDE OF ACCEPTABLE RANGE DUE TO MATRIX INTERFERENCE. J-INDICATES AN ANALYTE DETECTED BELOW THE CALIBRATION RANGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	45.3		%	SM17 2540G			05/12/95	SLS
Gasoline Range Organics	50.9		mg/Kg	AK 101.0 (1-93)		05/12/95		SPM
Diesel Range Organics	2512	D	mg/Kg	AK 102.0 (2-93)		05/13/95	05/16/95	JDG
Residual Range Organics	5030	D	mg/Kg	AK 103.0		05/16/95	05/17/95	JDG
Volatile Organics				EPA 8260				
Benzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromochloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromodichloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromoform	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromomethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
n-Butylbenzene	0.536	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
sec-Butylbenzene	0.168	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
tert-Butylbenzne	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Carbon Tetrachloride	17.3	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroform	0.796	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
2-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
4-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromochloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
12Dibromo3Chloropropane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dibromoethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromomethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,3-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,4-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dichlorodifluoromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-3
Matrix SOIL
Client Sample ID LIZ-LF01-4S40

cis-1,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
trans1,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
2,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1-Dichloropropene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Ethylbenzene	2.19	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Hexachlorobutadiene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Isopropylbenzene	0.242	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p-Isopropyltoluene	0.178	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Methylene Chloride	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Napthalene	0.185	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
n-Propylbenzene	0.758	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Styrene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1112-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1122-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Tetrachloroethene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Toluene	3.11	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,1-Trichloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,2-Trichloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichloroethene	15.3	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichlorofluoromethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trimethylbenzene	6.89	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3,5-Trimethylbenzene	2.04	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Vinyl Chloride	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p+m-Xylene	7.33	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
o-Xylene	2.50	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Semivolatile Organics				EPA 8270			
Phenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
bis(2-Chloroethyl)ether	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2-Chlorophenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
1,3-Dichlorobenzene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
1,4-Dichlorobenzene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Benzyl Alcohol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
1,2-Dichlorobenzene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2-Methylphenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
bis(2-Chloroisopropyl)e	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
4-Methylphenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
n-Nitroso-di-n-Propylam	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Hexachloroethane	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Nitrobenzene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Isophorone	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2-Nitrophenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2,4-Dimethylphenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Benzoic Acid	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
bis(2-Chloroethoxy)Meth	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2,4-Dichlorophenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
1,2,4-Trichlorobenzene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-3
Matrix SOIL
Client Sample ID LIZ-LF01-4S40

Naphthalene	4.26	J	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
4-Chloroaniline	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Hexachlorobutadiene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
4-Chloro-3-Methylphenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2-Methylnaphthalene	8.59	D	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Hexachlorocyclopentadie	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2,4,6-Trichlorophenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2,4,5-Trichlorophenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2-Chloronaphthalene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2-Nitroaniline	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Dimethylphthalate	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Acenaphthylene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2,6-Dinitrotoluene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
3-Nitroaniline	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Acenaphthene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2,4-Dinitrophenol	21.0	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
4-Nitrophenol	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Dibenzofuran	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
2,4-Dinitrotoluene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Diethylphthalate	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
4-Chlorophenyl-Phenylet	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Fluorene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
4-Nitroaniline	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
4,6-Dinitro-2-Methylphe	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
n-Nitrosodiphenylamine	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
4-Bromophenyl-Phenyleth	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Hexachlorobenzene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Pentachlorophenol	21.0	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Phenanthrene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Anthracene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
di-n-Butylphthalate	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Fluoranthene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Pyrene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Butylbenzylphthalate	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
3,3-Dichlorobenzidine	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Benzo(a)Anthracene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Chrysene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
bis(2-Ethylhexyl)Phthal	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
di-n-Octylphthalate	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Benzo(b)Fluoranthene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Benzo(k)Fluoranthene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Benzo(a)Pyrene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Indeno(1,2,3-cd)Pyrene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Dibenz(a,h)Anthracene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
Benzo(g,h,i)Perylene	5.26	U	mg/Kg	EPA 8270	05/12/95	05/26/95	GV
PCBs in Soil	0.149		mg/Kg	EPA 8080	05/12/95	05/16/95	DSM
------Aroclor 1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-10
Matrix SOIL
Client Sample ID LIZ-LF01-4S40 SPIKE

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE-LF01
Project# 41096-614-02
PWSID UA

WORK Order 14633
Printed Date 06/01/95 @ 09:55 hrs.
Collected Date 05/07/95 @ 19:25 hrs.
Received Date 05/11/95 @ 12:30 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: C.C. & JOHN P.FRERICH. QA/QC. J-INDICATES AN ANALYTE DETECTED BELOW THE CALIBRATION RANGE.RRO-SEE QC PKG FOR SAMPLE & SPIKE AMT & % RECOVERY. PCB - SPIKE RECOVERY CAN NOT BE DETERMINED DUE TO MATRIX INTERFERENCE. MORE SAMPLE REMARKS BELOW.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	45.3		%	SM17 2540G			05/12/95	SLS
Gasoline Range Organics	105		mg/Kg	AK 101.0 (1-93)		05/12/95	05/15/95	SPM
Diesel Range Organics	3200	D	mg/Kg	AK 102.0 (2-93)		05/13/95	05/15/95	JDG
Residual Range Organics	5560	D	mg/Kg	AK 103.0		05/15/95	05/17/95	JDG
Volatile Organics				EPA 8260				
Benzene	1.68	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromobenzene	1.66	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromochloromethane	1.66	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromodichloromethane	1.76	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromoform	1.59	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromomethane	0.958	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
n-Butylbenzene	2.25	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
sec-Butylbenzene	1.70	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
tert-Butylbenzne	1.64	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Carbon Tetrachloride	22.6	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chlorobenzene	1.63	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroethane	0.648	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroform	2.55	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloromethane	1.53	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
2-Chlorotoluene	2.12	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
4-Chlorotoluene	1.79	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromochloromethane	1.66	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
12Dibromo3Chloropropane	1.95	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dibromoethane	1.67	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromomethane	1.64	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichlorobenzene	1.76	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,3-Dichlorobenzene	1.63	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,4-Dichlorobenzene	1.66	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dichlorodifluoromethane	0.938	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethane	1.16	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichloroethane	1.69	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethene	1.58	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
cis-1,2-Dichloroethene	1.87	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS

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trans1,2-Dichloroethene	1.39	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2-Dichloropropane	1.70	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3-Dichloropropane	1.66	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
2,2-Dichloropropane	1.57	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1-Dichloropropene	1.63	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Ethylbenzene	3.94	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Hexachlorobutadiene	1.58	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Isopropylbenzene	1.86	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p-Isopropyltoluene	1.75	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Methylene Chloride	1.61	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Napthalene	3.52	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
n-Propylbenzene	2.40	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Styrene	3.46	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1112-Tetrachloroethane	1.64	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1122-Tetrachloroethane	1.82	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Tetrachloroethene	1.60	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Toluene	4.94	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichlorobenzene	1.22	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trichlorobenzene	1.75	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,1-Trichloroethane	1.57	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,2-Trichloroethane	1.67	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichloroethene	18.9	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichlorofluoromethane	1.48	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichloropropane	1.45	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trimethylbenzene	8.75	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3,5-Trimethylbenzene	3.72	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Vinyl Chloride	1.56	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p+m-Xylene	11.9	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
o-Xylene	4.35	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Semivolatile Organics				EPA 8270			
Phenol	10.7	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
bis(2-Chloroethyl)ether	9.14	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2-Chlorophenol	9.35	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
1,3-Dichlorobenzene	9.53	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
1,4-Dichlorobenzene	9.39	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Benzyl Alcohol	11.7	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
1,2-Dichlorobenzene	10.0	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2-Methylphenol	10.6	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
bis(2-Chloroisopropyl)e	9.46	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
4-Methylphenol	13.0	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
n-Nitroso-di-n-Propylam	10.2	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Hexachloroethane	12.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Nitrobenzene	10.2	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Isophorone	11.6	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2-Nitrophenol	10.3	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2,4-Dimethylphenol	11.1	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Benzoic Acid	3.78	J	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
bis(2-Chloroethoxy)Meth	9.40	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2,4-Dichlorophenol	10.4	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
1,2,4-Trichlorobenzene	10.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Naphthalene	16.4	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV

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4-Chloroaniline	1.02	J	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Hexachlorobutadiene	11.3	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
4-Chloro-3-Methylphenol	10.6	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2-Methylnaphthalene	21.7	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Hexachlorocyclopentadie	6.00	J	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2,4,6-Trichlorophenol	11.6	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2,4,5-Trichlorophenol	10.7	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2-Chloronaphthalene	11.3	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2-Nitroaniline	12.0	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Dimethylphthalate	12.4	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Acenaphthylene	12.1	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2,6-Dinitrotoluene	11.3	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
3-Nitroaniline	11.1	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Acenaphthene	12.4	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2,4-Dinitrophenol	2.77	J	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
4-Nitrophenol	12.4	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Dibenzofuran	13.4	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
2,4-Dinitrotoluene	12.3	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Diethylphthalate	13.1	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
4-Chlorophenyl-Phenylet	12.8	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Fluorene	14.0	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
4-Nitroaniline	9.80	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
4,6-Dinitro-2-Methylphe	7.98	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
n-Nitrosodiphenylamine	14.0	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
4-Bromophenyl-Phenyleth	14.0	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Hexachlorobenzene	13.0	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Pentachlorophenol	8.46	J	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Phenanthrene	14.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Anthracene	13.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
di-n-Butylphthalate	13.3	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Fluoranthene	13.8	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Pyrene	12.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Butylbenzylphthalate	11.9	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
3,3-Dichlorobenzidine	9.02	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Benzo(a)Anthracene	12.8	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Chrysene	12.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
bis(2-Ethylhexyl)Phthal	11.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
di-n-Octylphthalate	12.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Benzo(b)Fluoranthene	10.9	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Benzo(k)Fluoranthene	13.0	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Benzo(a)Pyrene	12.8	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Indeno(1,2,3-cd)Pyrene	12.7	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Dibenz(a,h)Anthracene	11.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
Benzo(g,h,i)Perylene	12.5	D	mg/Kg	EPA 8270	05/12/95	05/29/95	GV
PCBs in Soil	10.0	U	mg/Kg	EPA 8080	05/12/95	05/16/95	DSM
------Aroclor	---						

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

CT&E REF.# 95.1850-10

SAMPLE REMARKS CONTINUED:

DRO - SEE QC PACKAGE FOR MS, MSD & SAMPLE AMOUNTS. TYPICAL PATTERN FOR MIDDLE DISTILLATE FUEL. HEAVIER HYDROCARBONS CONTRIBUTING TO DIESEL RANGE QUANTITATION. SURROGATE RECOVERIES OUTSIDE OF ACCEPTABLE RANGE DUE TO MATRIX INTERFERENCE.

200 W. Potter Drive, Anchorage, AK 99518-1605 — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-11
Matrix SOIL
Client Sample ID LIZ-LF01-4S40 SPIKE DUPLICATE

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE-LF01
Project# 41096-614-02
PWSID UA

WORK Order 14633
Printed Date 06/01/95 @ 09:57 hrs.
Collected Date 05/07/95 @ 19:25 hrs.
Received Date 05/11/95 @ 12:30 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: COLLECTED BY:C.C. & JOHN P. FRERICH. QA/QC. J-INDICATES AN ANALYTE DETECTED BELOW THE CALIBRATION RANGE. RRO- SEE QC PKG FOR SAMPLE & SPIKE AMTS & % RECOVERY. PCB - SPIKE RECOVERY CAN NOT BE DETERMINED DUE TO MATRIX INTERFERENCE. MORE SAMPLE REMARKS BELOW.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	45.3		%	SM17 2540G			05/12/95	SLS
Gasoline Range Organics	106		mg/Kg	AK 101.0 (1-93)		05/12/95	05/15/95	SPM
Diesel Range Organics	3430	D	mg/Kg	AK 102.0 (2-93)		05/13/95	05/16/95	JDG
Residual Range Organics	3780	D	mg/Kg	AK 103.0		05/16/95	05/18/95	JDG
Volatile Organics				EPA 8260				
Benzene	1.76	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromobenzene	1.67	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromochloromethane	1.63	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromodichloromethane	1.79	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromoform	1.59	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromomethane	0.636	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
n-Butylbenzene	2.51	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
sec-Butylbenzene	1.84	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
tert-Butylbenzne	1.77	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Carbon Tetrachloride	23.9	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chlorobenzene	1.69	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroethane	0.609	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroform	2.64	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloromethane	1.63	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
2-Chlorotoluene	2.22	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
4-Chlorotoluene	1.87	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromochloromethane	1.62	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
12Dibromo3Chloropropane	1.50	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dibromoethane	1.60	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromomethane	1.61	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichlorobenzene	1.79	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,3-Dichlorobenzene	1.69	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,4-Dichlorobenzene	1.66	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dichlorodifluoromethane	1.06	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethane	1.64	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichloroethane	1.61	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethene	1.77	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
cis-1,2-Dichloroethene	1.88	D	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-11
Matrix SOIL
Client Sample ID LIZ-LF01-4S40 SPIKE DUPLICATE

trans1,2-Dichloroethene	1.48	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2-Dichloropropane	1.72	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3-Dichloropropane	1.66	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
2,2-Dichloropropane	1.69	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1-Dichloropropene	1.75	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Ethylbenzene	4.18	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Hexachlorobutadiene	1.60	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Isopropylbenzene	1.99	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p-Isopropyltoluene	1.87	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Methylene Chloride	1.67	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Napthalene	3.32	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
n-Propylbenzene	2.54	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Styrene	3.63	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1112-Tetrachloroethane	1.67	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1122-Tetrachloroethane	1.78	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Tetrachloroethene	1.72	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Toluene	5.21	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichlorobenzene	1.72	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trichlorobenzene	1.66	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,1-Trichloroethane	1.71	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,2-Trichloroethane	1.67	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichloroethene	20.0	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichlorofluoromethane	1.66	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichloropropane	1.03	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trimethylbenzene	9.23	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3,5-Trimethylbenzene	3.92	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Vinyl Chloride	1.72	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p+m-Xylene	12.6	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
o-Xylene	4.63	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Semivolatile Organics				EPA 8270			
Phenol	10.7	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroethyl)ether	10.0	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Chlorophenol	9.43	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,3-Dichlorobenzene	9.50	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,4-Dichlorobenzene	9.87	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzyl Alcohol	11.7	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,2-Dichlorobenzene	10.6	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Methylphenol	11.1	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroisopropyl)e	8.28	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Methylphenol	13.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
n-Nitroso-di-n-Propylam	11.8	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachloroethane	12.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Nitrobenzene	10.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Isophorone	11.7	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Nitrophenol	10.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dimethylphenol	10.8	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzoic Acid	4.55	J	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroethoxy)Meth	9.66	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dichlorophenol	10.8	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,2,4-Trichlorobenzene	11.0	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Naphthalene	17.0	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-11
Matrix SOIL
Client Sample ID LIZ-LF01-4S40 SPIKE DUPLICATE

4-Chloroaniline	9.74	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachlorobutadiene	11.2	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Chloro-3-Methylphenol	11.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Methylnaphthalene	22.9	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachlorocyclopentadie	5.56	J	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4,6-Trichlorophenol	11.2	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4,5-Trichlorophenol	10.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Chloronaphthalene	10.6	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Nitroaniline	12.1	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dimethylphthalate	12.7	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Acenaphthylene	11.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,6-Dinitrotoluene	11.2	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
3-Nitroaniline	12.2	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Acenaphthene	12.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dinitrophenol	2.80	J	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Nitrophenol	12.9	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dibenzofuran	13.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dinitrotoluene	13.1	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Diethylphthalate	12.9	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Chlorophenyl-Phenylet	13.6	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Fluorene	14.4	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Nitroaniline	11.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4,6-Dinitro-2-Methylphe	8.37	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
n-Nitrosodiphenylamine	14.1	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Bromophenyl-Phenyleth	14.2	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachlorobenzene	12.4	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Pentachlorophenol	8.91	J	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Phenanthrene	13.9	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Anthracene	13.1	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
di-n-Butylphthalate	13.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Fluoranthene	13.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Pyrene	12.4	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Butylbenzylphthalate	11.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
3,3-Dichlorobenzidine	8.77	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(a)Anthracene	12.0	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Chrysene	11.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Ethylhexyl)Phthal	11.1	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
di-n-Octylphthalate	12.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(b)Fluoranthene	10.9	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(k)Fluoranthene	13.4	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(a)Pyrene	12.5	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Indeno(1,2,3-cd)Pyrene	10.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dibenz(a,h)Anthracene	12.0	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(g,h,i)Perylene	12.3	D	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
PCBs in Soil	10.0	U	mg/Kg	EPA 8080	05/12/95	05/16/95	DSM
------Aroclor	---						

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

CT&E REF.# 95.1850-11

SAMPLE REMARKS CONTINUED:

DRO - SEE QC PACKAGE FOR MS, MSD & SAMPLE AMOUNTS. TYPICAL PATTERN FOR MIDDLE DISTILLATE FUEL. HEAVIER HYDROCARBONS CONTRIBUTING TO DIESEL RANGE QUANTITATION. SURROGATE RECOVERIES OUTSIDE OF ACCEPTABLE RANGE DUE TO MATRIX INTERFERENCE.

200 W. Potter Drive, Anchorage, AK 99518-1605 — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-4
Matrix SOIL
Client Sample ID LIZ-LF01-4S44

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE-LF01
Project# 41095-614-02
PWSID UA

WORK Order 14633
Printed Date 05/31/95 @ 14:59 hrs.
Collected Date 05/07/95 @ 19:50 hrs.
Received Date 05/11/95 @ 12:30 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: C.C. AND JOHN P. FRERICH. RRO - UNKNOWN HYDROCARBON WITH SEVERAL PEAKS. DRO - HEAVIER HYDROCARBONS CONTRIBUTING TO DIESEL RANGE QUANTITATION. SURROGATE RECOVERIES OUTSIDE OF ACCEPTABLE RANGE DUE TO MATRIX INTERFERENCE. J- INDICATES AN ANALYTE DETECTED BELOW THE CALIBRATION RANGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	45.3		%	SM17 2540G			05/12/95	SLS
Gasoline Range Organics	8.64		mg/Kg	AK 101.0 (1-93)		05/12/95	05/16/95	SPM
Diesel Range Organics	1780	D	mg/Kg	AK 102.0 (2-93)		05/13/95	05/16/95	JDG
Residual Range Organics	4240	D	mg/Kg	AK 103.0		05/16/95	05/18/95	JDG
Volatile Organics				EPA 8260				
Benzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromochloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromodichloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromoform	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Bromomethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
n-Butylbenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
sec-Butylbenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
tert-Butylbenzne	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Carbon Tetrachloride	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloroform	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Chloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
2-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
4-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromochloromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
12Dibromo3Chloropropane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dibromoethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dibromomethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,3-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,4-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
Dichlorodifluoromethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,2-Dichloroethane	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS
1,1-Dichloroethene	0.100	U	mg/Kg	EPA 8260		05/12/95	05/15/95	BLS

CT&E Environmental Services Inc.

CT&E Ref.# 95.1550-4
Matrix SOIL
Client Sample ID LIZ-LF01-4S44

cis-1,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
trans1,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
2,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1-Dichloropropene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Ethylbenzene	0.190	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Hexachlorobutadiene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Isopropylbenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p-Isopropyltoluene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Methylene Chloride	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Napthalene	0.125	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
n-Propylbenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Styrene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1112-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1122-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Tetrachloroethene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Toluene	0.845	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,1-Trichloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,1,2-Trichloroethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichloroethene	0.175	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Trichlorofluoromethane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,3-Trichloropropane	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,2,4-Trimethylbenzene	0.486	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
1,3,5-Trimethylbenzene	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Vinyl Chloride	0.100	U	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
p+m-Xylene	0.620	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
o-Xylene	0.204	D	mg/Kg	EPA 8260	05/12/95	05/15/95	BLS
Semivolatile Organics				EPA 8270			
Phenol	0.920		mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroethyl)ether	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Chlorophenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,3-Dichlorobenzene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,4-Dichlorobenzene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzyl Alcohol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,2-Dichlorobenzene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Methylphenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroisopropyl)e	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Methylphenol	2.16		mg/Kg	EPA 8270	05/12/95	05/25/95	GV
n-Nitroso-di-n-Propylam	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachloroethane	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Nitrobenzene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Isophorone	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Nitrophenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dimethylphenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzoic Acid	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Chloroethoxy)Meth	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dichlorophenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
1,2,4-Trichlorobenzene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV

CT&E Environmental Services Inc.

CT&E Ref.# 95.1850-4
Matrix SOIL
Client Sample ID LIZ-LF01-4S44

Naphthalene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Chloroaniline	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachlorobutadiene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Chloro-3-Methylphenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Methylnaphthalene	0.229	J	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachlorocyclopentadie	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4,6-Trichlorophenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4,5-Trichlorophenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Chloronaphthalene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2-Nitroaniline	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dimethylphthalate	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Acenaphthylene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,6-Dinitrotoluene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
3-Nitroaniline	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Acenaphthene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dinitrophenol	1.42	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Nitrophenol	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dibenzofuran	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
2,4-Dinitrotoluene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Diethylphthalate	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Chlorophenyl-Phenylet	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Fluorene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Nitroaniline	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4,6-Dinitro-2-Methylphe	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
n-Nitrosodiphenylamine	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
4-Bromophenyl-Phenyleth	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Hexachlorobenzene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Pentachlorophenol	1.42	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Phenanthrene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Anthracene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
di-n-Butylphthalate	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Fluoranthene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Pyrene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Butylbenzylphthalate	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
3,3-Dichlorobenzidine	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(a)Anthracene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Chrysene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
bis(2-Ethylhexyl)Phthal	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
di-n-Octylphthalate	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(b)Fluoranthene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(k)Fluoranthene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(a)Pyrene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Indeno(1,2,3-cd)Pyrene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Dibenz(a,h)Anthracene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
Benzo(g,h,i)Perylene	0.354	U	mg/Kg	EPA 8270	05/12/95	05/25/95	GV
PCBs in Soil	0.100		mg/Kg	EPA 8080	05/12/95	05/16/95	DSM
------Aroclor 1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

CT&E Ref.# 95.2610-1
Matrix SOIL
Client Sample ID LIS-LF01-5S55

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 09:16 hrs.
Collected Date 06/24/95 @ 07:47 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	53.6		%	SM17 2540G			06/29/95	KGF
PCBs in Soil	29.7	D	mg/Kg	EPA 8080		06/28/95	07/03/95	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

200 W. Potter Drive, **Anchorage, AK 99518-1605** — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-2
Matrix SOIL
Client Sample ID LIS-LF01-5S58

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 09:16 hrs.
Collected Date 06/24/95 @ 08:03 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By S Thomas Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	81.2		%	SM17 2540G			06/29/95	KGF
PCBs in Soil	11.4	D	mg/Kg	EPA 8080		06/28/95	07/03/95	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-12
Matrix SOIL
Client Sample ID SPIKE-LIS-LF01-5S58

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 11:12 hrs.
Collected Date 06/24/95 @ 08:03 hrs.
Received Date 06/27/95 @ 09:10 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.251		mg/Kg	EPA 8080		06/28/95	06/29/95	DSM
------Aroclor 1242								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-13
Matrix SOIL
Client Sample ID SPIKE DUP-LIS-LF01-5S58

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 11:13 hrs.
Collected Date 06/24/95 @ 08:03 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.257		mg/Kg	EPA 8080		06/28/95	06/29/95	DSM
------Aroclor 1242								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
CD = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

10:CT1:95

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-3
Matrix SOIL
Client Sample ID LIS-LF01-5S65

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 09:16 hrs.
Collected Date 06/24/95 @ 10:24 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	30.4		%	SM17 2540G			06/29/95	KGF
PCBs in Soil	0.999		mg/Kg	EPA 8080		06/28/95	06/30/95	DSM
------Aroclor	1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

CT&E Ref.# 95.2610-4
Matrix SOIL
Client Sample ID LIS-LF01-5S68

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 10:54 hrs.
Collected Date 06/24/95 @ 11:05 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962. DRO: HEAVIER HYDROCARBON THAN DIESEL. RRO: TYPICAL PATTERN FOR A LUBE OIL.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	95.8		%	SM17 2540G			06/28/95	CAV
PCBs in Soil	0.798		mg/Kg	EPA 8080		06/28/95	06/30/95	DSM
------Aroclor	1260							
Volatile Organics				EPA 8260				
Benzene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Bromobenzene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Bromochloromethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Bromodichloromethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Bromoform	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Bromomethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
n-Butylbenzene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
sec-Butylbenzene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
tert-Butylbenzne	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Carbon Tetrachloride	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Chlorobenzene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Chloroethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Chloroform	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Chloromethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
2-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
4-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Dibromochloromethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
12Dibromo3Chloropropane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,2-Dibromoethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Dibromomethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,2-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,3-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,4-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
Dichlorodifluoromethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,1-Dichloroethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,2-Dichloroethane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,1-Dichloroethene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
cis-1,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
trans1,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM
1,3-Dichloropropane	0.050	U	mg/Kg	EPA 8260		06/28/95	07/03/95	MCM

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-4
Matrix SOIL
Client Sample ID LIS-LF01-5S68

2,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1,1-Dichloropropene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Ethylbenzene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Hexachlorobutadiene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Isopropylbenzene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
p-Isopropyltoluene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Methylene Chloride	0.066		mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Napthalene	0.147		mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
n-Propylbenzene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Styrene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1112-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1122-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Tetrachloroethene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Toluene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1,2,3-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1,2,4-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1,1,1-Trichloroethane	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1,1,2-Trichloroethane	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Trichloroethene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Trichlorofluoromethane	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1,2,3-Trichloropropane	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1,2,4-Trimethylbenzene	0.166		mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
1,3,5-Trimethylbenzene	0.154		mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Vinyl Chloride	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
p+m-Xylene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
o-Xylene	0.050	U	mg/Kg	EPA 8260	06/28/95	07/03/95	MCM
Gasoline Range Organics	17.2	D	mg/Kg	AK 101.0 (1-93)	06/28/95	06/29/95	SPM
Diesel Range Organics	18600	D	mg/Kg	AK 102.0 (2-93)	06/30/95	07/08/95	JDG
Residual Range Organics	43100	D	mg/Kg	AK 103.0	06/30/95	07/12/95	JDG

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-5
Matrix SOIL
Client Sample ID LIS-LF01-5S70

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 09:16 hrs.
Collected Date 06/25/95 @ 17:15 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	16.4		%	SM17 2540G			06/29/95	KGF
PCBs in Soil	7.91		mg/Kg	EPA 8080		06/28/95	06/30/95	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-6
Matrix SOIL
Client Sample ID LIS-LF01-5S71

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 09:16 hrs.
Collected Date 06/26/95 @ 11:30 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	9.62		%	SM17 2540G			06/29/95	KGF
PCBs in Soil	59.7	D	mg/Kg	EPA 8080		06/28/95	07/03/95	DSM
------Aroclor	1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-7
Matrix SOIL
Client Sample ID LIS-LF01-5S72

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 09:17 hrs.
Collected Date 06/26/95 @ 11:35 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	19.7		%	SM17 2540G			06/29/95	KGF
PCBs in Soil	153	D	mg/Kg	EPA 8080		06/28/95	07/04/95	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-8
Matrix SOIL
Client Sample ID LIS-LF01-5S73

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 09:17 hrs.
Collected Date 06/26/95 @ 11:39 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By S Thomas Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	23.3		%	SM17 2540G			06/29/95	KGF
PCBs in Soil	0.472		mg/Kg	EPA 8080		06/28/95	06/30/95	DSM
------Aroclor	1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-2
Client Sample ID :LIS-LF01-SD03 CAPE LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 10:50 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromochloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromodichloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromoform	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromomethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
n-Butylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
sec-Butylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
tert-Butylbenzne	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Carbon Tetrachloride	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroform	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
4-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromochloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
12Dibromo3Chloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dibromoethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromomethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,4-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dichlorodifluoromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
cis-1,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
transl,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloropropene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Ethylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Hexachlorobutadiene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1931

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-2
Client Sample ID :LIS-LF01-SD03 CAPE LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Isopropylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
p-Isopropyltoluene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Methylene Chloride	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Napthalene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
n-Propylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Styrene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1112-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1122-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Tetrachloroethene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Toluene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,3-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,4-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,1,1-Trichloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,1,2-Trichloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Trichloroethene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Trichlorofluoromethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,3-Trichloropropane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,4-Trimethylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,3,5-Trimethylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Vinyl Chloride	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
p+m-Xylene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
o-Xylene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Semivolatile Organics				EPA 8270			
Phenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroethyl)ether	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Chlorophenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,3-Dichlorobenzene	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,4-Dichlorobenzene	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
Benzyl Alcohol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,2-Dichlorobenzene	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Methylphenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroisopropyl)e	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Methylphenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
n-Nitroso-di-n-Propylam	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachloroethane	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
Nitrobenzene	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
Isophorone	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Nitrophenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
2,4-Dimethylphenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
Benzoic Acid	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroethoxy)Meth	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
2,4-Dichlorophenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,2,4-Trichlorobenzene	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
Naphthalene	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Chloroaniline	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachlorobutadiene	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Chloro-3-Methylphenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Methylnaphthalene	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachlorocyclopentadie	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV
2,4,6-Trichlorophenol	7.50	U	mg/Kg	EPA 8270	09/14	10/16	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-2
Client Sample ID :LIS-LF01-SD03 CAPE LIS
Matrix :SOIL

					Qualifier / Comment		
2,4,5-Trichlorophenol	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
2-Chloronaphthalene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
2-Nitroaniline	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dimethylphthalate	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthylene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,6-Dinitrotoluene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
3-Nitroaniline	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrophenol	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitrophenol	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenzofuran	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrotoluene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Diethylphthalate	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Chlorophenyl-Phenylet	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Fluorene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitroaniline	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
4,6-Dinitro-2-Methylphe	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
n-Nitrosodiphenylamine	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Bromophenyl-Phenyleth	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Hexachlorobenzene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pentachlorophenol	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Phenanthrene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Anthracene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Butylphthalate	7.53	B	mg/Kg	EPA 8270		09/14 10/16	GV
Fluoranthene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pyrene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Butylbenzylphthalate	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
3,3-Dichlorobenzidine	7.50	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Benzo(a)Anthracene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Chrysene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
bis(2-Ethylhexyl)Phthal	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Octylphthalate	7.50	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Benzo(b)Fluoranthene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(k)Fluoranthene	7.50	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Benzo(a)Pyrene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Indeno(1,2,3-cd)Pyrene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenz(a,h)Anthracene	7.50	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Benzo(g,h,i)Perylene	7.50	U	mg/Kg	EPA 8270		09/14 10/16	GV
Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	4900		mg/Kg	EPA 6010	(J) - F.1	09/10 09/23	DFL
Antimony	47		mg/Kg	EPA 6010	(R) - J.1	09/10 09/23	DFL
Arsenic	47	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Barium	630		mg/Kg	EPA 6010		09/10 09/23	DFL
Beryllium	2.4	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Cadmium	24	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Calcium	19000		mg/Kg	EPA 6010		09/10 09/23	DFL
Chromium	9.0		mg/Kg	EPA 6010		09/10 09/23	DFL
Cobalt	5.6		mg/Kg	EPA 6010	(J) - F.1	09/10 09/23	DFL

Original by: CB 4.14.94

Compiled 4/11/94

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5633 B STREET
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TEL: (907) 562-2343
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-2
Client Sample ID :LIS-LF01-SD03 CAPE LIS
Matrix :SOIL

				Qualifier/Comments		
Copper	9.1		mg/Kg	EPA 6010	09/10 09/23	DFL
Iron	18000		mg/Kg	EPA 6010	09/10 09/23	DFL
Lead	47	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Magnesium	4200		mg/Kg	EPA 6010	09/10 09/23	DFL
Manganese	750		mg/Kg	EPA 6010 (J) - F.1	09/10 09/23	DFL
Molybdenum	2.4	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Nickel	15		mg/Kg	EPA 6010	09/10 09/23	DFL
Potassium	540		mg/Kg	EPA 6010 (J) - F.1	09/10 09/24	DFL
Selenium	47	U	mg/Kg	EPA 6010	09/10 10/23	DFL
Silver	24	U	mg/Kg	EPA 6010 (R) - J.1	09/10 10/23	DFL
Sodium	110		mg/Kg	EPA 6010	09/10 09/24	DFL
Thallium	0.23	U	mg/Kg	EPA 7841 (J) - B.1	09/10 09/13	KAW
Vanadium	18		mg/Kg	EPA 6010	09/10 09/23	DFL
Zinc	49		mg/Kg	EPA 6010	09/10 09/23	DFL

original by: CS 4-14-94

Completed SM 4.16.94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-5
Client Sample ID :LIS-LF01-SD03 CAPE LIS DUPLICATE
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 10:50 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Sample Preparation	---			EPA 3050 Digest				
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	4700		mg/Kg	EPA 6010		09/10	09/23	DFL
Antimony	47	U	mg/Kg	EPA 6010		09/10	09/23	DFL
Arsenic	47	U	mg/Kg	EPA 6010		09/10	09/23	DFL
Barium	540		mg/Kg	EPA 6010		09/10	09/23	DFL
Beryllium	2.4	U	mg/Kg	EPA 6010		09/10	09/23	DFL
Cadmium	24	U	mg/Kg	EPA 6010		09/10	09/23	DFL
Calcium	16000		mg/Kg	EPA 6010		09/10	09/23	DFL
Chromium	8.2		mg/Kg	EPA 6010		09/10	09/23	DFL
Cobalt	5.5		mg/Kg	EPA 6010		09/10	09/23	DFL
Copper	8.8		mg/Kg	EPA 6010		09/10	09/23	DFL
Iron	16000		mg/Kg	EPA 6010		09/10	09/23	DFL
Lead	47	U	mg/Kg	EPA 6010		09/10	09/23	DFL
Magnesium	4200		mg/Kg	EPA 6010		09/10	09/23	DFL
Manganese	700		mg/Kg	EPA 6010		09/10	09/23	DFL
Molybdenum	2.4	U	mg/Kg	EPA 6010		09/10	09/23	DFL
Nickel	15		mg/Kg	EPA 6010		09/10	09/23	DFL
Potassium	500		mg/Kg	EPA 6010		09/10	09/24	DFL
Selenium	47	U	mg/Kg	EPA 6010		09/10	09/23	DFL
Silver	24	U	mg/Kg	EPA 6010		09/10	09/23	DFL
Sodium	120		mg/Kg	EPA 6010		09/10	09/24	DFL
Thallium	0.23	U	mg/Kg	EPA 7841		09/10	09/13	KAW
Vanadium	18		mg/Kg	EPA 6010		09/10	09/23	DFL
Zinc	47		mg/Kg	EPA 6010		09/10	09/23	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-3
Client Sample ID :LIS-LF01-SD03 CAPE LIS SPIKE
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 10:50 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. SEE QC PACKAGE FOR SPIKE CONCENTRATIONS. J = INDICATES AN ANALYTE WHOSE CONCENTRATION IS ESTIMATED BECAUSE THE ANALYTE'S CONCENTRATION IS DETECTED BELOW THE CALIBRATION RANGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	1.07		mg/Kg	EPA 8260		09/02	09/06	SGM
Bromobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromochloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromodichloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromoform	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromomethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
n-Butylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
sec-Butylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
tert-Butylbenzne	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Carbon Tetrachloride	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chlorobenzene	1.04		mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroform	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
4-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromochloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
12Dibromo3Chloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dibromoethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromomethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,4-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dichlorodifluoromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethene	0.688		mg/Kg	EPA 8260		09/02	09/06	SGM
cis-1,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
trans1,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloropropene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Ethylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-3
Client Sample ID :LIS-LF01-SD03 CAPE LIS SPIKE
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Hexachlorobutadiene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Isopropylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
p-Isopropyltoluene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Methylene Chloride	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Napthalene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
n-Propylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Styrene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1112-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1122-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Tetrachloroethene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Toluene	1.07		mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,3-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,4-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,1,1-Trichloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,1,2-Trichloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Trichloroethene	0.962		mg/Kg	EPA 8260	09/02	09/06	SGM
Trichlorofluoromethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,3-Trichloropropane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,4-Trimethylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,3,5-Trimethylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Vinyl Chloride	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
p+m-Xylene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
o-Xylene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Semivolatile Organics				EPA 8270			
Phenol	8.76	D	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroethyl)ether	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Chlorophenol	7.76	D	mg/Kg	EPA 8270	09/14	10/16	GV
1,3-Dichlorobenzene	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,4-Dichlorobenzene	7.85	D	mg/Kg	EPA 8270	09/14	10/16	GV
Benzyl Alcohol	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,2-Dichlorobenzene	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Methylphenol	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroisopropyl)e	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Methylphenol	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
n-Nitroso-di-n-Propylam	9.90	D	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachloroethane	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
Nitrobenzene	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
Isophorone	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Nitrophenol	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
2,4-Dimethylphenol	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
Benzoic Acid	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroethoxy)Meth	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
2,4-Dichlorophenol	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,2,4-Trichlorobenzene	8.12	D	mg/Kg	EPA 8270	09/14	10/16	GV
Naphthalene	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Chloroaniline	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachlorobutadiene	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Chloro-3-Methylphenol	9.03	D	mg/Kg	EPA 8270	09/14	10/16	GV
2-Methylnaphthalene	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachlorocyclopentadie	7.70	U	mg/Kg	EPA 8270	09/14	10/16	GV

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ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-3
Client Sample ID :LIS-LF01-SD03 CAPE LIS SPIKE
Matrix :SOIL

2,4,6-Trichlorophenol	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4,5-Trichlorophenol	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
2-Chloronaphthalene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
2-Nitroaniline	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dimethylphthalate	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthylene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,6-Dinitrotoluene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
3-Nitroaniline	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthene	10.3	D	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrophenol	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitrophenol	7.35	J	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenzofuran	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrotoluene	7.76	D	mg/Kg	EPA 8270		09/14 10/16	GV
Diethylphthalate	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Chlorophenyl-Phenylet	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Fluorene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitroaniline	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
4,6-Dinitro-2-Methylphe	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
n-Nitrosodiphenylamine	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Bromophenyl-Phenyleth	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Hexachlorobenzene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pentachlorophenol	8.47	D	mg/Kg	EPA 8270		09/14 10/16	GV
Phenanthrene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Anthracene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Butylphthalate	25.0	D	mg/Kg	EPA 8270		09/14 10/16	GV
Fluoranthene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pyrene	8.67	D	mg/Kg	EPA 8270		09/14 10/16	GV
Butylbenzylphthalate	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
3,3-Dichlorobenzidine	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(a)Anthracene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Chrysene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
bis(2-Ethylhexyl)Phthal	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Octylphthalate	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(b)Fluoranthene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(k)Fluoranthene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(a)Pyrene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Indeno(1,2,3-cd)Pyrene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenz(a,h)Anthracene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(g,h,i)Perylene	7.70	U	mg/Kg	EPA 8270		09/14 10/16	GV
Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	4700		mg/Kg	EPA 6010		09/10 09/23	DFL
Antimony	47	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Arsenic	110		mg/Kg	EPA 6010		09/10 09/23	DFL
Barium	650		mg/Kg	EPA 6010		09/10 09/23	DFL
Beryllium	37		mg/Kg	EPA 6010		09/10 09/23	DFL
Cadmium	50		mg/Kg	EPA 6010		09/10 09/23	DFL
Calcium	16000		mg/Kg	EPA 6010		09/10 09/23	DFL
Chromium	97		mg/Kg	EPA 6010		09/10 09/23	DFL

COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
ANCHORAGE, AK 99518
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-3
Client Sample ID :LIS-LF01-SD03 CAPE LIS SPIKE
Matrix :SOIL

Cobalt	89		mg/Kg	EPA 6010	09/10 09/23	DFL
Copper	99		mg/Kg	EPA 6010	09/10 09/23	DFL
Iron	160000		mg/Kg	EPA 6010	09/10 09/23	DFL
Lead	98		mg/Kg	EPA 6010	09/10 09/23	DFL
Magnesium	4700		mg/Kg	EPA 6010	09/10 09/23	DFL
Manganese	850		mg/Kg	EPA 6010	09/10 09/23	DFL
Molybdenum	84		mg/Kg	EPA 6010	09/10 09/23	DFL
Nickel	98		mg/Kg	EPA 6010	09/10 09/23	DFL
Potassium	1400		mg/Kg	EPA 6010	09/10 09/23	DFL
Selenium	110		mg/Kg	EPA 6010	09/10 09/24	DFL
Silver	24	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Sodium	1100		mg/Kg	EPA 6010	09/10 09/23	DFL
Thallium	2.2		mg/Kg	EPA 7841	09/10 09/24	DFL
Vanadium	97		mg/Kg	EPA 6010	09/10 09/13	KAW
Zinc	134		mg/Kg	EPA 6010	09/10 09/23	DFL
					09/10 09/23	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-4
Client Sample ID :LIS-LF01-SD03 CAPE LIS SPIKE DUPLICATE
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 10:50 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. SEE QC FOR SPIKE CONCENTRATIONS. J = INDICATES AN ANALYTE WHOSE CONCENTRATION IS ESTIMATED BECAUSE THE ANALYTE'S CONCENTRATION IS DETECTED BELOW THE CALIBRATION RANGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	1.11		mg/Kg	EPA 8260		09/02	09/06	SGM
Bromobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromochloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromodichloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromoform	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromomethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
n-Butylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
sec-Butylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
tert-Butylbenzne	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Carbon Tetrachloride	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chlorobenzene	1.11		mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroform	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
4-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromochloromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
12Dibromo3Chloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dibromoethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromomethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,4-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dichlorodifluoromethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloroethane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethene	0.734		mg/Kg	EPA 8260		09/02	09/06	SGM
cis-1,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
trans1,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloropropene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Ethylbenzene	0.050	U	mg/Kg	EPA 8260		09/02	09/06	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1909

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-4
Client Sample ID :LIS-LF01-SD03 CAPE LIS SPIKE DUPLICATE
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Hexachlorobutadiene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Isopropylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
p-Isopropyltoluene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Methylene Chloride	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Napthalene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
n-Propylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Styrene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1112-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1122-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Tetrachloroethene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Toluene	1.12		mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,3-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,4-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,1,1-Trichloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,1,2-Trichloroethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Trichloroethene	0.994		mg/Kg	EPA 8260	09/02	09/06	SGM
Trichlorofluoromethane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,3-Trichloropropane	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,2,4-Trimethylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
1,3,5-Trimethylbenzene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Vinyl Chloride	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
p+m-Xylene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
o-Xylene	0.050	U	mg/Kg	EPA 8260	09/02	09/06	SGM
Semivolatile Organics				EPA 8270			
Phenol	9.20	D	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroethyl)ether	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Chlorophenol	7.96	D	mg/Kg	EPA 8270	09/14	10/16	GV
1,3-Dichlorobenzene	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,4-Dichlorobenzene	7.82	D	mg/Kg	EPA 8270	09/14	10/16	GV
Benzyl Alcohol	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,2-Dichlorobenzene	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Methylphenol	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroisopropyl)e	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Methylphenol	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
n-Nitroso-di-n-Propylam	9.99	D	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachloroethane	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
Nitrobenzene	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
Isophorone	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
2-Nitrophenol	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
2,4-Dimethylphenol	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
Benzoic Acid	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
bis(2-Chloroethoxy)Meth	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
2,4-Dichlorophenol	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
1,2,4-Trichlorobenzene	7.97	D	mg/Kg	EPA 8270	09/14	10/16	GV
Naphthalene	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Chloroaniline	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachlorobutadiene	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
4-Chloro-3-Methylphenol	9.23	D	mg/Kg	EPA 8270	09/14	10/16	GV
2-Methylnaphthalene	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV
Hexachlorocyclopentadie	7.69	U	mg/Kg	EPA 8270	09/14	10/16	GV

COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
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TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-4
Client Sample ID :LIS-LF01-SD03 CAPE LIS SPIKE DUPLICATE
Matrix :SOIL

2,4,6-Trichlorophenol	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4,5-Trichlorophenol	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Chloronaphthalene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Nitroaniline	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Dimethylphthalate	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Acenaphthylene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,6-Dinitrotoluene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
3-Nitroaniline	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Acenaphthene	10.0	D	mg/Kg	EPA 8270	09/14 10/16	GV
2,4-Dinitrophenol	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Nitrophenol	7.62	J	mg/Kg	EPA 8270	09/14 10/16	GV
Dibenzofuran	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4-Dinitrotoluene	7.71	D	mg/Kg	EPA 8270	09/14 10/16	GV
Diethylphthalate	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Chlorophenyl-Phenylet	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Fluorene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Nitroaniline	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
4,6-Dinitro-2-Methylphe	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
n-Nitrosodiphenylamine	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Bromophenyl-Phenyleth	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachlorobenzene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Pentachlorophenol	8.84	D	mg/Kg	EPA 8270	09/14 10/16	GV
Phenanthrene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Anthracene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
di-n-Butylphthalate	27.4	D	mg/Kg	EPA 8270	09/14 10/16	GV
Fluoranthene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Pyrene	8.62		mg/Kg	EPA 8270	09/14 10/16	GV
Butylbenzylphthalate	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
3,3-Dichlorobenzidine	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzo(a)Anthracene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Chrysene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Ethylhexyl)Phthal	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
di-n-Octylphthalate	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzo(b)Fluoranthene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzo(k)Fluoranthene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzo(a)Pyrene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Indeno(1,2,3-cd)Pyrene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Dibenz(a,h)Anthracene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzo(g,h,i)Perylene	7.69	U	mg/Kg	EPA 8270	09/14 10/16	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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ENVIRONMENTAL LABORATORY SERVICES
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-6
Client Sample ID :LIS-LF01-SD05 CAPE LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 13:25 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. THE HIGH DETECTION LIMIT FOR 8270 IS DUE TO CONTAMINATION IN SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromobenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromochloromethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromodichloromethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromoform	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromomethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
n-Butylbenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
sec-Butylbenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
tert-Butylbenzne	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Carbon Tetrachloride	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chlorobenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroform	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloromethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2-Chlorotoluene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
4-Chlorotoluene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromochloromethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
12Dibromo3Chloropropane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dibromoethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromomethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichlorobenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichlorobenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,4-Dichlorobenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dichlorodifluoromethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloroethane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
cis-1,2-Dichloroethene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
transi,2-Dichloroethene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloropropane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichloropropane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2,2-Dichloropropane	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloropropene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Ethylbenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Hexachlorobutadiene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Isopropylbenzene	0.160	U	mg/Kg	EPA 8260		09/02	09/06	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-6
Client Sample ID :LIS-LF01-SD05 CAPE LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Methylene Chloride	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Napthalene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
n-Propylbenzene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Styrene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1112-Tetrachloroethane	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1122-Tetrachloroethane	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Tetrachloroethene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Toluene	0.241		mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,3-Trichlorobenzene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,4-Trichlorobenzene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,1,1-Trichloroethane	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,1,2-Trichloroethane	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Trichloroethene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Trichlorofluoromethane	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,3-Trichloropropane	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,4-Trimethylbenzene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,3,5-Trimethylbenzene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Vinyl Chloride	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
p+m-Xylene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
o-Xylene	0.160	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Semivolatile Organics				EPA 8270		
Phenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroethyl)ether	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Chlorophenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,3-Dichlorobenzene	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,4-Dichlorobenzene	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzyl Alcohol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,2-Dichlorobenzene	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Methylphenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroisopropyl)e	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Methylphenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
n-Nitroso-di-n-Propylam	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachloroethane	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
Nitrobenzene	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
Isophorone	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Nitrophenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4-Dimethylphenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzoic Acid	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroethoxy)Meth	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4-Dichlorophenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,2,4-Trichlorobenzene	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
Naphthalene	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Chloroaniline	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachlorobutadiene	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Chloro-3-Methylphenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Methylnaphthalene	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachlorocyclopentadie	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4,6-Trichlorophenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4,5-Trichlorophenol	29.0	U	mg/Kg	EPA 8270	09/14 10/16	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1928

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-6
Client Sample ID :LIS-LF01-SD05 CAPE LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2-Chloronaphthalene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
2-Nitroaniline	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dimethylphthalate	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthylene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,6-Dinitrotoluene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
3-Nitroaniline	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrophenol	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitrophenol	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenzofuran	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrotoluene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Diethylphthalate	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Chlorophenyl-Phenylet	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Fluorene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitroaniline	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
4,6-Dinitro-2-Methylphe	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
n-Nitrosodiphenylamine	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Bromophenyl-Phenyleth	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Hexachlorobenzene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pentachlorophenol	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Phenanthrene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Anthracene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Butylphthalate	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Fluoranthene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pyrene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Butylbenzylphthalate	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
3,3-Dichlorobenzidine	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(a)Anthracene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Chrysene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
bis(2-Ethylhexyl)Phthal	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Octylphthalate	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(b)Fluoranthene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(k)Fluoranthene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(a)Pyrene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Indeno(1,2,3-cd)Pyrene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenz(a,h)Anthracene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(g,h,i)Perylene	29.0	U	mg/Kg	EPA 8270		09/14 10/16	GV
Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	5200		mg/Kg	EPA 6010		09/10 09/23	DFL
Antimony	88	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Arsenic	8.8	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Barium	430		mg/Kg	EPA 6010		09/10 09/23	DFL
Beryllium	4.4	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Cadmium	44	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Calcium	11000		mg/Kg	EPA 6010		09/10 09/23	DFL
Chromium	8.9		mg/Kg	EPA 6010		09/10 09/23	DFL
Cobalt	8.8	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Copper	13		mg/Kg	EPA 6010		09/10 09/23	DFL

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1938

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-6
Client Sample ID :LIS-LF01-SD05 CAPE LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Iron	12000		mg/Kg	EPA 6010	09/10 09/23	DFL
Lead	8.8	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Magnesium	2100		mg/Kg	EPA 6010	09/10 09/23	DFL
Manganese	160		mg/Kg	EPA 6010	09/10 09/23	DFL
Molybdenum	4.4	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Nickel	17		mg/Kg	EPA 6010	09/10 09/23	DFL
Potassium	440	U	mg/Kg	EPA 6010	09/10 09/24	DFL
Selenium	88	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Silver	44	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Sodium	290		mg/Kg	EPA 6010	09/10 09/24	DFL
Thallium	0.44	U	mg/Kg	EPA 7841	09/10 09/13	KAW
Vanadium	18		mg/Kg	EPA 6010	09/10 09/23	DFL
Zinc	57		mg/Kg	EPA 6010	09/10 09/23	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-7
Client Sample ID :LIS-LF01-SD08 CAPE LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 10:50 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromobenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromochloromethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromodichloromethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromoform	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Bromomethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
n-Butylbenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
sec-Butylbenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
tert-Butylbenzne	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Carbon Tetrachloride	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chlorobenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloroform	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Chloromethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2-Chlorotoluene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
4-Chlorotoluene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromochloromethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
12Dibromo3Chloropropane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dibromoethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dibromomethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichlorobenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichlorobenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,4-Dichlorobenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Dichlorodifluoromethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloroethane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloroethene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
cis-1,2-Dichloroethene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
trans1,2-Dichloroethene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,2-Dichloropropane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,3-Dichloropropane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
2,2-Dichloropropane	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
1,1-Dichloropropene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Ethylbenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Hexachlorobutadiene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
Isopropylbenzene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM
p-Isopropyltoluene	0.040	U	mg/Kg	EPA 8260		09/02	09/06	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-7
Client Sample ID :LIS-LF01-SD08 CAPE LIS
Matrix :SOIL

Methylene Chloride	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Napthalene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
n-Propylbenzene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Styrene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1112-Tetrachloroethane	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1122-Tetrachloroethane	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Tetrachloroethene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Toluene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,3-Trichlorobenzene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,4-Trichlorobenzene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,1,1-Trichloroethane	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,1,2-Trichloroethane	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Trichloroethene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Trichlorofluoromethane	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,3-Trichloropropane	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,2,4-Trimethylbenzene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
1,3,5-Trimethylbenzene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Vinyl Chloride	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
p+m-Xylene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
o-Xylene	0.040	U	mg/Kg	EPA 8260	09/02 09/06	SGM
Semivolatile Organics				EPA 8270		
Phenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroethyl)ether	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Chlorophenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,3-Dichlorobenzene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,4-Dichlorobenzene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzyl Alcohol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,2-Dichlorobenzene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Methylphenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroisopropyl)e	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Methylphenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
n-Nitroso-di-n-Propylam	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachloroethane	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
Nitrobenzene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
Isophorone	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Nitrophenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4-Dimethylphenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
Benzoic Acid	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
bis(2-Chloroethoxy)Meth	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4-Dichlorophenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
1,2,4-Trichlorobenzene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
Naphthalene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Chloroaniline	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachlorobutadiene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
4-Chloro-3-Methylphenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Methylnaphthalene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
Hexachlorocyclopentadie	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4,6-Trichlorophenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2,4,5-Trichlorophenol	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV
2-Chloronaphthalene	6.23	U	mg/Kg	EPA 8270	09/14 10/16	GV

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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-7
Client Sample ID :LIS-LF01-SD08 CAPE LIS
Matrix :SOIL

Qualifiers / Comments

2-Nitroaniline	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dimethylphthalate	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthylene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,6-Dinitrotoluene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
3-Nitroaniline	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Acenaphthene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrophenol	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitrophenol	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenzofuran	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
2,4-Dinitrotoluene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Diethylphthalate	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Chlorophenyl-Phenylet	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Fluorene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Nitroaniline	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
4,6-Dinitro-2-Methylphe	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
n-Nitrosodiphenylamine	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
4-Bromophenyl-Phenyleth	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Hexachlorobenzene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pentachlorophenol	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Phenanthrene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Anthracene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Butylphthalate	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Fluoranthene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Pyrene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Butylbenzylphthalate	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
3,3-Dichlorobenzidine	6.23	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Benzo(a)Anthracene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Chrysene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
bis(2-Ethylhexyl)Phthal	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
di-n-Octylphthalate	6.23	U	mg/Kg	EPA 8270	J /D.1	09/14 10/16	GV
Benzo(b)Fluoranthene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Benzo(k)Fluoranthene	6.23	U	mg/Kg	EPA 8270	J /D.1	09/14 10/16	GV
Benzo(a)Pyrene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Indeno(1,2,3-cd)Pyrene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Dibenz(a,h)Anthracene	6.23	U	mg/Kg	EPA 8270	J / D.1	09/14 10/16	GV
Benzo(g,h,i)Perylene	6.23	U	mg/Kg	EPA 8270		09/14 10/16	GV
Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	2800		mg/Kg	EPA 6010	(J)-F.1	09/10 09/23	DFL
Antimony	75	U	mg/Kg	EPA 6010	(R)-J.1	09/10 09/23	DFL
Arsenic	75	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Barium	540		mg/Kg	EPA 6010		09/10 09/23	DFL
Beryllium	3.8	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Cadmium	38	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Calcium	31000		mg/Kg	EPA 6010		09/10 09/23	DFL
Chromium	5.4		mg/Kg	EPA 6010		09/10 09/23	DFL
Cobalt	7.5	U	mg/Kg	EPA 6010	(J)-F.1	09/10 09/23	DFL
Copper	5.7		mg/Kg	EPA 6010		09/10 09/23	DFL
Iron	14000		mg/Kg	EPA 6010		09/10 09/23	DFL

CRD 4-14-94

Completed 11/6/94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-7
Client Sample ID :LIS-LF01-SD08 CAPE LIS
Matrix :SOIL

		Qualifier/Comments					
Lead	75	U	mg/Kg	EPA 6010	09/10	09/23	DFL
Magnesium	5300		mg/Kg	EPA 6010	09/10	09/23	DFL
Manganese	260		mg/Kg	EPA 6010 (J)-F.1	09/10	09/23	DFL
Molybdenum	3.8	U	mg/Kg	EPA 6010	09/10	09/23	DFL
Nickel	11		mg/Kg	EPA 6010	09/10	09/23	DFL
Potassium	370	U	mg/Kg	EPA 6010 (J)-F.1	09/10	09/24	DFL
Selenium	75	U	mg/Kg	EPA 6010	09/10	09/23	DFL
Silver	38	U	mg/Kg	EPA 6010 (R)-J.1	09/10	09/23	DFL
Sodium	97		mg/Kg	EPA 6010	09/10	09/24	DFL
Thallium	0.39	U	mg/Kg	EPA 7841 (J)-B.1	09/10	09/13	KAW
Vanadium	14		mg/Kg	EPA 6010	09/10	09/23	DFL
Zinc	36		mg/Kg	EPA 6010	09/10	09/23	DFL

CB
4-14-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
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REPORT of ANALYSIS

Chemlab Ref.# :93.4728-1
Client Sample ID :LIS-LF01-2SD09 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 16:25 hr:
Received :09/10/93 @ 15:55 hr:
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Qualifies/Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	66.0		%	SM17 2540G			10/14	
Hydrocarbons VPH	0.665		mg/Kg	EPA 5030/8015M		09/14	09/16	WLS
Volatile Organics				EPA 8260				
Benzene	0.035	U	mg/Kg	EPA 8260 (J)-A.1		09/14	10/02	KWM
Bromobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromochloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromodichloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromoform	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromomethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
n-Butylbenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
sec-Butylbenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
tert-Butylbenzne	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Carbon Tetrachloride	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chloroform	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
2-Chlorotoluene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
4-Chlorotoluene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dibromochloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
12Dibromo3Chloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dibromoethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dibromomethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,3-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,4-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dichlorodifluoromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1-Dichloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1-Dichloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
cis-1,2-Dichloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
trans1,2-Dichloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,3-Dichloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
2,2-Dichloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1-Dichloropropene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM

3.30-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1968

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-1
Client Sample ID :LIS-LF01-2SD09 CAPE LISB.
Matrix :SOIL

Qualifiers/Comments

Ethylbenzene	0.060		mg/Kg	EPA 8260	(J)-A.1,J.1	09/14	10/02	KWM
Hexachlorobutadiene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Isopropylbenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
p-Isopropyltoluene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Methylene Chloride	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Napthalene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
n-Propylbenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Styrene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1112-Tetrachloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1122-Tetrachloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Tetrachloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Toluene	0.179		mg/Kg	EPA 8260	J J.1	09/14	10/02	KWM
1,2,3-Trichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2,4-Trichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1,1-Trichloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1,2-Trichloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Trichloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Trichlorofluoromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2,3-Trichloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2,4-Trimethylbenzene	0.133		mg/Kg	EPA 8260	J J.1	09/14	10/02	KWM
1,3,5-Trimethylbenzene	0.043		mg/Kg	EPA 8260	J J.1	09/14	10/02	KWM
Vinyl Chloride	0.035	U	mg/Kg	EPA 8260	J J.1	09/14	10/02	KWM
p+m-Xylene	0.284		mg/Kg	EPA 8260	J J.1	09/14	10/02	KWM
o-Xylene	0.109		mg/Kg	EPA 8260	J J.1	09/14	10/02	KWM
Semivolatile Organics				EPA 8270				
Phenol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
bis(2-Chloroethyl)ether	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
2-Chlorophenol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
1,3-Dichlorobenzene	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
1,4-Dichlorobenzene	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
Benzyl Alcohol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
1,2-Dichlorobenzene	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
2-Methylphenol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
bis(2-Chloroisopropyl)e	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
4-Methylphenol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
n-Nitroso-di-n-Propylam	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
Hexachloroethane	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
Nitrobenzene	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
Isophorone	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
2-Nitrophenol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
2,4-Dimethylphenol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
Benzoic Acid	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
bis(2-Chloroethoxy)Meth	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
2,4-Dichlorophenol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
1,2,4-Trichlorobenzene	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
Naphthalene	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
4-Chloroaniline	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
Hexachlorobutadiene	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
4-Chloro-3-Methylphenol	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV
2-Methylnaphthalene	3.00	U	mg/Kg	EPA 8270		09/17	10/25	GV

3-30-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-1
Client Sample ID :LIS-LF01-2SD09 CAPE LISB.
Matrix :SOIL

Hexachlorocyclopentadie	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
2,4,6-Trichlorophenol	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
2,4,5-Trichlorophenol	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
2-Chloronaphthalene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
2-Nitroaniline	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Dimethylphthalate	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Acenaphthylene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
2,6-Dinitrotoluene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
3-Nitroaniline	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Acenaphthene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
2,4-Dinitrophenol	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
4-Nitrophenol	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Dibenzofuran	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
2,4-Dinitrotoluene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Diethylphthalate	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
4-Chlorophenyl-Phenylet	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Fluorene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
4-Nitroaniline	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
4,6-Dinitro-2-Methylphe	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
n-Nitrosodiphenylamine	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
4-Bromophenyl-Phenyleth	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Hexachlorobenzene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Pentachlorophenol	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Phenanthrene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Anthracene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
di-n-Butylphthalate	7.02	B	mg/Kg	EPA 8270	(U) -E.1	09/17 10/25	GV
Fluoranthene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Pyrene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Butylbenzylphthalate	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
3,3-Dichlorobenzidine	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Benzo(a)Anthracene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Chrysene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
bis(2-Ethylhexyl)Phthal	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
di-n-Octylphthalate	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Benzo(b)Fluoranthene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Benzo(k)Fluoranthene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Benzo(a)Pyrene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Indeno(1,2,3-cd)Pyrene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Dibenz(a,h)Anthracene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV
Benzo(g,h,i)Perylene	3.00	U	mg/Kg	EPA 8270		09/17 10/25	GV

5-6-97

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-2
Client Sample ID :LIS-LF01-2SD09 SPIKE
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 16:25 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. SEE QC PACKAGE FOR SPIKE AND SPIKE DUPLICATE CONCENTRATIONS AND % RPD. J = INDICATES AS ANALYTE WHOSE CONCENTRATION IS ESTIMATED BECAUSE THE ANALYTE'S CONCENTRATION IS DETECTED BELOW THE CALIBRATION RANGE. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	66.0		%	SM17 2540G				
Hydrocarbons VPH	17.2		mg/Kg	EPA 5030/8015M		09/14	09/16	WLS
Volatile Organics				EPA 8260				
Benzene	0.366		mg/Kg	EPA 8260		09/14	10/02	KWM
Bromobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromochloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromodichloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromoform	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromomethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
n-Butylbenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
sec-Butylbenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
tert-Butylbenzne	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Carbon Tetrachloride	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chlorobenzene	0.357		mg/Kg	EPA 8260		09/14	10/02	KWM
Chloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chloroform	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
2-Chlorotoluene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
4-Chlorotoluene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dibromochloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
12Dibromo3Chloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dibromoethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dibromomethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,3-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,4-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dichlorodifluoromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1-Dichloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1-Dichloroethene	0.094		mg/Kg	EPA 8260		09/14	10/02	KWM
cis-1,2-Dichloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
trans1,2-Dichloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-2
Client Sample ID :LIS-LF01-2SD09 SPIKE
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

1,3-Dichloropropane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
2,2-Dichloropropane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,1-Dichloropropene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Ethylbenzene	0.058		mg/Kg	EPA 8260	09/14 10/02	KWM
Hexachlorobutadiene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Isopropylbenzene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
p-Isopropyltoluene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Methylene Chloride	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Napthalene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
n-Propylbenzene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Styrene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1112-Tetrachloroethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1122-Tetrachloroethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Tetrachloroethene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Toluene	0.523		mg/Kg	EPA 8260	09/14 10/02	KWM
1,2,3-Trichlorobenzene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,2,4-Trichlorobenzene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,1,1-Trichloroethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,1,2-Trichloroethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Trichloroethene	0.339		mg/Kg	EPA 8260	09/14 10/02	KWM
Trichlorofluoromethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,2,3-Trichloropropane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,2,4-Trimethylbenzene	0.126		mg/Kg	EPA 8260	09/14 10/02	KWM
1,3,5-Trimethylbenzene	0.042		mg/Kg	EPA 8260	09/14 10/02	KWM
Vinyl Chloride	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
p+m-Xylene	0.277		mg/Kg	EPA 8260	09/14 10/02	KWM
o-Xylene	0.107		mg/Kg	EPA 8260	09/14 10/02	KWM
Semivolatile Organics				EPA 8270		
Phenol	2.28	J	mg/Kg	EPA 8270	09/17 10/25	GV
bis(2-Chloroethyl)ether	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2-Chlorophenol	2.01	J	mg/Kg	EPA 8270	09/17 10/25	GV
1,3-Dichlorobenzene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
1,4-Dichlorobenzene	1.83	J	mg/Kg	EPA 8270	09/17 10/25	GV
Benzyl Alcohol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
1,2-Dichlorobenzene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2-Methylphenol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
bis(2-Chloroisopropyl)e	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Methylphenol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
n-Nitroso-di-n-Propylam	2.60	J	mg/Kg	EPA 8270	09/17 10/25	GV
Hexachloroethane	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Nitrobenzene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Isophorone	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2-Nitrophenol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2,4-Dimethylphenol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Benzoic Acid	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
bis(2-Chloroethoxy)Meth	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2,4-Dichlorophenol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
1,2,4-Trichlorobenzene	2.61	J	mg/Kg	EPA 8270	09/17 10/25	GV
Naphthalene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Chloroaniline	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1929

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-2
Client Sample ID :LIS-LF01-2SD09 SPIKE
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Hexachlorobutadiene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Chloro-3-Methylphenol	2.67	J	mg/Kg	EPA 8270	09/17 10/25	GV
2-Methylnaphthalene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Hexachlorocyclopentadie	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2,4,6-Trichlorophenol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2,4,5-Trichlorophenol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2-Chloronaphthalene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2-Nitroaniline	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Dimethylphthalate	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Acenaphthylene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2,6-Dinitrotoluene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
3-Nitroaniline	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Acenaphthene	3.22		mg/Kg	EPA 8270	09/17 10/25	GV
2,4-Dinitrophenol	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Nitrophenol	2.21	J	mg/Kg	EPA 8270	09/17 10/25	GV
Dibenzofuran	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
2,4-Dinitrotoluene	2.30	J	mg/Kg	EPA 8270	09/17 10/25	GV
Diethylphthalate	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Chlorophenyl-Phenylet	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Fluorene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Nitroaniline	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
4,6-Dinitro-2-Methylphe	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
n-Nitrosodiphenylamine	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Bromophenyl-Phenyleth	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Hexachlorobenzene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Pentachlorophenol	0.795	J	mg/Kg	EPA 8270	09/17 10/25	GV
Phenanthrene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Anthracene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
di-n-Butylphthalate	9.36	B	mg/Kg	EPA 8270	09/17 10/25	GV
Fluoranthene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Pyrene	2.93	J	mg/Kg	EPA 8270	09/17 10/25	GV
Butylbenzylphthalate	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
3,3-Dichlorobenzidine	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Benzo(a)Anthracene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Chrysene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
bis(2-Ethylhexyl)Phthal	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
di-n-Octylphthalate	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Benzo(b)Fluoranthene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Benzo(k)Fluoranthene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Benzo(a)Pyrene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Indeno(1,2,3-cd)Pyrene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Dibenz(a,h)Anthracene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV
Benzo(g,h,i)Perylene	3.00	U	mg/Kg	EPA 8270	09/17 10/25	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1909

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-3
Client Sample ID :LIS-LF01-2SD09 SPIKE DUPLICATE
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 16:25 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLL. BY:ALEX POLANSKY. SEE QC PACKAGE FOR SPIKE AND SPIKE DUP CONC. AND % RPD. 8270: FOR SPIKE/SURR. RECOVERIES & RSD, PLEASE SEE QC SUMMARY SHEETS. B= THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE. J= INDICATES AN ANALYTE WHOSE CONC. IS ESTIMATED BECAUSE THE ANALYTE'S CONC. IS DETECTED BELOW

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	66.0		%	SM17 2540G			09/14	
Hydrocarbons VPH	18.3		mg/Kg	EPA 5030/8015M		09/14	09/16	WLS
Volatile Organics				EPA 8260				
Benzene	0.392		mg/Kg	EPA 8260		09/14	10/02	KWM
Bromobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromochloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromodichloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromoform	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Bromomethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
n-Butylbenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
sec-Butylbenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
tert-Butylbenzne	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Carbon Tetrachloride	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chlorobenzene	0.379		mg/Kg	EPA 8260		09/14	10/02	KWM
Chloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chloroform	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Chloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
2-Chlorotoluene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
4-Chlorotoluene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dibromochloromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
12Dibromo3Chloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dibromoethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dibromomethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,3-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,4-Dichlorobenzene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
Dichlorodifluoromethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1-Dichloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichloroethane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,1-Dichloroethene	0.096		mg/Kg	EPA 8260		09/14	10/02	KWM
cis-1,2-Dichloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
transl,2-Dichloroethene	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM
1,2-Dichloropropane	0.035	U	mg/Kg	EPA 8260		09/14	10/02	KWM

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REPORT of ANALYSIS

Chemlab Ref.# :93.4728-3
Client Sample ID :LIS-LF01-2SD09 SPIKE DUPLICATE
Matrix :SOIL

1,3-Dichloropropane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
2,2-Dichloropropane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,1-Dichloropropene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Ethylbenzene	0.060		mg/Kg	EPA 8260	09/14 10/02	KWM
Hexachlorobutadiene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Isopropylbenzene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
p-Isopropyltoluene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Methylene Chloride	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Napthalene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
n-Propylbenzene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Styrene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1112-Tetrachloroethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1122-Tetrachloroethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Tetrachloroethene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Toluene	0.529		mg/Kg	EPA 8260	09/14 10/02	KWM
1,2,3-Trichlorobenzene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,2,4-Trichlorobenzene	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,1,1-Trichloroethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,1,2-Trichloroethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
Trichloroethene	0.357		mg/Kg	EPA 8260	09/14 10/02	KWM
Trichlorofluoromethane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,2,3-Trichloropropane	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
1,2,4-Trimethylbenzene	0.128		mg/Kg	EPA 8260	09/14 10/02	KWM
1,3,5-Trimethylbenzene	0.042		mg/Kg	EPA 8260	09/14 10/02	KWM
Vinyl Chloride	0.035	U	mg/Kg	EPA 8260	09/14 10/02	KWM
p+m-Xylene	0.288		mg/Kg	EPA 8260	09/14 10/02	KWM
o-Xylene	0.111		mg/Kg	EPA 8260	09/14 10/02	KWM
Semivolatile Organics				EPA 8270		
Phenol	2.20	J	mg/Kg	EPA 8270	09/17 10/25	GV
bis(2-Chloroethyl)ether	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
2-Chlorophenol	1.98	J	mg/Kg	EPA 8270	09/17 10/25	GV
1,3-Dichlorobenzene	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
1,4-Dichlorobenzene	1.85	J	mg/Kg	EPA 8270	09/17 10/25	GV
Benzyl Alcohol	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
1,2-Dichlorobenzene	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
2-Methylphenol	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
bis(2-Chloroisopropyl)e	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Methylphenol	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
n-Nitroso-di-n-Propylam	2.57	J	mg/Kg	EPA 8270	09/17 10/25	GV
Hexachloroethane	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
Nitrobenzene	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
Isophorone	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
2-Nitrophenol	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
2,4-Dimethylphenol	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
Benzoic Acid	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
bis(2-Chloroethoxy)Meth	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
2,4-Dichlorophenol	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
1,2,4-Trichlorobenzene	2.55	J	mg/Kg	EPA 8270	09/17 10/25	GV
Naphthalene	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV
4-Chloroaniline	3.03	U	mg/Kg	EPA 8270	09/17 10/25	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-3
Client Sample ID :LIS-LF01-2SD09 SPIKE DUPLICATE
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Hexachlorobutadiene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
4-Chloro-3-Methylphenol	2.47	J	mg/Kg	EPA 8270	09/17	10/25	GV
2-Methylnaphthalene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Hexachlorocyclopentadie	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
2,4,6-Trichlorophenol	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
2,4,5-Trichlorophenol	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
2-Chloronaphthalene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
2-Nitroaniline	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Dimethylphthalate	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Acenaphthylene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
2,6-Dinitrotoluene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
3-Nitroaniline	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Acenaphthene	3.09		mg/Kg	EPA 8270	09/17	10/25	GV
2,4-Dinitrophenol	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
4-Nitrophenol	1.97	J	mg/Kg	EPA 8270	09/17	10/25	GV
Dibenzofuran	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
2,4-Dinitrotoluene	2.06	J	mg/Kg	EPA 8270	09/17	10/25	GV
Diethylphthalate	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
4-Chlorophenyl-Phenylet	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Fluorene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
4-Nitroaniline	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
4,6-Dinitro-2-Methylphe	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
n-Nitrosodiphenylamine	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
4-Bromophenyl-Phenyleth	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Hexachlorobenzene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Pentachlorophenol	0.484	J	mg/Kg	EPA 8270	09/17	10/25	GV
Phenanthrene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Anthracene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
di-n-Butylphthalate	8.76	B	mg/Kg	EPA 8270	09/17	10/25	GV
Fluoranthene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Pyrene	2.82	J	mg/Kg	EPA 8270	09/17	10/25	GV
Butylbenzylphthalate	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
3,3-Dichlorobenzidine	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Benzo(a)Anthracene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Chrysene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
bis(2-Ethylhexyl)Phthal	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
di-n-Octylphthalate	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Benzo(b)Fluoranthene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Benzo(k)Fluoranthene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Benzo(a)Pyrene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Indeno(1,2,3-cd)Pyrene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Dibenz(a,h)Anthracene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV
Benzo(g,h,i)Perylene	3.03	U	mg/Kg	EPA 8270	09/17	10/25	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-4
Client Sample ID :LIS-LF01-2SD10 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 16:35 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. 8270 DETECTION LIMIT IS ELEVATED DUE TO LOW PERCENT SOLID. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	41.2		%	SM17 2540G			09/14	
Hydrocarbons VPH	2.00	U	mg/Kg	EPA 5030/8015M		09/14	09/18	WLS
Volatile Organics				EPA 8260				
Benzene	0.104		mg/Kg	EPA 8260		09/15	10/02	KWM
Bromobenzene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromochloromethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromodichloromethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromoform	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromomethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
n-Butylbenzene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
sec-Butylbenzene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
tert-Butylbenzne	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Carbon Tetrachloride	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chlorobenzene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloroethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloroform	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloromethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
2-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
4-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dibromochloromethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
12Dibromo3Chloropropane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dibromoethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dibromomethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,3-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,4-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dichlorodifluoromethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,1-Dichloroethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichloroethane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,1-Dichloroethene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
cis-1,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
transi,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,3-Dichloropropane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM
2,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260		09/15	10/02	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-4
Client Sample ID :LIS-LF01-2SD10 CAPE LISB.
Matrix :SOIL

1,1-Dichloropropene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Ethylbenzene	0.225		mg/Kg	EPA 8260	09/15	10/02	KWM
Hexachlorobutadiene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Isopropylbenzene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
p-Isopropyltoluene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Methylene Chloride	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Napthalene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
n-Propylbenzene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Styrene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1112-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1122-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Tetrachloroethene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Toluene	0.877		mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,3-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,4-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,1,1-Trichloroethane	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,1,2-Trichloroethane	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Trichloroethene	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Trichlorofluoromethane	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,3-Trichloropropane	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,4-Trimethylbenzene	0.533		mg/Kg	EPA 8260	09/15	10/02	KWM
1,3,5-Trimethylbenzene	0.189		mg/Kg	EPA 8260	09/15	10/02	KWM
Vinyl Chloride	0.100	U	mg/Kg	EPA 8260	09/15	10/02	KWM
p+m-Xylene	1.07		mg/Kg	EPA 8260	09/15	10/02	KWM
o-Xylene	0.414		mg/Kg	EPA 8260	09/15	10/02	KWM
	1484						
Semivolatile Organics				EPA 8270			
Phenol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
bis(2-Chloroethyl)ether	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
2-Chlorophenol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
1,3-Dichlorobenzene	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
1,4-Dichlorobenzene	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
Benzyl Alcohol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
1,2-Dichlorobenzene	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
2-Methylphenol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
bis(2-Chloroisopropyl)e	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
4-Methylphenol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
n-Nitroso-di-n-Propylam	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
Hexachloroethane	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
Nitrobenzene	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
Isophorone	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
2-Nitrophenol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
2,4-Dimethylphenol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
Benzoic Acid	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
bis(2-Chloroethoxy)Meth	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
2,4-Dichlorophenol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
1,2,4-Trichlorobenzene	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
Naphthalene	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
4-Chloroaniline	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
Hexachlorobutadiene	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM
4-Chloro-3-Methylphenol	9.43	U	mg/Kg	EPA 8270	09/17	10/25	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-4
Client Sample ID :LIS-LF01-2SD10 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2-Methylnaphthalene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Hexachlorocyclopentadie	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
2,4,6-Trichlorophenol	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
2,4,5-Trichlorophenol	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
2-Chloronaphthalene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
2-Nitroaniline	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Dimethylphthalate	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Acenaphthylene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
2,6-Dinitrotoluene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
3-Nitroaniline	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Acenaphthene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
2,4-Dinitrophenol	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
4-Nitrophenol	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Dibenzofuran	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
2,4-Dinitrotoluene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Diethylphthalate	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
4-Chlorophenyl-Phenylet	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Fluorene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
4-Nitroaniline	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
4,6-Dinitro-2-Methylphe	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
n-Nitrosodiphenylamine	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
4-Bromophenyl-Phenyleth	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Hexachlorobenzene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Pentachlorophenol	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Phenanthrene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Anthracene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
di-n-Butylphthalate	26~~3~~	~~B~~	mg/Kg	EPA 8270	09/17 10/25	KWM
Fluoranthene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Pyrene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Butylbenzylphthalate	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
3,3-Dichlorobenzidine	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Benzo(a)Anthracene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Chrysene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
bis(2-Ethylhexyl)Phthal	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
di-n-Octylphthalate	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Benzo(b)Fluoranthene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Benzo(k)Fluoranthene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Benzo(a)Pyrene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Indeno(1,2,3-cd)Pyrene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Dibenz(a,h)Anthracene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM
Benzo(g,h,i)Perylene	9.43	U	mg/Kg	EPA 8270	09/17 10/25	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-5
Client Sample ID :LIS-LF01-2SD11 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 17:00 hr
Received :09/10/93 @ 15:55 hr
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. 8270 DETECTION LIMIT IS ELEVATED DUE TO LOW % SOLID. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	19.0		%	SM17 2540G			09/14	
Hydrocarbons VPH	6.00	U	mg/Kg	EPA 5030/8015M		09/14	09/18	WLS
Volatile Organics				EPA 8260				
Benzene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromobenzene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromochloromethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromodichloromethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromoform	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromomethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
n-Butylbenzene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
sec-Butylbenzene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
tert-Butylbenzne	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Carbon Tetrachloride	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chlorobenzene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloroethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloroform	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloromethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
2-Chlorotoluene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
4-Chlorotoluene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dibromochloromethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
12Dibromo3Chloropropane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dibromoethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dibromomethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichlorobenzene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,3-Dichlorobenzene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,4-Dichlorobenzene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dichlorodifluoromethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,1-Dichloroethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichloroethane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,1-Dichloroethene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
cis-1,2-Dichloroethene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
transl,2-Dichloroethene	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichloropropane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,3-Dichloropropane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM
2,2-Dichloropropane	0.300	U	mg/Kg	EPA 8260		09/15	10/02	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1958

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-5
Client Sample ID :LIS-LF01-2SD11 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

1,1-Dichloropropene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Ethylbenzene	0.400		mg/Kg	EPA 8260	09/15	10/02	KWM
Hexachlorobutadiene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Isopropylbenzene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
p-Isopropyltoluene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Methylene Chloride	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Napthalene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
n-Propylbenzene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Styrene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1112-Tetrachloroethane	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1122-Tetrachloroethane	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Tetrachloroethene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Toluene	1.50		mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,3-Trichlorobenzene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,4-Trichlorobenzene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,1,1-Trichloroethane	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,1,2-Trichloroethane	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Trichloroethene	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Trichlorofluoromethane	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,3-Trichloropropane	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,4-Trimethylbenzene	0.949		mg/Kg	EPA 8260	09/15	10/02	KWM
1,3,5-Trimethylbenzene	0.321		mg/Kg	EPA 8260	09/15	10/02	KWM
Vinyl Chloride	0.300	U	mg/Kg	EPA 8260	09/15	10/02	KWM
p+m-Xylene	1.93		mg/Kg	EPA 8260	09/15	10/02	KWM
o-Xylene	0.721		mg/Kg	EPA 8260	09/15	10/02	KWM
	2.651						
Semivolatile Organics				EPA 8270			
Phenol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
bis(2-Chloroethyl)ether	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
2-Chlorophenol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
1,3-Dichlorobenzene	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
1,4-Dichlorobenzene	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
Benzyl Alcohol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
1,2-Dichlorobenzene	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
2-Methylphenol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
bis(2-Chloroisopropyl)e	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
4-Methylphenol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
n-Nitroso-di-n-Propylam	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
Hexachloroethane	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
Nitrobenzene	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
Isophorone	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
2-Nitrophenol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
2,4-Dimethylphenol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
Benzoic Acid	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
bis(2-Chloroethoxy)Meth	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
2,4-Dichlorophenol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
1,2,4-Trichlorobenzene	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
Naphthalene	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
4-Chloroaniline	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
Hexachlorobutadiene	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV
4-Chloro-3-Methylphenol	20.9	U	mg/Kg	EPA 8270	09/17	10/26	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-5
Client Sample ID :LIS-LF01-2SD11 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2-Methylnaphthalene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Hexachlorocyclopentadie	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,4,6-Trichlorophenol	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,4,5-Trichlorophenol	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
2-Chloronaphthalene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
2-Nitroaniline	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Dimethylphthalate	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Acenaphthylene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,6-Dinitrotoluene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
3-Nitroaniline	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Acenaphthene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,4-Dinitrophenol	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
4-Nitrophenol	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Dibenzofuran	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,4-Dinitrotoluene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Diethylphthalate	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
4-Chlorophenyl-Phenylet	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Fluorene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
4-Nitroaniline	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
4,6-Dinitro-2-Methylphe	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
n-Nitrosodiphenylamine	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
4-Bromophenyl-Phenyleth	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Hexachlorobenzene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Pentachlorophenol	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Phenanthrene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Anthracene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
di-n-Butylphthalate	55.8	B	mg/Kg	EPA 8270	09/17 10/26	GV
Fluoranthene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Pyrene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Butylbenzylphthalate	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
3,3-Dichlorobenzidine	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(a)Anthracene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Chrysene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
bis(2-Ethylhexyl)Phthal	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
di-n-Octylphthalate	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(b)Fluoranthene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(k)Fluoranthene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(a)Pyrene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Indeno(1,2,3-cd)Pyrene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Dibenz(a,h)Anthracene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(g,h,i)Perylene	20.9	U	mg/Kg	EPA 8270	09/17 10/26	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5533 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-6
Client Sample ID :LIS-LF01-2SD12 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 17:15 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. 8270 DETECTION LIMIT IS ELEVATED DUE TO LOW % SOLID. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	21.6		%	SM17 2540G			09/15	
Hydrocarbons VPH	5.00	U	mg/Kg	EPA 5030/8015M		09/14	09/18	WLS
Volatile Organics				EPA 8260				
Benzene	0.250		mg/Kg	EPA 8260		09/15	10/02	KWM
Bromobenzene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromochloromethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromodichloromethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromoform	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Bromomethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
n-Butylbenzene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
sec-Butylbenzene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
tert-Butylbenzne	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Carbon Tetrachloride	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chlorobenzene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloroethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloroform	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Chloromethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
2-Chlorotoluene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
4-Chlorotoluene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dibromochloromethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
12Dibromo3Chloropropane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dibromoethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dibromomethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichlorobenzene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,3-Dichlorobenzene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,4-Dichlorobenzene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
Dichlorodifluoromethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,1-Dichloroethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichloroethane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,1-Dichloroethene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
cis-1,2-Dichloroethene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
transl,2-Dichloroethene	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,2-Dichloropropane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
1,3-Dichloropropane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM
2,2-Dichloropropane	0.250	U	mg/Kg	EPA 8260		09/15	10/02	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1938

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-6
Client Sample ID :LIS-LF01-2SD12 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

1,1-Dichloropropene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Ethylbenzene	0.690		mg/Kg	EPA 8260	09/15	10/02	KWM
Hexachlorobutadiene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Isopropylbenzene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
p-Isopropyltoluene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Methylene Chloride	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Napthalene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
n-Propylbenzene	0.315		mg/Kg	EPA 8260	09/15	10/02	KWM
Styrene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1112-Tetrachloroethane	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1122-Tetrachloroethane	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Tetrachloroethene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Toluene	2.52		mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,3-Trichlorobenzene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,4-Trichlorobenzene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,1,1-Trichloroethane	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,1,2-Trichloroethane	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Trichloroethene	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
Trichlorofluoromethane	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,3-Trichloropropane	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
1,2,4-Trimethylbenzene	1.73		mg/Kg	EPA 8260	09/15	10/02	KWM
1,3,5-Trimethylbenzene	0.600		mg/Kg	EPA 8260	09/15	10/02	KWM
Vinyl Chloride	0.250	U	mg/Kg	EPA 8260	09/15	10/02	KWM
p+m-Xylene	3.30		mg/Kg	EPA 8260	09/15	10/02	KWM
o-Xylene	1.29		mg/Kg	EPA 8260	09/15	10/02	KWM
	4.59						
Semivolatile Organics				EPA 8270			
Phenol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
bis(2-Chloroethyl)ether	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
2-Chlorophenol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
1,3-Dichlorobenzene	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
1,4-Dichlorobenzene	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
Benzyl Alcohol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
1,2-Dichlorobenzene	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
2-Methylphenol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
bis(2-Chloroisopropyl)e	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
4-Methylphenol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
n-Nitroso-di-n-Propylam	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
Hexachloroethane	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
Nitrobenzene	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
Isophorone	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
2-Nitrophenol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
2,4-Dimethylphenol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
Benzoic Acid	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
bis(2-Chloroethoxy)Meth	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
2,4-Dichlorophenol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
1,2,4-Trichlorobenzene	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
Naphthalene	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
4-Chloroaniline	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
Hexachlorobutadiene	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV
4-Chloro-3-Methylphenol	18.5	U	mg/Kg	EPA 8270	09/17	10/26	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-6
Client Sample ID :LIS-LF01-2SD12 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2-Methylnaphthalene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Hexachlorocyclopentadie	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,4,6-Trichlorophenol	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,4,5-Trichlorophenol	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
2-Chloronaphthalene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
2-Nitroaniline	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Dimethylphthalate	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Acenaphthylene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,6-Dinitrotoluene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
3-Nitroaniline	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Acenaphthene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,4-Dinitrophenol	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
4-Nitrophenol	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Dibenzofuran	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
2,4-Dinitrotoluene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Diethylphthalate	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
4-Chlorophenyl-Phenylet	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Fluorene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
4-Nitroaniline	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
4,6-Dinitro-2-Methylphe	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
n-Nitrosodiphenylamine	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
4-Bromophenyl-Phenyleth	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Hexachlorobenzene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Pentachlorophenol	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Phenanthrene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Anthracene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
di-n-Butylphthalate	27.6	B	mg/Kg	EPA 8270	09/17 10/26	GV
Fluoranthene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Pyrene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Butylbenzylphthalate	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
3,3-Dichlorobenzidine	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(a)Anthracene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Chrysene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
bis(2-Ethylhexyl)Phthal	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
di-n-Octylphthalate	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(b)Fluoranthene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(k)Fluoranthene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(a)Pyrene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Indeno(1,2,3-cd)Pyrene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Dibenz(a,h)Anthracene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV
Benzo(g,h,i)Perylene	18.5	U	mg/Kg	EPA 8270	09/17 10/26	GV

* See Special Instructions Above
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U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	93.4728-7
Client Sample ID	LIS-LF01-2SD13 CAPE LISB.
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	70816	
Ordered By	RAY MORRIS	Printed Date	03/21/94	@ 15:32 hrs.
Project Name	DEW LINE RI/FS CAPE LISB.	Collected Date	09/09/93	@ 17:25 hrs.
Project#	41096-412-01	Received Date	09/10/93	@ 15:55 hrs.
PWSID	UA			

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. 8270: SAMPLE LOST DURING EXTRACTION. J = INDICATES AS ANALYTE WHOSE CONCENTRATION IS ESTIMATED BECAUSE THE ANALYTE'S CONCENTRATION IS DETECTED BELOW THE CALIBRATION RANGE. CORRECTED UNITS.

Qualifier/Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	35.16		%	SM17 2540G			09/15/93	
Hydrocarbons VPH	2.80	U	mg/Kg	EPA 5030/8015M		09/14/93	09/18/93	WLS
Volatile Organics				EPA 8260				
Benzene	0.144	J	mg/Kg	EPA 8260 (J)-A.1		09/15/93	10/02/93	KWM
Bromobenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Bromochloromethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Bromodichloromethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Bromoform	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Bromomethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
n-Butylbenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
sec-Butylbenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
tert-Butylbenzne	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Carbon Tetrachloride	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Chlorobenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Chloroethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Chloroform	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Chloromethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
2-Chlorotoluene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
4-Chlorotoluene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Dibromochloromethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
12Dibromo3Chloropropane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,2-Dibromoethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Dibromomethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,2-Dichlorobenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,3-Dichlorobenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,4-Dichlorobenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
Dichlorodifluoromethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,1-Dichloroethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,2-Dichloroethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,1-Dichloroethene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
cis-1,2-Dichloroethene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
trans1,2-Dichloroethene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,2-Dichloropropane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
1,3-Dichloropropane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93	KWM
2,2-Dichloropropane	0.150	U	mg/Kg	EPA 8260	3-30-94	09/15/93	10/02/93	KWM

Commercial Testing & Engineering Co.
Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 93.4728-7
Client Sample ID LIS-LF01-2SD13 CAPE LISB.
Matrix SOIL

					Qualifier/Comment		
1,1-Dichloropropene	0.150	U	mg/Kg	EPA 8260	(J)-A.1	09/15/93	10/02/93 KWM
Ethylbenzene	0.285		mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
Hexachlorobutadiene	0.150	U	mg/Kg	EPA 8260	J.1	09/15/93	10/02/93 KWM
Isopropylbenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
p-Isopropyltoluene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
Methylene Chloride	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
Napthalene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
n-Propylbenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
Styrene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
1112-Tetrachloroethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
1122-Tetrachloroethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
Tetrachloroethene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
Toluene	1.13		mg/Kg	EPA 8260	J.1	09/15/93	10/02/93 KWM
1,2,3-Trichlorobenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
1,2,4-Trichlorobenzene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
1,1,1-Trichloroethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
1,1,2-Trichloroethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
Trichloroethene	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
Trichlorofluoromethane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
1,2,3-Trichloropropane	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
1,2,4-Trimethylbenzene	0.646		mg/Kg	EPA 8260	J.1	09/15/93	10/02/93 KWM
1,3,5-Trimethylbenzene	0.229		mg/Kg	EPA 8260	J.1	09/15/93	10/02/93 KWM
Vinyl Chloride	0.150	U	mg/Kg	EPA 8260		09/15/93	10/02/93 KWM
p+m-Xylene	1.36		mg/Kg	EPA 8260	J.1	09/15/93	10/02/93 KWM
o-Xylene	0.516		mg/Kg	EPA 8260	J.1	09/15/93	10/02/93 KWM

3.30-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

Commercial Testing & Engineering Co.

Environmental Laboratory Services

SINCE 1908

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-6
Client Sample ID	LIS-LF01-3SD23
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@21:40 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.235		mg/Kg	EPA 8080		09/21/94	09/26/94	DSM
------Aroclor 1254								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712/0-05/94

5633 B Street, **Anchorage, AK 99518-1600** — Tel: (907) 562-2343 Fax: (907) 561-5301

CT&E Environmental Services Inc.

CT&E Ref.# 95.2592-S
Matrix SOIL
Client Sample ID LIS-LF01-SSD02

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 06/27/95 @ 16:41 hrs.
Collected Date 06/23/95 @ 10:00 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	86.6		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.03	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
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UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2592-10
Matrix SOIL
Client Sample ID LIS-LF01-58D03-1

Client Name TOF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 06/27/95 @ 16:41 hrs.
Collected Date 06/23/95 @ 10:13 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	81.6		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.05	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
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LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2592-11
Project# 41096-614-02
PWSID UA

Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	81.2		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.03	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
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D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

Laboratory Division

French

Laboratory Analysis Report

RECEIVED JUL 17 1995

CT&E Ref.# 95.2592-12
Matrix SOIL
Client Sample ID LIS-LF01-5SD05

Client Name	ICF KAISER ENGINEERING	RUSH Order	15769
Ordered By	JEFF DAWSON	Printed Date	07/07/95 @ 15:42 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	06/23/95 @ 10:22 hrs.
Project#	41096-614-02	Received Date	06/26/95 @ 09:00 hrs.
PWSID	UA		

Technical Director STEPHEN C. EDE

Released By S Thomas Paxton

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962. CORRECTED EXTRACTION DATE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	87.6		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.04	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---	U	mg/Kg					ECG

* See Special Instructions Above
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D = Secondary dilution.

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LT = Less Than
GT = Greater Than

200 W. Potter Drive, **Anchorage, AK 99518-1605** — Tel: (907) 562-2343 Fax: (907) 561-5301

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

CT&E Ref.# 95.2592-13
Matrix SOIL
Client Sample ID LIS-LF01-5SD06

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 07/07/95 @ 15:45 hrs.
Collected Date 06/23/95 @ 10:32 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962. CORRECTED EXTRACTION DATE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	78.2		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.04	U	mg/Kg	EPA 8080		06/26/95	06/28/95	ECG
------Aroclor	---							

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** See Sample Remarks Above
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D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

CT&E Ref.# 95.2592-14
Matrix SOIL
Client Sample ID LIS-LF01-5SD07

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 07/07/95 @ 15:45 hrs.
Collected Date 06/23/95 @ 09:52 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962. CORRECTED EXTRACTION DATE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	86.5		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.02	U	mg/Kg	EPA 8080		06/26/95	06/28/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

CT&E Ref.# 95.2592-15
Matrix SOIL
Client Sample ID LIS-LF01-5SD08

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 07/07/95 @ 15:45 hrs.
Collected Date 06/23/95 @ 10:50 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Poston

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962. CORRECTED EXTRACTION DATE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	76.2		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.309		mg/Kg	EPA 8080		06/26/95	06/28/95	ECG
------Aroclor	1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

200 W. Potter Drive, **Anchorage, AK 99518-1605** — Tel: (907) 562-2343 Fax: (907) 561-5301

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

CT&E Ref.# 95.2592-16
Matrix SOIL
Client Sample ID LIS-LF01-5SD09

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 07/07/95 @ 15:46 hrs.
Collected Date 06/23/95 @ 10:55 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By Stephen Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962. CORRECTED EXTRACTION DATE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	33.4		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	7.42	D	mg/Kg	EPA 8080		06/26/95	06/29/95	ECG
------Aroclor	1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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CT&E Environmental Services Inc.

CT&E Ref.# 95.2714-4
Matrix SOIL
Client Sample ID LIS-LF01-5SD11

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE (DEW LINE) IRA
Project# 4196-614-02
PWSID UA

WORK Order 15995
Printed Date 07/14/95 @ 14:07 hrs.
Collected Date 06/27/95 @ 15:15 hrs.
Received Date 06/30/95 @ 10:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.02	U	mg/Kg	EPA 8080		07/03/95	07/07/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2714-5
Matrix SOIL
Client Sample ID LIS-LF01-5SD12

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE (DEW LINE) IRA
Project# 4196-614-02
PWSID UA

WORK Order 15995
Printed Date 07/14/95 @ 14:07 hrs.
Collected Date 06/27/95 @ 15:42 hrs.
Received Date 06/30/95 @ 10:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Paxton

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.09	U	mg/Kg	EPA 8080		07/03/95	07/07/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2714-6
Matrix SOIL
Client Sample ID LIS-LF01-5SD13

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE (DEW LINE) IRA
Project# 4196-614-02
PWSID UA

WORK Order 15995
Printed Date 07/14/95 @ 14:07 hrs.
Collected Date 06/27/95 @ 16:23 hrs.
Received Date 06/30/95 @ 10:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.20	U	mg/Kg	EPA 8080		07/03/95	07/07/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2714-9
Matrix SOIL
Client Sample ID SPIKE-LIS-LF01-5SD13

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE (DEW LINE) IRA
Project# 4196-614-02
PWSID UA

WORK Order 15995
Printed Date 07/14/95 @ 15:22 hrs.
Collected Date 06/27/95 @ 16:23 hrs.
Received Date 06/30/95 @ 10:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962. **SPIKED WITH 1242 AT 10.0 MG/ML.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	**0.269		mg/Kg	EPA 8080		07/03/95	07/07/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2714-10
Matrix SOIL
Client Sample ID SPIKE DUP-LIS-LF01-5SD13

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE (DEW LINE) IRA
Project# 4196-614-02
PWSID UA

WORK Order 15995
Printed Date 07/14/95 @ 14:07 hrs.
Collected Date 06/27/95 @ 16:23 hrs.
Received Date 06/30/95 @ 10:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962. **1.0 ML OF 1242 (10.0 MG/ML) ADDED.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	**0.354		mg/Kg	EPA 8080		07/03/95	07/07/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1968

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-4
Client Sample ID :LIS-LF01-SW02 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 10:10 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-4
Client Sample ID :LIS-LF01-SW02 CAPE LIS
Matrix :WATER

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ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Methylene Chloride	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
Napthalene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
n-Propylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
Styrene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
Tetrachloroethene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
Toluene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
Trichloroethene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
Vinyl Chloride	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
p+m-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
o-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGI
Residue, Non-Filterable	2.5		mg/L	EPA 160.2		09/07 09/07	GPP
Residue,Filterable(TDS)	236		mg/L	EPA 160.1	500	09/20 09/21	RJK

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5633 B STREET
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TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4513-2
Client Sample ID :LIS-LF01-SW02 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70393
Report Completed :09/24/93
Collected :08/31/93 @ 10:10 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethyl)ether	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,3-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,4-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzyl Alcohol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroisopropyl)e	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
n-Nitroso-di-n-Propylam	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachloroethane	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Nitrobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Isophorone	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dimethylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzoic Acid	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethoxy)Meth	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2,4-Trichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Naphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorobutadiene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloro-3-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylnaphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorocyclopentadie	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,6-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,5-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chloronaphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Dimethylphthalate	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthylene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,6-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
3-Nitroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dinitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Nitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT

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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4513-2
Client Sample ID :LIS-LF01-SW02 CAPE LIS
Matrix :WATER

Dibenzofuran	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
2,4-Dinitrotoluene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Diethylphthalate	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
4-Chlorophenyl-Phenylet	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Fluorene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
4-Nitroaniline	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
4,6-Dinitro-2-Methylphe	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
n-Nitrosodiphenylamine	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
4-Bromophenyl-Phenyleth	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Hexachlorobenzene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Pentachlorophenol	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Phenanthrene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Anthracene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
di-n-Butylphthalate	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Fluoranthene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Pyrene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Butylbenzylphthalate	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
3,3-Dichlorobenzidine	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(a)Anthracene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Chrysene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
bis(2-Ethylhexyl)Phthal	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
di-n-Octylphthalate	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(b)Fluoranthene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(k)Fluoranthene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(a)Pyrene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Indeno(1,2,3-cd)Pyrene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Dibenz(a,h)Anthracene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(g,h,i)Perylene	0.011	U	mg/L	EPA 8270	09/07 09/23	MT

* See Special Instructions Above
** See Sample Remarks Above
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TEL: (907) 562-2343
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REPORT of ANALYSIS

Chemlab Ref.# :93.4511-2
Client Sample ID :LIS-LF01-SW02 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70389
Report Completed :09/22/93
Collected :08/31/93 @ 10:10 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: J.P. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.077		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	020		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Iron	0.47		mg/L	EPA 6010		09/11	09/14	DFL
Lead	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Magnesium	8.7		mg/L	EPA 6010		09/11	09/14	DFL
Manganese	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010		09/11	09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Silver	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Sodium	38		mg/L	EPA 6010		09/11	09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841		09/10	09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.071		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	19		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL

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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4511-2
Client Sample ID :LIS-LF01-SW02 CAPE LIS
Matrix :WATER

Iron	0.16		mg/L	EPA 6010	09/11 09/14	DFL
Lead	0.10	U	mg/L	EPA 6010	09/11 09/14	DFL
Magnesium	8.4		mg/L	EPA 6010	09/11 09/14	DFL
Manganese	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010	09/11 09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010	09/11 09/14	DFL
Silver	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Sodium	38		mg/L	EPA 6010	09/11 09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841	09/10 09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-1
Client Sample ID :LIS-LF01-SW02 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 10:10 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Nonpurgable				EPA 9060	n/a			
...TOC Range	9.77-10.5		mg/L	EPA 9060			09/14	CMR
...TOC Concentration	10.2		mg/L	EPA 9060			09/14	CMR

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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GT = Greater Than

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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-5
Client Sample ID :LIS-LF01-SW04 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 13:25 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

COMMERCIAL TESTING & ENGINEERING CO.
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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-5
Client Sample ID :LIS-LF01-SW04 CAPE LIS
Matrix :WATER

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Methylene Chloride	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Napthalene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Styrene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Toluene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Trichloroethene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
p+m-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
o-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Residue, Non-Filterable	56		mg/L	EPA 160.2		09/07 09/07	GPP
Residue,Filterable(TDS)	328		mg/L	EPA 160.1	500	09/20 09/21	RJK

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COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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5633 B STREET
ANCHORAGE, AK 99518
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REPORT of ANALYSIS

Chemlab Ref.# :93.4513-3
Client Sample ID :LIS-LF01-SW04 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70393
Report Completed :09/24/93
Collected :08/31/93 @ 13:25 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethyl)ether	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
1,3-Dichlorobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
1,4-Dichlorobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzyl Alcohol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2-Dichlorobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroisopropyl)e	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Methylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
n-Nitroso-di-n-Propylam	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachloroethane	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Nitrobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Isophorone	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitrophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dimethylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzoic Acid	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethoxy)Meth	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2,4-Trichlorobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Naphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorobutadiene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloro-3-Methylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylnaphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorocyclopentadie	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,6-Trichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,5-Trichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chloronaphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Dimethylphthalate	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthylene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,6-Dinitrotoluene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
3-Nitroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dinitrophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Nitrophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT

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ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
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REPORT of ANALYSIS

Chemlab Ref.# :93.4513-3
Client Sample ID :LIS-LF01-SW04 CAPE LIS
Matrix :WATER

Dibenzofuran	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
2,4-Dinitrotoluene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Diethylphthalate	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
4-Chlorophenyl-Phenylet	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Fluorene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
4-Nitroaniline	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
4,6-Dinitro-2-Methylphe	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
n-Nitrosodiphenylamine	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
4-Bromophenyl-Phenyleth	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Hexachlorobenzene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Pentachlorophenol	0.031	U	mg/L	EPA 8270	J /D.1	09/07 09/23	MTT
Phenanthrene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Anthracene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
di-n-Butylphthalate	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Fluoranthene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Pyrene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Butylbenzylphthalate	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
3,3-Dichlorobenzidine	0.031	U	mg/L	EPA 8270	J /D.1	09/07 09/23	MTT
Benzo(a)Anthracene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Chrysene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
bis(2-Ethylhexyl)Phthal	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
di-n-Octylphthalate	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Benzo(b)Fluoranthene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Benzo(k)Fluoranthene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Benzo(a)Pyrene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Indeno(1,2,3-cd)Pyrene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Dibenz(a,h)Anthracene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT
Benzo(g,h,i)Perylene	0.031	U	mg/L	EPA 8270		09/07 09/23	MTT

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REPORT of ANALYSIS

Chemlab Ref.# :93.4511-3
Client Sample ID :LIS-LF01-SW04
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70389
Report Completed :09/22/93
Collected :08/31/93 @ 13:25 hr:
Received :09/01/93 @ 12:00 hr:
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: J.P. AND JEFF J. DAWSON.

Qualifier Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.16		mg/L	EPA 6010		09/11	09/14	DFT
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFT
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFT
Barium	0.21		mg/L	EPA 6010		09/11	09/14	DFT
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Calcium	58		mg/L	EPA 6010		09/11	09/14	DFT
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFT
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Iron	1.6		mg/L	EPA 6010		09/11	09/14	DFT
Lead	0.10	U	mg/L	EPA 6010		09/11	09/14	DFT
Magnesium	14		mg/L	EPA 6010		09/11	09/14	DFT
Manganese	0.73		mg/L	EPA 6010		09/11	09/14	DFT
Molybdenum	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Nickel	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Potassium	5.0	U	mg/L	EPA 6010		09/11	09/14	DFT
Selenium	0.10	U	mg/L	EPA 6010		09/11	09/14	DFT
Silver	0.050	U	mg/L	EPA 6010 (J) J.1		09/11	09/14	DFT
Sodium	23		mg/L	EPA 6010		09/11	09/14	DFT
Thallium	0.0050	U	mg/L	EPA 7841		09/10	09/13	KAH
Vanadium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Zinc	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/11	09/14	DFT
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFT
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFT
Barium	0.18		mg/L	EPA 6010		09/11	09/14	DFT
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Calcium	58		mg/L	EPA 6010		09/11	09/14	DFT
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Cobalt	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFT

CP 3-21-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4511-3
Client Sample ID :LIS-LF01-SW04
Matrix :WATER

Qualifiers/Comments

Iron	0.33		mg/L	EPA 6010	09/11	09/14	DFT
Lead	0.10	U	mg/L	EPA 6010	09/11	09/14	DFT
Magnesium	14		mg/L	EPA 6010	09/11	09/14	DFT
Manganese	0.46		mg/L	EPA 6010	09/11	09/14	DFT
Molybdenum	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT
Nickel	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT
Potassium	5.0	U	mg/L	EPA 6010	09/11	09/14	DFT
Selenium	0.10	U	mg/L	EPA 6010	09/11	09/14	DFT
Silver	0.050	U	mg/L	EPA 6010(J)-5.1	09/11	09/14	DFT
Sodium	23		mg/L	EPA 6010	09/11	09/14	DFT
Thallium	0.0050	U	mg/L	EPA 7841	09/10	09/13	KAH
Vanadium	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT
Zinc	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT

CQP
3-21-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-8
Client Sample ID :LIS-LF01-SW04 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 13:25 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN, C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Nonpurgable				EPA 9060	n/a			
...TOC Range	23.6-25.4		mg/L	EPA 9060			09/14	CMR
...TOC Concentration	24.5		mg/L	EPA 9060			09/14	CMR

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REPORT of ANALYSIS

Chemlab Ref.# :93.4511-4
Client Sample ID :LIS-LF01-SW04 DUPLICATE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70389
Report Completed :09/22/93
Collected :08/31/93 @ 13:25 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: J.P. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.16		mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.21		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	59		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Iron	1.6		mg/L	EPA 6010		09/11	09/14	DFL
Lead	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Magnesium	14		mg/L	EPA 6010		09/11	09/14	DFL
Manganese	0.73		mg/L	EPA 6010		09/11	09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010		09/11	09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Silver	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Sodium	22		mg/L	EPA 6010		09/11	09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841		09/10	09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.18		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	59		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL

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REPORT of ANALYSIS

Chemlab Ref.# :93.4511-4
Client Sample ID :LIS-LF01-SW04 DUPLICATE
Matrix :WATER

Iron	0.33		mg/L	EPA 6010	09/11 09/14	DFL
Lead	0.10	U	mg/L	EPA 6010	09/11 09/14	DFL
Magnesium	14		mg/L	EPA 6010	09/11 09/14	DFL
Manganese	0.47		mg/L	EPA 6010	09/11 09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010	09/11 09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010	09/11 09/14	DFL
Silver	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Sodium	22		mg/L	EPA 6010	09/11 09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841	09/10 09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-9
Client Sample ID :LIS-LF01-SW04 CAPE LIS DUPLICATE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 13:25 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Nonpurgable				EPA 9060	n/a			
...TOC Range	23.8-25.4		mg/L	EPA 9060			09/14	CMR
...TOC Concentration	24.4		mg/L	EPA 9060			09/14	CMR

* See Special Instructions Above
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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-6
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 13:25 hrs
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. FOR SPIKING CONCENTRATION AND PERCENT RECOVERIES SEE QA/QC PACKAGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.022		mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.021		mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethene	0.021		mg/L	EPA 8260		09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
transi,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-6
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE
Matrix :WATER

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FAX: (907) 561-5301

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Napthalene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Styrene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Toluene	0.022		mg/L	EPA 8260	09/04	09/04	SGM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Trichloroethene	0.019		mg/L	EPA 8260	09/04	09/04	SGM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM

* See Special Instructions Above
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COMMERCIAL TESTING & ENGINEERING CO.
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ANCHORAGE, AK 99518
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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4513-4
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70393
Report Completed :09/24/93
Collected :08/31/93 @ 13:25 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. 8270: SAMPLE WAS SPIKED WITH 100 PPM SPIKE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.157		mg/L	EPA 8270		09/07	09/23	MTI
bis(2-Chloroethyl)ether	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2-Chlorophenol	0.173		mg/L	EPA 8270		09/07	09/23	MTI
1,3-Dichlorobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
1,4-Dichlorobenzene	0.132		mg/L	EPA 8270		09/07	09/23	MTI
Benzyl Alcohol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
1,2-Dichlorobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2-Methylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
bis(2-Chloroisopropyl)e	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
4-Methylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
n-Nitroso-di-n-Propylam	0.231		mg/L	EPA 8270		09/07	09/23	MTI
Hexachloroethane	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
Nitrobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
Isophorone	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2-Nitrophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2,4-Dimethylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
Benzoic Acid	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
bis(2-Chloroethoxy)Meth	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2,4-Dichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
1,2,4-Trichlorobenzene	0.156		mg/L	EPA 8270		09/07	09/23	MTI
Naphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
4-Chloroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
Hexachlorobutadiene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
4-Chloro-3-Methylphenol	0.206		mg/L	EPA 8270		09/07	09/23	MTI
2-Methylnaphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
Hexachlorocyclopentadie	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2,4,6-Trichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2,4,5-Trichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2-Chloronaphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2-Nitroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
Dimethylphthalate	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
Acenaphthylene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
2,6-Dinitrotoluene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
3-Nitroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI
Acenaphthene	0.179		mg/L	EPA 8270		09/07	09/23	MTI
2,4-Dinitrophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTI

COMMERCIAL TESTING & ENGINEERING CO.
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REPORT of ANALYSIS

Chemlab Ref.# :93.4513-4
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

4-Nitrophenol	0.085		mg/L	EPA 8270	09/07 09/23	MT
Dibenzofuran	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
2,4-Dinitrotoluene	0.191		mg/L	EPA 8270	09/07 09/23	MT
Diethylphthalate	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
4-Chlorophenyl-Phenylet	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Fluorene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
4-Nitroaniline	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
4,6-Dinitro-2-Methylphe	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
n-Nitrosodiphenylamine	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
4-Bromophenyl-Phenyleth	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Hexachlorobenzene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Pentachlorophenol	0.056		mg/L	EPA 8270	09/07 09/23	MTT
Phenanthrene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Anthracene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
di-n-Butylphthalate	0.082		mg/L	EPA 8270	09/07 09/23	MTT
Fluoranthene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Pyrene	0.202		mg/L	EPA 8270	09/07 09/23	MTT
Butylbenzylphthalate	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
3,3-Dichlorobenzidine	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Benzo(a)Anthracene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Chrysene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
bis(2-Ethylhexyl)Phthal	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
di-n-Octylphthalate	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Benzo(b)Fluoranthene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Benzo(k)Fluoranthene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Benzo(a)Pyrene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Indeno(1,2,3-cd)Pyrene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Dibenz(a,h)Anthracene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT
Benzo(g,h,i)Perylene	0.031	U	mg/L	EPA 8270	09/07 09/23	MTT

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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NA = Not Analyzed
LT = Less Than
GT = Greater Than

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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4511-5
Client Sample ID :LIS-LF01-SW04 SPIKE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70389
Report Completed :09/22/93
Collected :08/31/93 @ 13:25 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: J.P. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	1.11		mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.87		mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.96		mg/L	EPA 6010		09/11	09/14	DFL
Barium	1.20		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.38		mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.47		mg/L	EPA 6010		09/11	09/14	DFL
Calcium	68		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.96		mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.95		mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.96		mg/L	EPA 6010		09/11	09/14	DFL
Iron	2.5		mg/L	EPA 6010		09/11	09/14	DFL
Lead	0.94		mg/L	EPA 6010		09/11	09/14	DFL
Magnesium	23		mg/L	EPA 6010		09/11	09/14	DFL
Manganese	1.68		mg/L	EPA 6010		09/11	09/14	DFL
Molybdenum	0.99		mg/L	EPA 6010		09/11	09/14	DFL
Nickel	0.96		mg/L	EPA 6010		09/11	09/14	DFL
Potassium	9.6		mg/L	EPA 6010		09/11	09/14	DFL
Selenium	0.90		mg/L	EPA 6010		09/11	09/14	DFL
Silver	0.13		mg/L	EPA 6010		09/11	09/14	DFL
Sodium	31		mg/L	EPA 6010		09/11	09/14	DFL
Thallium	0.020		mg/L	EPA 7841		09/10	09/13	KAW
Vanadium	0.91		mg/L	EPA 6010		09/11	09/14	DFL
Zinc	0.94		mg/L	EPA 6010		09/11	09/14	DFL
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.96		mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.87		mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.95		mg/L	EPA 6010		09/11	09/14	DFL
Barium	1.17		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.38		mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.48		mg/L	EPA 6010		09/11	09/14	DFL
Calcium	67		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.97		mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.96		mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.95		mg/L	EPA 6010		09/11	09/14	DFL

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REPORT of ANALYSIS

Chemlab Ref.# :93.4511-5
Client Sample ID :LIS-LF01-SW04 SPIKE
Matrix :WATER

Iron	1.31	mg/L	EPA 6010	09/11 09/14	DFL
Lead	0.93	mg/L	EPA 6010	09/11 09/14	DFL
Magnesium	23	mg/L	EPA 6010	09/11 09/14	DFL
Manganese	1.43	mg/L	EPA 6010	09/11 09/14	DFL
Molybdenum	0.99	mg/L	EPA 6010	09/11 09/14	DFL
Nickel	0.97	mg/L	EPA 6010	09/11 09/14	DFL
Potassium	9.0	mg/L	EPA 6010	09/11 09/14	DFL
Selenium	0.87	mg/L	EPA 6010	09/11 09/14	DFL
Silver	0.13	mg/L	EPA 6010	09/11 09/14	DFL
Sodium	30	mg/L	EPA 6010	09/11 09/14	DFL
Thallium	0.020	mg/L	EPA 7841	09/10 09/13	KAW
Vanadium	0.91	mg/L	EPA 6010	09/11 09/14	DFL
Zinc	1.33	mg/L	EPA 6010	09/11 09/14	DFL

* See Special Instructions Above
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-10
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 13:25 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Nonpurgable				EPA 9060	n/a			
...TOC Range	61.7-64.2		mg/L	EPA 9060			09/14	CMR
...TOC Concentration	63.4		mg/L	EPA 9060			09/14	CMR

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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-7
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE DUPLICATE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 13:25 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. FOR SPIKING CONCENTRATION AND PERCENT RECOVERIES SEE QA/QC PACKAGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.021		mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.021		mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethene	0.021		mg/L	EPA 8260		09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
transi,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-7
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE DUPLICATE
Matrix :WATER

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p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Napthalene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Styrene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Toluene	0.022		mg/L	EPA 8260	09/04	09/04	SGM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Trichloroethene	0.019		mg/L	EPA 8260	09/04	09/04	SGM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM

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REPORT of ANALYSIS

Chemlab Ref.# :93.4513-5
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE DUPLICATE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70393
Report Completed :09/24/93
Collected :08/31/93 @ 13:25 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. 8270: SAMPLE WAS SPIKED WITH 100 PPM SPIKE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.131		mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethyl)ether	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chlorophenol	0.123		mg/L	EPA 8270		09/07	09/23	MTT
1,3-Dichlorobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
1,4-Dichlorobenzene	0.148		mg/L	EPA 8270		09/07	09/23	MTT
Benzyl Alcohol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2-Dichlorobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroisopropyl)e	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Methylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
n-Nitroso-di-n-Propylam	0.235		mg/L	EPA 8270		09/07	09/23	MTT
Hexachloroethane	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Nitrobenzene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Isophorone	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitrophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dimethylphenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzoic Acid	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethoxy)Meth	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2,4-Trichlorobenzene	0.174		mg/L	EPA 8270		09/07	09/23	MTT
Naphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorobutadiene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloro-3-Methylphenol	0.200		mg/L	EPA 8270		09/07	09/23	MTT
2-Methylnaphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorocyclopentadie	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,6-Trichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,5-Trichlorophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chloronaphthalene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Dimethylphthalate	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthylene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
2,6-Dinitrotoluene	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
3-Nitroaniline	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthene	0.188		mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dinitrophenol	0.031	U	mg/L	EPA 8270		09/07	09/23	MTT

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REPORT of ANALYSIS DCE

Chemlab Ref.# :93.4513-5
Client Sample ID :LIS-LF01-SW04 CAPE LIS SPIKE DUPLICATE
Matrix :WATER

4-Nitrophenol	0.019		mg/L	EPA 8270	09/07 09/23	MT
Dibenzofuran	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
2,4-Dinitrotoluene	0.188		mg/L	EPA 8270	09/07 09/23	MT
Diethylphthalate	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
4-Chlorophenyl-Phenylet	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Fluorene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
4-Nitroaniline	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
4,6-Dinitro-2-Methylphe	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
n-Nitrosodiphenylamine	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
4-Bromophenyl-Phenyleth	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Hexachlorobenzene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Pentachlorophenol	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Phenanthrene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Anthracene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
di-n-Butylphthalate	0.045		mg/L	EPA 8270	09/07 09/23	MT
Fluoranthene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Pyrene	0.197		mg/L	EPA 8270	09/07 09/23	MT
Butylbenzylphthalate	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
3,3-Dichlorobenzidine	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(a)Anthracene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Chrysene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
bis(2-Ethylhexyl)Phthal	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
di-n-Octylphthalate	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(b)Fluoranthene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(k)Fluoranthene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(a)Pyrene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Indeno(1,2,3-cd)Pyrene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Dibenz(a,h)Anthracene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT
Benzo(g,h,i)Perylene	0.031	U	mg/L	EPA 8270	09/07 09/23	MT

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-14
Client Sample ID :LIS-LF01-SW05 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 14:35 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2-Chlorophenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Benzyl Alcohol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2-Methylphenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
4-Methylphenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Hexachloroethane	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Nitrobenzene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Isophorone	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2-Nitrophenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Benzoic Acid	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Naphthalene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
4-Chloroaniline	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2-Nitroaniline	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Dimethylphthalate	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Acenaphthylene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
3-Nitroaniline	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
Acenaphthene	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT
4-Nitrophenol	0.010	U	mg/L	EPA 8270		09/07	09/25	MTT

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-14
Client Sample ID :LIS-LF01-SW05 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Dibenzofuran	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Diethylphthalate	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Fluorene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
4-Nitroaniline	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Hexachlorobenzene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Pentachlorophenol	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Phenanthrene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Anthracene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Fluoranthene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Pyrene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Chrysene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270		09/07 09/25	MTT
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	50.2-56.9		mg/L	EPA 9060		09/14	CMR
...TOC Concentration	52.9		mg/L	EPA 9060		09/14	CMR

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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SINCE 1908

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REPORT of ANALYSIS

Chemlab Ref.# :93.4511-6
Client Sample ID :LIS-LF01-SW05
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70389
Report Completed :09/22/93
Collected :08/31/93 @ 14:35 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: J.P. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.86		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	150		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Iron	4.9		mg/L	EPA 6010		09/11	09/14	DFL
Lead	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Magnesium	30		mg/L	EPA 6010		09/11	09/14	DFL
Manganese	1.8		mg/L	EPA 6010		09/11	09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010		09/11	09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Silver	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Sodium	25		mg/L	EPA 6010		09/11	09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841		09/10	09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.72		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050		mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050		mg/L	EPA 6010		09/11	09/14	DFL
Calcium	140		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL

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REPORT of ANALYSIS

Chemlab Ref.# :93.4511-6
Client Sample ID :LIS-LF01-SW05
Matrix :WATER

Iron	0.84		mg/L	EPA 6010	09/11	09/14	DFL
Lead	0.10	U	mg/L	EPA 6010	09/11	09/14	DFL
Magnesium	28		mg/L	EPA 6010	09/11	09/14	DFL
Manganese	1.1		mg/L	EPA 6010	09/11	09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010	09/11	09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010	09/11	09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010	09/11	09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010	09/11	09/14	DFL
Silver	0.050	U	mg/L	EPA 6010	09/11	09/14	DFL
Sodium	23		mg/L	EPA 6010	09/11	09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841	09/10	09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010	09/11	09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010	09/11	09/14	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
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COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
ANCHORAGE, AK 99518
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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-8
Client Sample ID :LIS-LF01-SW05 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 14:35 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN, C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Residue, Non-Filterable	13		mg/L	EPA 160.2		09/07	09/07	GPP
Residue,Filterable(TDS)	688		mg/L	EPA 160.1	500	09/20	09/21	RJK

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COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-9
Client Sample ID :LIS-LF01-SW06 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 15:10 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. HOLDING EXCEEDED ON 8270, NOT ANALYZED BY PER CLIENT.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0048		mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroform	0.0048		mg/L	EPA 8260		09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0012		mg/L	EPA 8260		09/04	09/04	SGM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-9
Client Sample ID :LIS-LF01-SW06 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Methylene Chloride	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Napthalene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Styrene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Toluene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Trichloroethene	0.0068		mg/L	EPA 8260		09/04 09/04	SGM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
p+m-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
o-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Residue, Non-Filterable	35		mg/L	EPA 160.2		09/07 09/07	GPP
Residue,Filterable(TDS)	258		mg/L	EPA 160.1	500	09/20 09/21	RJK

* See Special Instructions Above
** See Sample Remarks Above
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D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
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SINCE 1908

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ANCHORAGE, AK 99518
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REPORT of ANALYSIS

Chemlab Ref.# :93.4513-6
Client Sample ID :LIS-LF01-SW06 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70393
Report Completed :09/24/93
Collected :08/31/93 @ 15:10 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethyl)ether	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,3-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,4-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzyl Alcohol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroisopropyl)e	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
n-Nitroso-di-n-Propylam	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachloroethane	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Nitrobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Isophorone	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dimethylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzoic Acid	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethoxy)Meth	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2,4-Trichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Naphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorobutadiene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloro-3-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylnaphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorocyclopentadie	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,6-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,5-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chloronaphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Dimethylphthalate	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthylene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,6-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
3-Nitroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dinitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Nitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4513-6
Client Sample ID :LIS-LF01-SW06 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Dibenzofuran	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
2,4-Dinitrotoluene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Diethylphthalate	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
4-Chlorophenyl-Phenylet	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Fluorene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
4-Nitroaniline	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
4,6-Dinitro-2-Methylphe	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
n-Nitrosodiphenylamine	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
4-Bromophenyl-Phenyleth	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Hexachlorobenzene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Pentachlorophenol	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Phenanthrene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Anthracene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
di-n-Butylphthalate	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Fluoranthene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Pyrene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Butylbenzylphthalate	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
3,3-Dichlorobenzidine	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Benzo(a)Anthracene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Chrysene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
bis(2-Ethylhexyl)Phthal	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
di-n-Octylphthalate	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Benzo(b)Fluoranthene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Benzo(k)Fluoranthene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Benzo(a)Pyrene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Indeno(1,2,3-cd)Pyrene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Dibenz(a,h)Anthracene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT
Benzo(g,h,i)Perylene	0.011	U	mg/L	EPA 8270	09/07	09/23	MTT

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4511-7
Client Sample ID :LIS-LF01-SW06 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70389
Report Completed :09/22/93
Collected :08/31/93 @ 15:10 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: J.P. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.13		mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.46		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	25		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Iron	1.3		mg/L	EPA 6010		09/11	09/14	DFL
Lead	0.10		mg/L	EPA 6010		09/11	09/14	DFL
Magnesium	9.9		mg/L	EPA 6010		09/11	09/14	DFL
Manganese	0.090		mg/L	EPA 6010		09/11	09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010		09/11	09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Silver	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Sodium	19		mg/L	EPA 6010		09/11	09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841		09/10	09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.11		mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.44		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	27		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL

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ENVIRONMENTAL LABORATORY SERVICES
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4511-7
Client Sample ID :LIS-LF01-SW06 CAPE LIS
Matrix :WATER

Iron	0.72		mg/L	EPA 6010	09/11 09/14	DFL
Lead	0.10	U	mg/L	EPA 6010	09/11 09/14	DFL
Magnesium	10		mg/L	EPA 6010	09/11 09/14	DFL
Manganese	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010	09/11 09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010	09/11 09/14	DFL
Silver	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Sodium	18		mg/L	EPA 6010	09/11 09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841	09/10 09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
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GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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REPORT of ANALYSIS

Chemlab Ref.# :93.4514-15
Client Sample ID :LIS-LF01-SW06 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 15:10 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Nonpurgable				EPA 9060	n/a			
...TOC Range	31.1-32.9		mg/L	EPA 9060			09/15	CMR
...TOC Concentration	32.1		mg/L	EPA 9060			09/15	CMR

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-10
Client Sample ID :LIS-LF01-SW07 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 15:15 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P. HOLDING EXCEEDED ON 8270, NOT ANALYZED AS PER CLIENT.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0014		mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroform	0.0024		mg/L	EPA 8260		09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0015		mg/L	EPA 8260		09/04	09/04	SGM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-10
Client Sample ID :LIS-LF01-SW07 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Methylene Chloride	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Napthalene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Styrene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Toluene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Trichloroethene	0.0042		mg/L	EPA 8260		09/04 09/04	SGM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
p+m-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
o-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Residue, Non-Filterable	36		mg/L	EPA 160.2		09/07 09/07	GPP
Residue,Filterable(TDS)	245		mg/L	EPA 160.1	500	09/20 09/21	RJK

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4511-8
Client Sample ID :LIS-LF01-SW07 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70389
Report Completed :09/22/93
Collected :08/31/93 @ 15:15 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: J.P. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.15		mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.49		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	28		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Iron	4.0		mg/L	EPA 6010		09/11	09/14	DFL
Lead	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Magnesium	10		mg/L	EPA 6010		09/11	09/14	DFL
Manganese	0.16		mg/L	EPA 6010		09/11	09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010		09/11	09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Silver	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Sodium	18		mg/L	EPA 6010		09/11	09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841		09/10	09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Dissolved Metals Analys	----			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.13		mg/L	EPA 6010		09/11	09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Barium	0.47		mg/L	EPA 6010		09/11	09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Calcium	23		mg/L	EPA 6010		09/11	09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFL

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4511-8
Client Sample ID :LIS-LF01-SW07 CAPE LIS
Matrix :WATER

Iron	2.0		mg/L	EPA 6010	09/11 09/14	DFL
Lead	0.10	U	mg/L	EPA 6010	09/11 09/14	DFL
Magnesium	9.0		mg/L	EPA 6010	09/11 09/14	DFL
Manganese	0.076		mg/L	EPA 6010	09/11 09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010	09/11 09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010	09/11 09/14	DFL
Silver	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Sodium	17		mg/L	EPA 6010	09/11 09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841	09/10 09/13	KAW
Vanadium	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010	09/11 09/14	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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LT = Less Than
GT = Greater Than

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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4514-16
Client Sample ID :LIS-LF01-SW07 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70395
Report Completed :10/27/93
Collected :08/31/93 @ 15:15 hrs.
Received :09/01/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Nonpurgable				EPA 9060	n/a			
...TOC Range	32.2-33.6		mg/L	EPA 9060			09/15	CMR
...TOC Concentration	32.9		mg/L	EPA 9060			09/15	CMR

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LT = Less Than
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ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-4
Client Sample ID :LIS-LF01-2SW08
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 17:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Analysis Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0012		mg/L	EPA 8260 (J). A.1		09/21	09/21	MCM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Carbon Tetrachloride	0.089	D	mg/L	EPA 8260		09/22	09/22	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroform	0.016		mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

3-30-94

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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-4
Client Sample ID :LIS-LF01-2SW08
Matrix :WATER

Qualifiers/Comments (35-A)

Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Toluene	0.0096		mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichloroethene	0.062		mg/L	EPA 8260	09/21	09/21	MCM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
p+m-Xylene	0.0018		mg/L	EPA 8260	09/21	09/21	MCM
o-Xylene	0.0015		mg/L	EPA 8260	09/21	09/21	MCM

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3-30-94

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TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4729-1
Client Sample ID :LIS-LF01-2SW08 CAPE LISB.
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70820
Report Completed :11/04/93
Collected :09/09/93 @ 17:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Qualifier/Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
2-Chlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Benzyl Alcohol	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
2-Methylphenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
4-Methylphenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Hexachloroethane	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Nitrobenzene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Isophorone	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
2-Nitrophenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
Benzoic Acid	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Naphthalene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
4-Chloroaniline	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
2-Nitroaniline	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Dimethylphthalate	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Acenaphthylene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
3-Nitroaniline	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
Acenaphthene	0.010	U	mg/L	EPA 8270	R/F.1	09/17	10/23	GV
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV
4-Nitrophenol	0.010	U	mg/L	EPA 8270		09/17	10/23	GV

DFW 3/9/94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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REPORT of ANALYSIS

Chemlab Ref.# :93.4729-1
Client Sample ID :LIS-LF01-2SW08 CAPE LISB.
Matrix :WATER

5633 B STREET
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TEL: (907) 562-2343
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Dibenzofuran	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Diethylphthalate	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Fluorene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
4-Nitroaniline	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270		09/17 10/23	GV
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Hexachlorobenzene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Pentachlorophenol	0.010	U	mg/L	EPA 8270		09/17 10/23	GV
Phenanthrene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Anthracene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Fluoranthene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Pyrene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Chrysene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270	J/D.1 R/F.1	09/17 10/23	GV
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270	J/D.1 R/F.1	09/17 10/23	GV
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270	J/D.1 R/F.1	09/17 10/23	GV
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270	R/F.1	09/17 10/23	GV

DFM 3/9/94

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ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727 5
Client Sample ID :LIS-LF01-2SW08 SPIKE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 17:00 hr
Received :09/10/93 @ 15:55 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. SEE QC PACKAGE FOR SPIKE RECOVERIES AND % RSD.

Parameter	QC Results	Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics								
Benzene	0.022		mg/L	EPA 8260				
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Carbon Tetrachloride	0.146		mg/L	EPA 8260		09/21	09/21	MCM
Chlorobenzene	0.021		mg/L	EPA 8260		09/21	09/21	MCM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroform	0.017		mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.020		mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-5
Client Sample ID :LIS-LF01-2SW08 SPIKE
Matrix :WATER

[illegible] B STREE
ANCHORAGE, AK 9951
TEL (907) 562-234
FAX (907) 561-530

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Toluene	0.031		mg/L	EPA 8260	09/21	09/21	M
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Trichloroethene	0.083		mg/L	EPA 8260	09/21	09/21	M
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
p+m-Xylene	0.0019		mg/L	EPA 8260	09/21	09/21	M
o-Xylene	0.0015		mg/L	EPA 8260	09/21	09/21	M

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.

ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-6
Client Sample ID :LIS-LF01-2SW08 SPIKE DUPLICATE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 17:00 hr
Received :09/10/93 @ 15:55 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Ini
Volatile Organics								
Benzene	0.022		mg/L	EPA 8260				
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Carbon Tetrachloride	0.150		mg/L	EPA 8260		09/21	09/21	MCI
Chlorobenzene	0.021		mg/L	EPA 8260		09/21	09/21	MCI
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroform	0.017		mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.019		mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
transi,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-6
Client Sample ID :LIS-LF01-2SW08 SPIKE DUPLICATE
Matrix :WATER

5633 B STREE
ANCHORAGE, AK 9951
TEL (907) 562-234
FAX (907) 561-530

Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Toluene	0.030		mg/L	EPA 8260	09/21	09/21	M
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Trichloroethene	0.084		mg/L	EPA 8260	09/21	09/21	M
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
p+m-Xylene	0.0018		mg/L	EPA 8260	09/21	09/21	M
o-Xylene	0.0015		mg/L	EPA 8260	09/21	09/21	M

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

5633 B STREET
ANCHORAGE, AK 9951
TEL (907) 562-233
FAX (907) 561-339

Chemlab Ref.# :93.4727-7
Client Sample ID :LIS-LF01-2SW09
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 16:45 hr
Received :09/10/93 @ 15:55 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Ini
Volatile Organics								
Benzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCI
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlordifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-7
Client Sample ID :LIS-LF01-2SW09
Matrix :WATER

5633 B STREE
ANCHORAGE, AK 995
TEL (907) 562-234
FAX (907) 561-530

Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Toluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
o-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

SGS Member of the SGS Group

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4729-2
Client Sample ID :LIS-LF01-2SW09 CAPE LISB.
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70820
Report Completed :11/04/93
Collected :09/09/93 @ 16:45 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroethyl)ether	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Chlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
1,3-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
1,4-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Benzyl Alcohol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
1,2-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroisopropyl)e	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
4-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
n-Nitroso-di-n-Propylam	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Hexachloroethane	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Nitrobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Isophorone	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Nitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4-Dimethylphenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Benzoic Acid	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroethoxy)Meth	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4-Dichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
1,2,4-Trichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Naphthalene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
4-Chloroaniline	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Hexachlorobutadiene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
4-Chloro-3-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Methylnaphthalene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Hexachlorocyclopentadie	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4,6-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4,5-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Chloronaphthalene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Nitroaniline	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Dimethylphthalate	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Acenaphthylene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,6-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
3-Nitroaniline	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Acenaphthene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4-Dinitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
4-Nitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1968

REPORT of ANALYSIS

Chemlab Ref.# :93.4729-2
Client Sample ID :LIS-LF01-2SW09 CAPE LISB.
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Dibenzofuran	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
2,4-Dinitrotoluene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Diethylphthalate	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
4-Chlorophenyl-Phenylet	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Fluorene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
4-Nitroaniline	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
4,6-Dinitro-2-Methylphe	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
n-Nitrosodiphenylamine	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
4-Bromophenyl-Phenyleth	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Hexachlorobenzene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Pentachlorophenol	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Phenanthrene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Anthracene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
di-n-Butylphthalate	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Fluoranthene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Pyrene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Butylbenzylphthalate	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
3,3-Dichlorobenzidine	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Benzo(a)Anthracene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Chrysene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
bis(2-Ethylhexyl)Phthal	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
di-n-Octylphthalate	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Benzo(b)Fluoranthene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Benzo(k)Fluoranthene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Benzo(a)Pyrene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Indeno(1,2,3-cd)Pyrene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Dibenz(a,h)Anthracene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV
Benzo(g,h,i)Perylene	0.011	U	mg/L	EPA 8270	09/17 10/23	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.

ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

3838 B STREET
ANCHORAGE AK 995
TEL (907) 562-33
FAX (907) 561-53

Chemlab Ref.# :93.4727-8
Client Sample ID :LIS-LF01-2SW10
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 17:00 h
Received :09/10/93 @ 15:55 h
Technical Director: STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Ini
Volatile Organics								
Benzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MC
Chloroform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-8
Client Sample ID :LIS-LF01-2SW10
Matrix :WATER

...B STRE-
AN... AK 995
TE... (907) 562-23
FA... (907) 561-53

Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Toluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M
o-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	M

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* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1928

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4729-3
Client Sample ID :LIS-LF01-2SW10 CAPE LISB.
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70820
Report Completed :11/04/93
Collected :09/09/93 @ 17:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By : Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroethyl)ether	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Chlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
1,3-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
1,4-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Benzyl Alcohol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
1,2-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroisopropyl)e	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
4-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
n-Nitroso-di-n-Propylam	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Hexachloroethane	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Nitrobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Isophorone	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Nitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4-Dimethylphenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Benzoic Acid	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
bis(2-Chloroethoxy)Meth	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4-Dichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
1,2,4-Trichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Naphthalene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
4-Chloroaniline	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Hexachlorobutadiene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
4-Chloro-3-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Methylnaphthalene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Hexachlorocyclopentadie	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4,6-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4,5-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Chloronaphthalene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2-Nitroaniline	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Dimethylphthalate	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Acenaphthylene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,6-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
3-Nitroaniline	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
Acenaphthene	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
2,4-Dinitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV
4-Nitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/23	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4729-3
Client Sample ID :LIS-LF01-2SW10 CAPE LISB.
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Dibenzofuran	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
2,4-Dinitrotoluene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Diethylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
4-Chlorophenyl-Phenylet	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Fluorene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
4-Nitroaniline	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
4,6-Dinitro-2-Methylphe	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
n-Nitrosodiphenylamine	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
4-Bromophenyl-Phenyleth	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Hexachlorobenzene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Pentachlorophenol	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Phenanthrene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
di-n-Butylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Butylbenzylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
3,3-Dichlorobenzidine	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Benzo(a)Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Chrysene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
bis(2-Ethylhexyl)Phthal	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
di-n-Octylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Benzo(b)Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Benzo(k)Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Benzo(a)Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Indeno(1,2,3-cd)Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Dibenz(a,h)Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV
Benzo(g,h,i)Perylene	0.011	U	mg/L	EPA 8270	09/17	10/23	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

ICF ID	LIS-LF01-S01	LIS-LF01-S02	LIS-LF01-S03	LIS-LF01-S04
F&BI Number	1594	1596	1598	1600
Sample Type	soil	soil	soil	soil
Date Received	9/1/93	9/1/93	9/1/93	9/1/93
% Dry Weight	64	63	93	68
Sequence Date	#6-09/05/93	#6-09/05/93	#6-09/05/93	#6-09/05/93
Leaded Gas				
JP-4	<100	<100	<50	<100
Lube Oil	<200	<200	<100	<200
Diesel	~~<100~~ <80	~~<100~~ <80	<50	~~<100~~ <70
Spike Level				
Unknown Semi-volatile				
Pentacosane	105	90	73	95
Sequence Date	#6-09/05/93	#6-09/05/93	#6-09/05/93	#6-09/05/93
PCB 1221	<0.1	<0.1	<0.1	<0.1
PCB 1232	<0.1	<0.1	<0.1	<0.1
PCB 1016	<0.1	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1	<0.1
PCB 1260	<0.1	<0.1	<0.1	<0.1
Spike Level				
Dibutyl Chlorendate	106	91	73	95
Sequence Date		#6-09/05/93		
alpha-BHC		<0.01J		
beta-BHC		<0.01		
gamma-BHC		<0.01		
delta-BHC		<0.01		
Heptachlor		<0.01		
Aldrin		<0.01		
Heptachlor Epoxide		<0.01		
Endosulfan I		<0.01		
DDE		<0.01		
Dieldrin		<0.01		
Endrin		<0.01		
Endosulfan II		<0.01		
DDD		<0.01		
Endrin Aldehyde		<0.01		
DDT		<0.01		
Endosulfan Sulfate		<0.01		
Endrin Ketone		<0.01		
Methoxy Chlor		~~<0.1~~ <0.5J		
Chlordane		<0.5J		
Dibutyl Chlorendate		114		
Spike Level				
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.03J	<0.03J	<0.02J	<0.02J
TCA	<0.03J	<0.03J	<0.02J	<0.02J
Benzene	<0.03	<0.03	<0.02	<0.02
TCE	<0.03J	<0.03J	<0.02J	<0.02J
Toluene	<0.03	<0.03	<0.02	<0.02
PCE	<0.03J	<0.03J	<0.02J	<0.02J
Ethylbenzene	<0.03	<0.03	<0.02	<0.02
Xylenes	<0.06	<0.06	<0.04	<0.04
Gasoline	~~<2~~ <3J	~~<2~~ <3J	~~<1~~ <2J	~~<1~~ <3J
Spike level				
BFB	104	108	114	109

Compiled by [illegible] as 1 [illegible]

ICF ID	LIS-LF01-S05
F&BI Number	1602
Sample Type	soil
Date Received	9/1/93
% Dry Weight	81
Sequence Date	#6-09/05/93
Leaded Gas	
JP-4	<60
Lube Oil	
Diesel	
Spike Level	
Unknown Semi-volatile	
Pentacosane	
Sequence Date	
PCB 1221	
PCB 1232	
PCB 1016	
PCB 1242	
PCB 1248	
PCB 1254	
PCB 1260	
Spike Level	
Dibutyl Chlorendate	
Sequence Date	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
Endosulfan I	
DDE	
Dieldrin	
Endrin	
Endosulfan II	
DDD	
Endrin Aldehyde	
DDT	
Endosulfan Sulfate	
Endrin Ketone	
Methoxy Chlor	
Chlordane	
Dibutyl Chlorendate	
Spike Level	
Vol Sequence	#3&4-09/04/93
CCl4	<0.02 J
TCA	<0.02 J
Benzene	<0.02
TCE	0.1 J
Toluene	<0.02
PCE	2 <0.02 J
Ethylbenzene	0.6
Xylenes	~~0.4~~2.5 J
Gasoline	5 J
Spike level	
BFB	91

ICF ID	LIS-LF01-S08	LIS-LF01-2S11
F&BI Number	1608	1923
Sample Type	soil	soil
Date Received	9/1/93	9/13/93
% Dry Weight	33	35
Sequence Date	#6-09/05/93	#6-09/13/93
Leaded Gas		
JP-4	<200	<150
Lube Oil	<400	<300
Diesel	~~<200~~ <150	~~<150~~ <140
Spike Level		
Unknown Semi-volatile		
Pentacosane	130	70
Sequence Date	#6-09/05/93	
PCB 1221	<4	
PCB 1232	<4	
PCB 1016	<4	
PCB 1242	<4	
PCB 1248	<4	
PCB 1254	<4	
PCB 1260	<4	
Spike Level		
Dibutyl Chlorendate	129	
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence	#3&4-09/04/93	
CCl4	<0.06 J	
TCA	<0.06 J	
Benzene	<0.06	
TCE	<0.06 J	
Toluene	<0.06	
PCE	<0.06 J	
Ethylbenzene	<0.06	
Xylenes	<0.12	
Gasoline	< 8 ~~possible carryover~~ J	
Spike level		
BFB	94	

Compiled by MP 3 Aug 95

ICF ID	LIS-LF01-SD01	LIS-LF01-SD02	LIS-LF01-SD03	LIS-LF01-SD04
F&BI Number	1578	1580	1582	1584
Sample Type	soil	soil	soil	soil
Date Received	9/1/93	9/1/93	9/1/93	9/1/93
% Dry Weight	36	83	47	9
Sequence Date	#6-09/05/93	#6-09/05/93	#6-09/05/93	#6-09/05/93
Leaded Gas				
JP-4	<140	<60	<100	<560
Lube Oil	<280	<120	<200	<1100
Diesel	<140	<60	<100	<560
Spike Level				
Unknown Semi-volatile		30 biological		20 biological
Pentacosane	118	102	110	104
Sequence Date	#6-09/05/93	#6-09/05/93	#6-09/05/93	#6-09/05/93
PCB 1221	~~<0.1~~ <0.2	<0.1	~~<0.1~~ <0.2	~~<0.1~~ <1.1
PCB 1232	<0.1	<0.1	<0.1	<0.1
PCB 1016	<0.1	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1	<0.1
PCB 1260	<0.1	<0.1	<0.1	<0.1
Spike Level				
Dibutyl Chlorendate	97	84	95	100
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.06 J	<0.02 J	<0.04 J	<0.2 J
TCA	<0.06 J	<0.02 J	<0.04 J	<0.2 J
Benzene	<0.06	<0.02	<0.04	<0.2
TCE	<0.06 J	<0.02 J	<0.04 J	<0.2 J
Toluene	<0.06	<0.02	<0.04	<0.2
PCE	<0.06 J	<0.02 J	<0.04 J	<0.2 J
Ethylbenzene	<0.06	<0.02	<0.04	<0.2
Xylenes	<0.12	<0.04	<0.08	<0.4
Gasoline	~~<3~~ <6 J	~~<1~~ <2 J	~~<2~~ <4 J	~~4 possible carryover~~ <40 J
Spike level				
BFB	104	105	108	104

Compiled by SM 1/24/94

ICF ID	LIS-LF01-SD05	LIS-LF01-SD06	LIS-LF01-SD07
F&BI Number	1586	1588	1590
Sample Type	soil	soil	soil
Date Received	9/1/93	9/1/93	9/1/93
% Dry Weight	14	37	10
Sequence Date	#6-09/05/93	#6-09/05/93	#6-09/05/93
Leaded Gas			
JP-4	<360	<140	<50
Lube Oil	<710	5000	4700
Diesel	<360	1200	~~<50~~ <500
Spike Level			
Unknown Semi-volatile	20 biological		
Pentacosane	111	120	140
Sequence Date	#6-09/05/93	#6-09/05/93	#6-09/05/93
PCB 1221	~~<0.1~~ <0.7	~~<0.1~~ <0.3	~~<0.1~~ <1 J
PCB 1232	<0.1	<0.1	<0.1
PCB 1016	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1
PCB 1260	<0.1	<0.1	<0.1
Spike Level			
Dibutyl Chlorendate	97	140	155 outside recovery limits
Sequence Date			
alpha-BHC			
beta-BHC			
gamma-BHC			
delta-BHC			
Heptachlor			
Aldrin			
Heptachlor Epoxide			
Endosulfan I			
DDE			
Dieldrin			
Endrin			
Endosulfan II			
DDD			
Endrin Aldehyde			
DDT			
Endosulfan Sulfate			
Endrin Ketone			
Methoxy Chlor			
Chlordane			
Dibutyl Chlorendate			
Spike Level			
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.2 J	<0.05 J	<0.2 J
TCA	<0.2 J	<0.05 J	<0.2 J
Benzene	<0.2	<0.05	<0.2
TCE	<0.2 J	<0.05 J	<0.2 J
Toluene	<0.2	<0.05	<0.2
PCE	<0.2 J	<0.05 J	<0.2 J
Ethylbenzene	<5	<0.05	<0.2
Xylenes	<7	<0.1	<0.4
Gasoline	<130 ~~possible carryover~~ J	~~<2~~ <5 J	~~<10~~ <20 J
Spike level			
BFB	113	70	72

ICF ID	LIS-LF01-SD08	LIS-LF01-2SD10	LIS-LF01-2SD11	LIS-LF01-SW01
F&BI Number	1592	1927	1920	1516
Sample Type	soil	soil	soil	water
Date Received	9/1/93	9/13/93	9/13/93	9/1/93
% Dry Weight	64	90	19	
Sequence Date	#6-09/05/93	#6-09/13/93	#6-09/13/93	
Leaded Gas				
JP-4	<100	<60	<260	
Lube Oil	<200	2300	<530	
Diesel	~~<100~~ <80	500 J	<260	
Spike Level				
Unknown Semi-volatile				
Pentacosane	96	69	90	
Sequence Date	#6-09/05/93			
PCB 1221	<0.1			
PCB 1232	<0.1			
PCB 1016	<0.1			
PCB 1242	<0.1			
PCB 1248	<0.1			
PCB 1254	<0.1			
PCB 1260	<0.1			
Spike Level				
Dibutyl Chlorendate	96			
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence	#3&4-09/04/93			#1&2-09/04/93
CCl4	<0.03 J			<1 J
TCA	<0.03 J			<1 J
Benzene	<0.03			5 J
TCE	<0.03 J			<1 J
Toluene	<0.03			<1
PCE	<0.03 J			<1 J
Ethylbenzene	<0.03			2
Xylenes	<0.06			5 J
Gasoline	~~<2~~ <3J			<50 J
Spike level				
BFB	89			99

Compiled by NP 3 Aug 94

ICF ID	LIS-LF01-SW01	LIS-LF01-SW02
F&BI Number	1543	1518
Sample Type	water	water
Date Received	9/1/93	9/1/93
% Dry Weight		
Sequence Date	#6-09/03/93	
Leaded Gas		
JP-4	<1000	
Lube Oil	<2000	
Diesel	<1000 J	
Spike Level		
Unknown Semi-volatile		
Pentacosane	130	
Sequence Date	#6-09/03/93	
PCB 1221	~~<10~~ <2J	
PCB 1232	~~<10~~	
PCB 1016	~~<10~~	
PCB 1242	~~<10~~	
PCB 1248	~~<10~~	
PCB 1254	~~<10~~	
PCB 1260	~~<10~~	
Spike Level		
Dibutyl Chlorendate	130	
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence		#1&2-09/04/93
CCl4		<1 J
TCA		<1 J
Benzene		<1
TCE		<1 J
Toluene		<1
PCE		<1 J
Ethylbenzene		<1
Xylenes		<2
Gasoline		<50 J
Spike level		
BFB		91

ICF ID	LIS-LF01-SW02	LIS-LF01-SW03	LIS-LF01-SW03	LIS-LF01-SW04
F&BI Number	1544	1522	1545	1524
Sample Type	water	water	water	water
Date Received	9/1/93	9/1/93	9/1/93	9/1/93
% Dry Weight				
Sequence Date	#6-09/03/93		#6-09/03/93	
Leaded Gas				
JP-4	<1000		<1000	
Lube Oil	<2000		<2000	
Diesel	<1000 J		<1000 J	
Spike Level				
Unknown Semi-volatile				
Pentacosane	120		100	
Sequence Date	#6-09/03/93		#6-09/03/93	
PCB 1221	<10 <2 J		<10 <2 J	
PCB 1232	<10		<10	
PCB 1016	<10		<10	
PCB 1242	<10		<10	
PCB 1248	<10		<10	
PCB 1254	<10		<10	
PCB 1260	<10		<10	
Spike Level				
Dibutyl Chlorendate	120		100	
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence		#1&2-09/04/93		#1&2-09/04/93
CCl4		<1 J		<1 J
TCA		<1 J		<1 J
Benzene		5 J		<1
TCE		<1 J		<1 J
Toluene		2		<1
PCE		4 J		<1 J
Ethylbenzene		2		<1
Xylenes		5 J		<2
Gasoline		<50 J		<50 J
Spike level				
BFB		104		93

compiled by Staff 1 Aug 95

ICF ID	LIS-LF01-SW04	LIS-LF01-SW04	LIS-LF01-SW05	LIS-LF01-SW05
F&BI Number	1526 dup	1546	1534	1549
Sample Type	water	water	water	water
Date Received	9/1/93	9/1/93	9/1/93	9/1/93
% Dry Weight				
Sequence Date		#6-09/03/93		#6-09/03/93
Leaded Gas				
JP-4		<1000		<1000
Lube Oil		<2000		<2000
Diesel		<1000J		<1000J
Spike Level				
Unknown Semi-volatile				
Pentacosane		118		150
Sequence Date		#6-09/03/93		#6-09/03/93
PCB 1221		<10 <2J		<10 <2J
PCB 1232		<10		<10
PCB 1016		<10		<10
PCB 1242		<10		<10
PCB 1248		<10		<10
PCB 1254		<10		<10
PCB 1260		<10		<10
Spike Level				
Dibutyl Chlorendate		118		150
Sequence Date		#6-09/03/93		
alpha-BHC		<0.2J		
beta-BHC		<0.2		
gamma-BHC		<0.2		
delta-BHC		<0.2		
Heptachlor		<0.2		
Aldrin		<0.2		
Heptachlor Epoxide		<0.2		
Endosulfan I		<0.2		
DDE		<0.2		
Dieldrin		<0.2		
Endrin		<0.2		
Endosulfan II		<0.2		
DDD		<0.2		
Endrin Aldehyde		<0.2		
DDT		<0.2		
Endosulfan Sulfate		<0.2		
Endrin Ketone		<0.2		
Methoxy Chlor		410 <2 R		
Chlordane		<10		
Dibutyl Chlorendate		118		
Spike Level				
Vol Sequence	#1&2-09/04/93		#1&2-09/04/93	
CCl4	<1		<1J	
TCA	<1		<1J	
Benzene	<1		<1	
TCE	<1		<1J	
Toluene	1		<1	
PCE	<1		<1J	
Ethylbenzene	1		<1	
Xylenes	4		<2	
Gasoline	<50		<50J	
Spike level				
BFB	93		90	

Completed by [illegible]

ICF ID	LIS-LF01-SW06	LIS-LF01-SW06	LIS-LF01-SW07	LIS-LF01-SW07
F&BI Number	1536	1550	1540	1551
Sample Type	water	water	water	water
Date Received	9/1/93	9/1/93	9/1/93	9/1/93
% Dry Weight				
Sequence Date		#6-09/03/93		#6-09/03/93
Leaded Gas				
JP-4		<1000		<1000
Lube Oil		<2000		<2000
Diesel		<1000 J		<1000 J
Spike Level				
Unknown Semi-volatile				
Pentacosane		113		120
Sequence Date		#6-09/03/93		#6-09/03/93
PCB 1221		<10 <2 J		<10 <2 J
PCB 1232		<10		<10
PCB 1016		<10		<10
PCB 1242		<10		<10
PCB 1248		<10		<10
PCB 1254		<10		<10
PCB 1260		<10		<10
Spike Level				
Dibutyl Chlorendate		113		120
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence	#1&2-09/04/93		#1&2-09/04/93	
CCl4	1 J		2 J	
TCA	<1 J		<1 J	
Benzene	<1		<1	
TCE	17 J		21 J	
Toluene	1		<1	
PCE	<1 J		<1 J	
Ethylbenzene	1		1	
Xylenes	4 J		4 J	
Gasoline	<50 J		<50 J	
Spike level				
BFB	102		96	

Completed by Jang 9/15

compiled by NP 3 Aug 95

ICF ID	LIS-LF01-2SW08	LIS-LF01-2SW08	LIS-LF01-2SW08	LIS-LF01-2SW09
F&BI Number	1914 ms	1915	1916 dup	1917
Sample Type	water	water	water	water
Date Received	9/13/93	9/13/93	9/13/93	9/13/93
% Dry Weight				
Sequence Date	#6-09/13/93	#6-09/13/93	#6-09/13/93	#6-09/13/93
Leaded Gas				
JP-4		<2000	<2000	<2000
Lube Oil		<4000	<4000	<4000
Diesel	83	~~<2000~~ <1000	~~<2000~~ <1000	~~<2000~~ <1000
Spike Level	500			
Unknown Semi-volatile				
Pentacosane	120	130	120	140
Sequence Date				
PCB 1221				
PCB 1232				
PCB 1016				
PCB 1242				
PCB 1248				
PCB 1254				
PCB 1260				
Spike Level				
Dibutyl Chlorendate				
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence				
CCl4				
TCA				
Benzene				
TCE				
Toluene				
PCE				
Ethylbenzene				
Xylenes				
Gasoline				
Spike level				
BFB				

ICF ID	LIS-LF01-2SW10
F&BI Number	1918
Sample Type	water
Date Received	9/13/93
% Dry Weight	
Sequence Date	#6-09/13/93
Leaded Gas	
JP-4	<2000
Lube Oil	<4000
Diesel	~~<2000~~ <1000
Spike Level	
Unknown Semi-volatile	
Pentacosane	80
Sequence Date	
PCB 1221	
PCB 1232	
PCB 1016	
PCB 1242	
PCB 1248	
PCB 1254	
PCB 1260	
Spike Level	
Dibutyl Chlorendate	
Sequence Date	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
Endosulfan I	
DDE	
Dieldrin	
Endrin	
Endosulfan II	
DDD	
Endrin Aldehyde	
DDT	
Endosulfan Sulfate	
Endrin Ketone	
Methoxy Chlor	
Chlordane	
Dibutyl Chlorendate	
Spike Level	
Vol Sequence	
CCl4	
TCA	
Benzene	
TCE	
Toluene	
PCE	
Ethylbenzene	
Xylenes	
Gasoline	
Spike level	
BFB	

Completed by Sml 1 Aug. 95

ANALYTICAL DATA SHEETS FOR THE WHITE ALICE SITE (SS03)

Commercial Testing & Engineering Co.

Environmental Laboratory Services

SINCE 1908

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-11
Client Sample ID	LIS-SS03-3S19
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@15:30 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	300	D	mg/Kg	EPA 8080		09/21/94	09/27/94	DSM
------Aroclor	1260							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712/0403/94

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Environmental Laboratory Services

SINCE 1908

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-14
Client Sample ID	LIS-SS03-3S19 SPIKE
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118		
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36	hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@15:30	hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30	hrs.
PWSID	UA				

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F. SAMPLE -10 WAS SPIKED WITH 1 ML 10 PPM 1242. SEE QC PACKAGE FOR % RSD AND SPIKE RECOVERIES.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.459		mg/Kg	EPA 8080		09/21/94	09/26/94	DSM
------Aroclor 1242								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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F-71(0-08/94)

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LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-15
Client Sample ID	LIS-SS03-3519 SPIKE DUPLICATE
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118		
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36	hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@15:30	hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30	hrs.
PWSID	UA				

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F. SAMPLE -10 WAS SPIKED WITH 1 ML 10 PPM 1242. SEE QC PACKAGE FOR % RSD AND SPIKE RECOVERIES.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.436		mg/Kg	EPA 8080		09/21/94	09/26/94	DSM
------Aroclor 1242								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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SINCE 1908

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-13
Client Sample ID	LIS-SS03-3S22-0.5
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@15:20 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	6290	D	mg/Kg	EPA 8080		09/21/94	09/27/94	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712/0416/94

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4608-12
Client Sample ID LIS-SS03-3S23
Matrix SOIL

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE SP. LISBURNE IRA
Project# 41096-514-02
PWSID UA

WORK Order 82118
Printed Date 11/02/94 @ 14:35 hrs.
Collected Date 09/07/94 @ 15:30 hrs.
Received Date 09/09/94 @ 11:30 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Paton

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F. CORRECTED CLIENT SAMPLE ID.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	233	D	mg/Kg	EPA 8080		09/21/94	09/27/94	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712(06/94

5633 B Street, **Anchorage, AK 99518-1600** — Tel: (907) 562-2343 Fax: (907) 561-5301

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-5
Client Sample ID LIS-SS03-3S33 POSSIBLE HIGH CONC PCB
Matrix SOIL

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-514-02
PWSID UA

WORK Order 82360
Printed Date 11/02/94 @ 12:57 hrs.
Collected Date 09/10/94 @ 14:16 hrs.
Received Date 09/16/94 @ 11:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	26.8	D	mg/Kg	EPA 8080		09/20/94	09/26/94	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-7120(6/94)

5633 B Street, **Anchorage, AK 99518-1600** — Tel: (907) 562-2343 Fax: (907) 561-5301

ICF ID	LIS-SS03-S01	LIS-SS03-S02	LIS-SS03-S03
F&BI Number	1379	1394	1395
Sample Type	soil	soil	soil
Date Received	8/31/93	8/31/93	8/31/93
% Dry Weight	77	93	95
Sequence Date	#6-09/02/93	#6-09/02/93	#6-09/02/93
Leaded Gas			
JP-4	<60	<50	<50
Lube Oil	<120	<110	<200
Diesel	<60 J	<50	<50 J
Spike Level			
Unknown Semi-volatile			160
Pentacosane	120	113	100
Sequence Date	#6-09/02/93	#6-09/02/93	#6-09/02/93
PCB 1221	<0.1	<0.1	<0.1
PCB 1232	<0.1	<0.1	<0.1
PCB 1016	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1
PCB 1260	<0.1	0.8 JN	5.5 JN
Spike Level			
Dibutyl Chlorendate	86	114	120
Sequence Date			
alpha-BHC			
beta-BHC			
gamma-BHC			
delta-BHC			
Heptachlor			
Aldrin			
Heptachlor Epoxide			
Endosulfan I			
DDE			
Dieldrin			
Endrin			
Endosulfan II			
DDD			
Endrin Aldehyde			
DDT			
Endosulfan Sulfate			
Endrin Ketone			
Methoxy Chlor			
Chlordane			
Dibutyl Chlorendate			
Spike Level			
Vol Sequence			
CCl4			
TCA			
Benzene			
TCE			
Toluene			
PCE			
Ethylbenzene			
Xylenes			
Gasoline			
Spike level			
BFB			

Completed by SMF 1/Aug 95

ICF ID	LIS-SS03-S04	LIS-SS03-S05	LIS-SS03-S06
F&BI Number	1396	1397	1398
Sample Type	soil	soil	soil
Date Received	8/31/93	8/31/93	8/31/93
% Dry Weight	95	96	94
Sequence Date	#6-09/02/93	#6-09/02/93	#6-09/02/93
Leaded Gas			
JP-4	<50	<50	<50
Lube Oil	<100	<100	<110
Diesel	<50 J	<50	<50 J
Spike Level			
Unknown Semi-volatile	60		80
Pentacosane	122	99	110
Sequence Date	#6-09/02/93	#6-09/02/93	#6-09/02/93
PCB 1221	<0.1	<0.1	<0.1
PCB 1232	<0.1	<0.1	<0.1
PCB 1016	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1
PCB 1260	~~10~~ 20 JN	1 JN	~~0.9~~ 2 JN
Spike Level			
Dibutyl Chlorendate	>150 outside recovery limits	111	110
Sequence Date			#6-09/02/93
alpha-BHC			<0.01
beta-BHC			<0.01
gamma-BHC			<0.01
delta-BHC			<0.01
Heptachlor			<0.01
Aldrin			<0.01
Heptachlor Epoxide			<0.01
Endosulfan I			<0.01
DDE			co<eluted with dieldrin
Dieldrin			0.02
Endrin			<5
Endosulfan II			<5
DDD			<5
Endrin Aldehyde			<5
DDT			<5
Endosulfan Sulfate			<5
Endrin Ketone			<5
Methoxy Chlor			<0.1
Chlordane			<0.5
Dibutyl Chlorendate			87
Spike Level			
Vol Sequence			
CCl4			
TCA			
Benzene			
TCE			
Toluene			
PCE			
Ethylbenzene			
Xylenes			
Gasoline			
Spike level			
BFB			

Computed by SRL 1 Aug 95

ICF ID	LIS-SS03-2S07	LIS-SS03-2S08	LIS-SS03-2S09	LIS-SS03-2S10
F&BI Number	1908	1909	1910	1911
Sample Type	soil	soil	soil	soil
Date Received	9/13/93	9/13/93	9/13/93	9/13/93
% Dry Weight	94	100	64	100
Sequence Date	#6-09/13/93	#6-09/13/93	#6-09/13/93	#6-09/13/93
Leaded Gas				
JP-4	<50	<50	<100	<50
Lube Oil	<100	<100	<200	<100
Diesel	<50	<50 J	380 J	<50 J
Spike Level				
Unknown Semi-volatile				
Pentacosane	92	91	91	90
Sequence Date	#6-09/13/93	#6-09/13/93	#6-09/13/93	#6-09/13/93
PCB 1221	<0.1	<0.1	<0.1	<0.1
PCB 1232	<0.1	<0.1	<0.1	<0.1
PCB 1016	<0.1	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1	<0.1
PCB 1260	0.5 J	0.1<0.1	<0.1	<0.1
Spike Level				
Dibutyl Chlorendate	92	91	91	90
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence				
CCl4				
TCA				
Benzene				
TCE				
Toluene				
PCE				
Ethylbenzene				
Xylenes				
Gasoline				
Spike level				
BFB				

Computed by Sat. Org. 9/

ICF ID	LIS-SS03-2S11	LIS-SS03-2S13
F&BI Number	1912	1913
Sample Type	soil	soil
Date Received	9/13/93	9/13/93
% Dry Weight	86	43
Sequence Date	#6-09/13/93	#6-09/13/93
Leaded Gas		
JP-4	<50	<100
Lube Oil	<100	<200
Diesel	<50 J	<100
Spike Level		
Unknown Semi-volatile		
Pentacosane	89	120
Sequence Date	#6-09/13/93	#6-09/13/93
PCB 1221	<0.1	<0.1
PCB 1232	<0.1	<0.1
PCB 1016	<0.1	<0.1
PCB 1242	<0.1	<0.1
PCB 1248	<0.1	<0.1
PCB 1254	<0.1	<0.1
PCB 1260	<0.1	1.8 J
Spike Level		
Dibutyl Chlorendate	89	120
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence		
CCl4		
TCA		
Benzene		
TCE		
Toluene		
PCE		
Ethylbenzene		
Xylenes		
Gasoline		
Spike level		
BFB		

Completely dry 1 day as

ANALYTICAL DATA SHEETS FOR THE SPILL/LEAK #3 (ST07)

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1958

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-15
Client Sample ID :LIS-ST07-2S12 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 14:40 hr
Received :09/10/93 @ 15:55 hr
Technical Director: STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Qualitative Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Ini
Percent Solids	85.9		%	SM17 2540G			09/14	
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260 (J)-A.1		09/14	10/04	KW
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Bromoform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Chloroform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Ethylbenzene	0.030		mg/Kg	EPA 8260		09/14	10/04	KW
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW
Isopropylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KW

3-30-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1928

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-15
Client Sample ID :LIS-ST07-2S12 CAPE LISB.
Matrix :SOIL

Qualifier/Comment

p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260 (J) - A.1	09/14	10/04	KW
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Napthalene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
n-Propylbenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Styrene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Toluene	0.045		mg/Kg	EPA 8260	09/14	10/04	KW
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Trichloroethene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,2,4-Trimethylbenzene	0.087		mg/Kg	EPA 8260	09/14	10/04	KW
1,3,5-Trimethylbenzene	0.048		mg/Kg	EPA 8260	09/14	10/04	KW
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
p+m-Xylene	0.105		mg/Kg	EPA 8260	09/14	10/04	KW
o-Xylene	0.050		mg/Kg	EPA 8260	09/14	10/04	KW

3-30-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1939

5533 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-16
Client Sample ID :LIS-ST07-2S13 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 16:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	87.6		%	SM17 2540G			09/14	
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Ethylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Isopropylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM

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ENVIRONMENTAL LABORATORY SERVICES
SINCE 1969

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-16
Client Sample ID :LIS-ST07-2S13 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Napthalene	0.035		mg/Kg	EPA 8260	09/14	10/04	KW
n-Propylbenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Styrene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Toluene	0.033		mg/Kg	EPA 8260	09/14	10/04	KW
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Trichloroethene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
1,2,4-Trimethylbenzene	0.078		mg/Kg	EPA 8260	09/14	10/04	KW
1,3,5-Trimethylbenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW
p+m-Xylene	0.055		mg/Kg	EPA 8260	09/14	10/04	KW
o-Xylene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KW

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* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1959

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-17
Client Sample ID :LIS-ST07-2S14 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 15:35 hr
Received :09/10/93 @ 15:55 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	80.1		%	SM17 2540G			09/14	
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
Bromoform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWI
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Ethylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Isopropylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1938

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-17
Client Sample ID :LIS-ST07-2S14 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Napthalene	0.027		mg/Kg	EPA 8260	09/14	10/04	KWI
n-Propylbenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Styrene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Toluene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Trichloroethene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,2,4-Trimethylbenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,3,5-Trimethylbenzene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
p+m-Xylene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI
o-Xylene	0.025	U	mg/Kg	EPA 8260	09/14	10/04	KWI

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* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
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GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1909

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-18
Client Sample ID :LIS-ST07-2S15 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 15:05 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	84.1		%	SM17 2540G			09/14	
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,4-Dichlorobenzene	0.095		mg/Kg	EPA 8260		09/14	10/04	KWM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
transl,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Ethylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Isopropylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-18
Client Sample ID :LIS-ST07-2S15 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Napthalene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
n-Propylbenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Styrene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Toluene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Trichloroethene	0.059		mg/Kg	EPA 8260	09/14 10/04	KWM
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,2,4-Trimethylbenzene	0.030		mg/Kg	EPA 8260	09/14 10/04	KWM
1,3,5-Trimethylbenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
p+m-Xylene	0.043		mg/Kg	EPA 8260	09/14 10/04	KWM
o-Xylene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-19
Client Sample ID :LIS-ST07-2S16 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 14:55 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	82.4		%	SM17 2540G			09/14	
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Ethylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Isopropylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1903

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-19
Client Sample ID :LIS-ST07-2S16 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Napthalene	0.038		mg/Kg	EPA 8260	09/14 10/04	KWM
n-Propylbenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Styrene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Toluene	0.036		mg/Kg	EPA 8260	09/14 10/04	KWM
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Trichloroethene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
1,2,4-Trimethylbenzene	0.051		mg/Kg	EPA 8260	09/14 10/04	KWM
1,3,5-Trimethylbenzene	0.037		mg/Kg	EPA 8260	09/14 10/04	KWM
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWM
p+m-Xylene	0.103		mg/Kg	EPA 8260	09/14 10/04	KWM
o-Xylene	0.029		mg/Kg	EPA 8260	09/14 10/04	KWM

* See Special Instructions Above
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U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1909

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-20
Client Sample ID :LIS-ST07-2S17 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 14:45 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	86.8		%	SM17 2540G			09/14	
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Ethylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Isopropylbenzene	0.025	U	mg/Kg	EPA 8260		09/14	10/04	KWM

COMMERCIAL TESTING & ENGINEERING CO.
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SINCE 1909

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-20
Client Sample ID :LIS-ST07-2S17 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
Napthalene	0.068		mg/Kg	EPA 8260	09/14 10/04	KWI
n-Propylbenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
Styrene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
Toluene	0.029		mg/Kg	EPA 8260	09/14 10/04	KWI
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
Trichloroethene	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
1,2,4-Trimethylbenzene	0.108		mg/Kg	EPA 8260	09/14 10/04	KWI
1,3,5-Trimethylbenzene	0.059		mg/Kg	EPA 8260	09/14 10/04	KWI
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/14 10/04	KWI
p+m-Xylene	0.079		mg/Kg	EPA 8260	09/14 10/04	KWI
o-Xylene	0.037		mg/Kg	EPA 8260	09/14 10/04	KWI

* See Special Instructions Above
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D = Secondary dilution.

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LT = Less Than
GT = Greater Than

Commercial Testing & Engineering Co.

Environmental Laboratory Services

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SMF 11.30.94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-5
Client Sample ID	LIS-ST07-~~3521~~ 3821
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@ 16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@ 19:36 hrs.
Project#	41096-514-02	Received Date	09/10/94	@ 11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	1190	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	81.8	U	%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.030	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Toluene	0.030	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Ethylbenzene	0.092		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
p&m Xylene	0.119		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
o-Xylene	0.256		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB

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F-712/0416/94

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Environmental Laboratory Services

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SMF 11.30.94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-6
Client Sample ID	LIS-ST07-3S22
Matrix	SOIL S

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@19:25 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL WEATHERED.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	125	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/24/94	WAA
Percent Solids	88.4		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Toluene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Ethylbenzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
p&m Xylene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
o-Xylene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB

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GT = Greater Than

F-712/0406/94

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Environmental Laboratory Services

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LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-16 S
Client Sample ID	LIS-ST07-3[illegible]22 SPIKE
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@ 07:43 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@ 19:25 hrs.
Project#	41096-514-02	Received Date	09/10/94	@ 11:00 hrs.
PWSID	UA	Technical Director	STEPHEN C. EDE	

Released By:

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	88.4		%	SM17 2540G			09/22/94	WAA
Diesel Range Organics	192	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA

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GT = Greater Than

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

Commercial Testing & Engineering Co.

Environmental Laboratory Services

SMF 12.6.95

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-17 S
Client Sample ID	LIS-ST07-3522 SPIKE DUPLICATE
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@07:43 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@19:25 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	88.4		%	SM17 2540G			09/22/94	WAA
Diesel Range Organics	221	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA

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Commercial Testing & Engineering Co.

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Environmental Laboratory Services

SMF 10.30.94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-7 S
Client Sample ID	LIS-ST07-3323
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@16:48 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Patton

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	151	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	92.8		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Toluene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Ethylbenzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
p&m Xylene	0.061		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
o-Xylene	0.035		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB

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F-712(0-16)/94

Commercial Testing & Engineering Co.

SINCE 1908

Environmental Laboratory Services

Sent 4-30-94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-8 S
Client Sample ID	LIS-ST07-3524
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@ 16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@ 16:25 hrs.
Project#	41096-514-02	Received Date	09/10/94	@ 11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Stephen Parker

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	14100	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/27/94	WAA
Percent Solids	76.7		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Toluene	0.247		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Ethylbenzene	1.09		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
p&m Xylene	2.23		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
o-Xylene	1.58		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB

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F-7/12/04/6/94

Commercial Testing & Engineering Co.

Environmental Laboratory Services

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SMF 11.30.94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-9 S
Client Sample ID	LIS-ST07-3225
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@ 16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@ 16:48 hrs.
Project#	41096-514-02	Received Date	09/10/94	@ 11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Stephen Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL. 1,4 - DICHLOROBENZENE AT 0.129 MG/KG WAS DETECTED IN THIS SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	2040	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	90.3		%	SM172540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Toluene	0.097		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
Ethylbenzene	0.139		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
p&m Xylene	0.172		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB
o-Xylene	0.085		mg/Kg	EPA 8020		09/13/94	09/16/94	JLB

* See Special Instructions Above
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F-712/0-06/94

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Environmental Laboratory Services

SMF 11-30-94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-10
Client Sample ID	LIS-ST07-3526
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@19:48 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	11800	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	88.5		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
Toluene	0.949		mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
Ethylbenzene	4.53	D	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
p&m Xylene	2.83	D	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
o-Xylene	1.40	D	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB

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D = Secondary dilution.

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F-712/D46/94

Commercial Testing & Engineering Co.

Environmental Laboratory Services

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SMF 11-30-94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-11
Client Sample ID	LIS-ST07-3327
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@19:57 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Poston

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL WEATHERED.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	228	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	94.7		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
Toluene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
Ethylbenzene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
p&m Xylene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
o-Xylene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-71/046/94

Commercial Testing & Engineering Co.

Environmental Laboratory Services

SINCE 1908

8Mt 11-20-94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-12
Client Sample ID	LIS-ST07-3528
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@21:25 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Patton

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	8180	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	91.6		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
Toluene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
Ethylbenzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
p&m Xylene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB
o-Xylene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/17/94	JLB

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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GT = Greater Than

F-712/040/94

Commercial Testing & Engineering Co.

SINCE 1908

Environmental Laboratory Services

SMF 11-30-94

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-13
Client Sample ID	LIS-ST07-3329
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@21:12 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	1790	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	76.9		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
Toluene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
Ethylbenzene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
p&m Xylene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
o-Xylene	0.020	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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GT = Greater Than

F-712/046/94

Commercial Testing & Engineering Co.

Environmental Laboratory Services

SINCE 1908

SMF 113094

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-14
Client Sample ID	LIS-ST07-3230
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@ 16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/08/94	@ 21:00 hrs.
Project#	41096-514-02	Received Date	09/10/94	@ 11:00 hrs.
PWSID	UA	Technical Director	STEPHEN C. EDE	

Released By: Stephen Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL WEATHERED.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	518		mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	90.9		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
Toluene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
Ethylbenzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
p&m Xylene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
o-Xylene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712(0-16)/94

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-15
Client Sample ID	LIS-ST07-3731
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/09/94	@11:25 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By:

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF. EPH: TYPICAL PATTERN FOR DIESEL.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	3130	D	mg/Kg	AK 102.0 (2-93)		09/22/94	09/25/94	WAA
Percent Solids	90.3		%	SM17 2540G			09/22/94	MDP
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.025	U	mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
Toluene	0.113		mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
Ethylbenzene	2.66		mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
p&m Xylene	1.98		mg/Kg	EPA 8020		09/13/94	09/19/94	JLB
o-Xylene	2.06		mg/Kg	EPA 8020		09/13/94	09/19/94	JLB

* See Special Instructions Above
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GT = Greater Than

F-7 (10/18/94)

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-8
Client Sample ID :LIS-ST07-SD01 CAPE LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ 10:05 hrs
Received :09/04/93 @ 11:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. 8270: UNABLE TO REPORT RESULTS DUE TO SAMPLE BEING INADVERTENTLY SPIKED WITH 100PPM SPIKING SOLUTION.

Qualifier Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
sec-Butylbenzene	0.370		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Ethylbenzene	0.242		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Isopropylbenzene	0.210		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-8
Client Sample ID :LIS-ST07-SD01 CAPE LIS
Matrix :SOIL

Analytical Comments

p-Isopropyltoluene	0.762		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM
Methylene Chloride	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Napthalene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
n-Propylbenzene	0.366		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM
Styrene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Toluene	0.074		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Trichloroethene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2,4-Trimethylbenzene	2.81	D	mg/Kg	EPA 8260	~~J / J.1~~	09/07	09/23	MCM
1,3,5-Trimethylbenzene	1.76		mg/Kg	EPA 8260	~~J / J.1~~	09/07	09/23	MCM
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
p+m-Xylene	0.600		mg/Kg	EPA 8260	~~J / J.1~~	09/07	09/23	MCM
o-Xylene	0.176		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM

5-6-94

* See Special Instructions Above
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U = Undetected, Reported value is the practical quantification limit.
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NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-9
Client Sample ID :LIS-ST07-SD04 CAPE LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ 11:15 hrs.
Received :09/04/93 @ 11:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE. J = INDICATES AN ANALYTE WHOSE CONCENTRATION IS ESTIMATED BECAUSE THE ANALYTE'S CONCENTRATION IS DETECTED BELOW THE CALIBRATION RANGE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Bromobenzene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Bromochloromethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Bromodichloromethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Bromoform	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Bromomethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
n-Butylbenzene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
sec-Butylbenzene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
tert-Butylbenzne	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Carbon Tetrachloride	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Chlorobenzene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Chloroethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Chloroform	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Chloromethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
2-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
4-Chlorotoluene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Dibromochloromethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
12Dibromo3Chloropropane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,2-Dibromoethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Dibromomethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,2-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,3-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,4-Dichlorobenzene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Dichlorodifluoromethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,1-Dichloroethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,2-Dichloroethane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,1-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
cis-1,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
transi,2-Dichloroethene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,3-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
2,2-Dichloropropane	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
1,1-Dichloropropene	0.050	U	mg/Kg	EPA 8260		09/07	09/22	MCM
Ethylbenzene	0.072		mg/Kg	EPA 8260		09/07	09/22	MCM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-9
Client Sample ID :LIS-ST07-SD04 CAPE LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Hexachlorobutadiene	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
Isopropylbenzene	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
p-Isopropyltoluene	0.157		mg/Kg	EPA 8260	09/07	09/22	MCM
Methylene Chloride	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
Napthalene	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
n-Propylbenzene	0.053		mg/Kg	EPA 8260	09/07	09/22	MCM
Styrene	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
1112-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
1122-Tetrachloroethane	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
Tetrachloroethene	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
Toluene	0.047		mg/Kg	EPA 8260	09/07	09/22	MCM
1,2,3-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
1,2,4-Trichlorobenzene	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
1,1,1-Trichloroethane	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
1,1,2-Trichloroethane	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
Trichloroethene	0.426		mg/Kg	EPA 8260	09/07	09/22	MCM
Trichlorofluoromethane	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
1,2,3-Trichloropropane	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
1,2,4-Trimethylbenzene	0.953		mg/Kg	EPA 8260	09/07	09/22	MCM
1,3,5-Trimethylbenzene	0.546		mg/Kg	EPA 8260	09/07	09/22	MCM
Vinyl Chloride	0.050	U	mg/Kg	EPA 8260	09/07	09/22	MCM
p+m-Xylene	0.167		mg/Kg	EPA 8260	09/07	09/22	MCM
o-Xylene	0.128		mg/Kg	EPA 8260	09/07	09/22	MCM
Semivolatile Organics				EPA 8270			
Phenol	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
bis(2-Chloroethyl)ether	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
2-Chlorophenol	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
1,3-Dichlorobenzene	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
1,4-Dichlorobenzene	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
Benzyl Alcohol	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
1,2-Dichlorobenzene	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
2-Methylphenol	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
bis(2-Chloroisopropyl)e	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
4-Methylphenol	7.32	J	mg/Kg	EPA 8270	09/15	10/22	GV
n-Nitroso-di-n-Propylam	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
Hexachloroethane	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
Nitrobenzene	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
Isophorone	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
2-Nitrophenol	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
2,4-Dimethylphenol	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
Benzoic Acid	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
bis(2-Chloroethoxy)Meth	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
2,4-Dichlorophenol	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
1,2,4-Trichlorobenzene	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
Naphthalene	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
4-Chloroaniline	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
Hexachlorobutadiene	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
4-Chloro-3-Methylphenol	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV
2-Methylnaphthalene	2.29	J	mg/Kg	EPA 8270	09/15	10/22	GV
Hexachlorocyclopentadie	8.20	U	mg/Kg	EPA 8270	09/15	10/22	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-9
Client Sample ID :LIS-ST07-SD04 CAPE LIS
Matrix :SOIL

2,4,6-Trichlorophenol	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
2,4,5-Trichlorophenol	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
2-Chloronaphthalene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
2-Nitroaniline	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Dimethylphthalate	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Acenaphthylene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
2,6-Dinitrotoluene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
3-Nitroaniline	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Acenaphthene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
2,4-Dinitrophenol	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
4-Nitrophenol	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Dibenzofuran	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
2,4-Dinitrotoluene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Diethylphthalate	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
4-Chlorophenyl-Phenylet	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Fluorene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
4-Nitroaniline	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
4,6-Dinitro-2-Methylphe	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
n-Nitrosodiphenylamine	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
4-Bromophenyl-Phenyleth	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Hexachlorobenzene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Pentachlorophenol	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Phenanthrene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Anthracene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
di-n-Butylphthalate	31.5	B	mg/Kg	EPA 8270	J/E.1	09/15 10/22	GV
Fluoranthene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Pyrene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Butylbenzylphthalate	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
3,3-Dichlorobenzidine	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Benzo(a)Anthracene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Chrysene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
bis(2-Ethylhexyl)Phthal	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
di-n-Octylphthalate	8.20	U	mg/Kg	EPA 8270	J/D.1	09/15 10/22	GV
Benzo(b)Fluoranthene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Benzo(k)Fluoranthene	8.20	U	mg/Kg	EPA 8270	J/D.1	09/15 10/22	GV
Benzo(a)Pyrene	8.20	U	mg/Kg	EPA 8270	J/D.1	09/15 10/22	GV
Indeno(1,2,3-cd)Pyrene	8.20	U	mg/Kg	EPA 8270		09/15 10/22	GV
Dibenz(a,h)Anthracene	8.20	U	mg/Kg	EPA 8270	J/D.1	09/15 10/22	GV
Benzo(g,h,i)Perylene	8.20	U	mg/Kg	EPA 8270	J/D.1	09/15 10/22	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
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REPORT of ANALYSIS

Chemlab Ref.# :93.4614-10
Client Sample ID :LIS-ST07-SD06 CAPE LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ 10:00 hrs
Received :09/04/93 @ 11:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Armstead

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Qualifiers/Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Ethylbenzene	0.134		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/07	09/23	MCM
Isopropylbenzene	0.085		mg/Kg	EPA 8260	J / J.1	09/07	09/23	MCM

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REPORT of ANALYSIS

Chemlab Ref.# :93.4614-10
Client Sample ID :LIS-ST07-SD06 CAPE LIS
Matrix :SOIL

					Qualifier/Comments		
p-Isopropyltoluene	0.435		mg/Kg	EPA 8260	J / J.1	09/07 09/23	MCM
Methylene Chloride	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
Napthalene	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
n-Propylbenzene	0.149		mg/Kg	EPA 8260	J / J.1	09/07 09/23	MCM
Styrene	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
Toluene	0.037		mg/Kg	EPA 8260		09/07 09/23	MCM
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	J / J.1	09/07 09/23	MCM
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
Trichloroethene	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
1,2,4-Trimethylbenzene	1.97		mg/Kg	EPA 8260		09/07 09/23	MCM
1,3,5-Trimethylbenzene	1.27		mg/Kg	EPA 8260		09/07 09/23	MCM
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260		09/07 09/23	MCM
p+m-Xylene	0.454		mg/Kg	EPA 8260		09/07 09/23	MCM
o-Xylene	0.094		mg/Kg	EPA 8260	J / J.1	09/07 09/23	MCM
Semivolatile Organics				EPA 8270			
Phenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
bis(2-Chloroethyl)ether	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2-Chlorophenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
1,3-Dichlorobenzene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
1,4-Dichlorobenzene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Benzyl Alcohol	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
1,2-Dichlorobenzene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
2-Methylphenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
bis(2-Chloroisopropyl)e	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
4-Methylphenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
n-Nitroso-di-n-Propylam	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Hexachloroethane	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Nitrobenzene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Isophorone	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2-Nitrophenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2,4-Dimethylphenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Benzoic Acid	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
bis(2-Chloroethoxy)Meth	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2,4-Dichlorophenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
1,2,4-Trichlorobenzene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Naphthalene	4.18		mg/Kg	EPA 8270	J / L.1,F.1	09/15 10/22	GV
4-Chloroaniline	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Hexachlorobutadiene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
4-Chloro-3-Methylphenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2-Methylnaphthalene	5.12		mg/Kg	EPA 8270	J / L.1,F.1	09/15 10/22	GV
Hexachlorocyclopentadie	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2,4,6-Trichlorophenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2,4,5-Trichlorophenol	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV

5-6-94 originated by: CB

Compiled SMF 11-6-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93:4614-10
Client Sample ID :LIS-ST07-SD06 CAPE LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2-Chloronaphthalene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2-Nitroaniline	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Dimethylphthalate	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Acenaphthylene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2,6-Dinitrotoluene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
3-Nitroaniline	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Acenaphthene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2,4-Dinitrophenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
4-Nitrophenol	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Dibenzofuran	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
2,4-Dinitrotoluene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Diethylphthalate	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
4-Chlorophenyl-Phenylet	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
Fluorene	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
4-Nitroaniline	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
4,6-Dinitro-2-Methylphe	0.311	U	mg/Kg	EPA 8270	UJ / L.1	09/15 10/22	GV
n-Nitrosodiphenylamine	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
4-Bromophenyl-Phenyleth	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Hexachlorobenzene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Pentachlorophenol	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Phenanthrene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Anthracene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
di-n-Butylphthalate	6.74	B	mg/Kg	EPA 8270	U / E.1	09/15 10/22	GV
Fluoranthene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Pyrene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Butylbenzylphthalate	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
3,3-Dichlorobenzidine	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Benzo(a)Anthracene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Chrysene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
bis(2-Ethylhexyl)Phthal	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
di-n-Octylphthalate	0.311	U	mg/Kg	EPA 8270	J / D.1	09/15 10/22	GV
Benzo(b)Fluoranthene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Benzo(k)Fluoranthene	0.311	U	mg/Kg	EPA 8270	J / D.1	09/15 10/22	GV
Benzo(a)Pyrene	0.311	U	mg/Kg	EPA 8270	J / D.1	09/15 10/22	GV
Indeno(1,2,3-cd)Pyrene	0.311	U	mg/Kg	EPA 8270		09/15 10/22	GV
Dibenz(a,h)Anthracene	0.311	U	mg/Kg	EPA 8270	J / D.1	09/15 10/22	GV
Benzo(g,h,i)Perylene	0.311	U	mg/Kg	EPA 8270	J / D.1	09/15 10/22	GV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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ENVIRONMENTAL LABORATORY SERVICES
SINCE 1939

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ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-13
Client Sample ID :LIS-ST07-2SD07 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 15:40 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Qualifier Comment

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	25.6		%	SM17 2540G			09/14	
Volatile Organics				EPA 8260				
Benzene	0.200	U	mg/Kg	EPA 8260	(J)-A.1	09/14	10/04	KWM
Bromobenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromochloromethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromodichloromethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromoform	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromomethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
n-Butylbenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
sec-Butylbenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
tert-Butylbenzne	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Carbon Tetrachloride	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chlorobenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroform	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloromethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2-Chlorotoluene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
4-Chlorotoluene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromochloromethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
12Dibromo3Chloropropane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dibromoethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromomethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichlorobenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichlorobenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,4-Dichlorobenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dichlorodifluoromethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloroethane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
cis-1,2-Dichloroethene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
trans1,2-Dichloroethene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloropropane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichloropropane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2,2-Dichloropropane	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloropropene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Ethylbenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Hexachlorobutadiene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Isopropylbenzene	0.200	U	mg/Kg	EPA 8260		09/14	10/04	KWM

3-30-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1909

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-13
Client Sample ID :LIS-ST07-2SD07. CAPE LISB.
Matrix :SOIL

					Qualifier/Comment		
p-Isopropyltoluene	0.200	U	mg/Kg	EPA 8260	(J)-A.1	09/14 10/04	KWM
Methylene Chloride	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
Napthalene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
n-Propylbenzene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
Styrene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1112-Tetrachloroethane	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1122-Tetrachloroethane	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
Tetrachloroethene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
Toluene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1,2,3-Trichlorobenzene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1,2,4-Trichlorobenzene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1,1,1-Trichloroethane	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1,1,2-Trichloroethane	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
Trichloroethene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
Trichlorofluoromethane	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1,2,3-Trichloropropane	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1,2,4-Trimethylbenzene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
1,3,5-Trimethylbenzene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
Vinyl Chloride	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
p+m-Xylene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM
o-Xylene	0.200	U	mg/Kg	EPA 8260		09/14 10/04	KWM

CAP
3-30-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-14
Client Sample ID :LIS-ST07-2SD08 CAPE LISB.
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 14:40 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	36.5		%	SM17 2540G			09/14	
Volatile Organics				EPA 8260				
Benzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromobenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromochloromethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromodichloromethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromoform	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Bromomethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
n-Butylbenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
sec-Butylbenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
tert-Butylbenzne	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Carbon Tetrachloride	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chlorobenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloroform	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Chloromethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2-Chlorotoluene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
4-Chlorotoluene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromochloromethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
12Dibromo3Chloropropane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dibromoethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dibromomethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichlorobenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichlorobenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,4-Dichlorobenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Dichlorodifluoromethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloroethane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloroethene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
cis-1,2-Dichloroethene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
trans1,2-Dichloroethene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,2-Dichloropropane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,3-Dichloropropane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
2,2-Dichloropropane	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
1,1-Dichloropropene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Ethylbenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Hexachlorobutadiene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM
Isopropylbenzene	0.140	U	mg/Kg	EPA 8260		09/14	10/04	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1939

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-14
Client Sample ID :LIS-ST07-2SD08 CAPE LISB.
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.145		mg/Kg	EPA 8260	09/14	10/04	KWI
Methylene Chloride	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Napthalene	0.380		mg/Kg	EPA 8260	09/14	10/04	KWI
n-Propylbenzene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Styrene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1112-Tetrachloroethane	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1122-Tetrachloroethane	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Tetrachloroethene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Toluene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,2,3-Trichlorobenzene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,2,4-Trichlorobenzene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,1,1-Trichloroethane	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,1,2-Trichloroethane	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Trichloroethene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Trichlorofluoromethane	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,2,3-Trichloropropane	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
1,2,4-Trimethylbenzene	0.185		mg/Kg	EPA 8260	09/14	10/04	KWI
1,3,5-Trimethylbenzene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
Vinyl Chloride	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
p+m-Xylene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI
o-Xylene	0.140	U	mg/Kg	EPA 8260	09/14	10/04	KWI

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-3
Client Sample ID :LIS-ST07-SW01 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ 09:30 hrs.
Received :09/04/93 @ 11:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. 8270 SAMPLES WERE TO BE RESAMPLED DUE TO LONG PERIOD OF TIME IN TRANSIT.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-3
Client Sample ID :LIS-ST07-SW01 CAPE LIS
Matrix :WATER

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Methylene Chloride	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Napthalene	0.0015		mg/L	EPA 8260		09/08 09/08	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Styrene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Toluene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,2,4-Trimethylbenzene	0.0011		mg/L	EPA 8260		09/08 09/08	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	10.6-13.0		mg/L	EPA 9060		09/15	CMR
...TOC Concentration	12.0		mg/L	EPA 9060		09/15	CMR
Residue, Non-Filterable	9		mg/L	EPA 160.2		09/07	TAV
Residue,Filterable(TDS)	369		mg/L	EPA 160.1	500	09/22	RJK

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STRE
ANCHORAGE, AK 995
TEL (907) 562-23
FAX (907) 561-53

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-3
Client Sample ID :LIS-ST07-SW01 CAPE LISB.
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 15:10 h
Received :09/10/93 @ 15:55 h
Technical Director: STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	In
Semivolatile Organics								
Phenol	0.011	U	mg/L	EPA 8270				
bis(2-Chloroethyl)ether	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Chlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
1,3-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
1,4-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Benzyl Alcohol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
1,2-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
bis(2-Chloroisopropyl)e	0.011	U	mg/L	EPA 8270		09/17	10/22	G
4-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
n-Nitroso-di-n-Propylam	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Hexachloroethane	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Nitrobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Isophorone	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Nitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4-Dimethylphenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Benzoic Acid	0.011	U	mg/L	EPA 8270		09/17	10/22	G
bis(2-Chloroethoxy)Meth	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4-Dichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
1,2,4-Trichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Naphthalene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
4-Chloroaniline	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Hexachlorobutadiene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
4-Chloro-3-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Methylnaphthalene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Hexachlorocyclopentadie	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4,6-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4,5-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Chloronaphthalene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Nitroaniline	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Dimethylphthalate	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Acenaphthylene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,6-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
3-Nitroaniline	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Acenaphthene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4-Dinitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
4-Nitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-3
Client Sample ID :LIS-ST07-SW01 CAPE LISB.
Matrix :WATER

5633 B STRE
ANCHORAGE, AK 995
TEL (907) 562-23
FAX (907) 561-53

Dibenzofuran	0.011	U	mg/L	EPA 8270	09/17	10/22
2,4-Dinitrotoluene	0.011	U	mg/L	EPA 8270	09/17	10/22
Diethylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/22
4-Chlorophenyl-Phenylet	0.011	U	mg/L	EPA 8270	09/17	10/22
Fluorene	0.011	U	mg/L	EPA 8270	09/17	10/22
4-Nitroaniline	0.011	U	mg/L	EPA 8270	09/17	10/22
4,6-Dinitro-2-Methylphe	0.011	U	mg/L	EPA 8270	09/17	10/22
n-Nitrosodiphenylamine	0.011	U	mg/L	EPA 8270	09/17	10/22
4-Bromophenyl-Phenyleth	0.011	U	mg/L	EPA 8270	09/17	10/22
Hexachlorobenzene	0.011	U	mg/L	EPA 8270	09/17	10/22
Pentachlorophenol	0.011	U	mg/L	EPA 8270	09/17	10/22
Phenanthrene	0.011	U	mg/L	EPA 8270	09/17	10/22
Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/22
di-n-Butylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/22
Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/22
Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/22
Butylbenzylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/22
3,3-Dichlorobenzidine	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(a)Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/22
Chrysene	0.011	U	mg/L	EPA 8270	09/17	10/22
bis(2-Ethylhexyl)Phthal	0.011	U	mg/L	EPA 8270	09/17	10/22
di-n-Octylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(b)Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(k)Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(a)Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/22
Indeno(1,2,3-cd)Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/22
Dibenz(a,h)Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(g,h,i)Perylene	0.011	U	mg/L	EPA 8270	09/17	10/22

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-5
Client Sample ID :LIS-ST07-SW03 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ 09:35 hrs.
Received :09/04/93 @ 11:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. 8270 SAMPLES WERE TO BE RESAMPLED DUE TO LONG PERIOD OF TIME IN TRANSIT.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-5
Client Sample ID :LIS-ST07-SW03 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Methylene Chloride	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Napthalene	0.0017		mg/L	EPA 8260		09/08 09/08	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Styrene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Toluene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
1,2,4-Trimethylbenzene	0.0012		mg/L	EPA 8260		09/08 09/08	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260		09/08 09/08	KWM
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	11.7-13.3		mg/L	EPA 9060		09/15	CMR
...TOC Concentration	12.6		mg/L	EPA 9060		09/15	CMR
Residue, Non-Filterable	10		mg/L	EPA 160.2		09/07	TAV
Residue,Filterable(TDS)	376		mg/L	EPA 160.1	500	09/22	RJK

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.

ENVIRONMENTAL LABORATORY SERVICES

[illegible] B STREET
ANCHORAGE AK 995
TEL (907) 562-23
FAX (907) 561-53

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-2
Client Sample ID :LIS-ST07-SW03 CAPE LISB.
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 15:15 h
Received :09/10/93 @ 15:55 h
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Ini
Semivolatile Organics								
Phenol	0.011	U	mg/L	EPA 8270				
bis(2-Chloroethyl)ether	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Chlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
1,3-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
1,4-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Benzyl Alcohol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
1,2-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
bis(2-Chloroisopropyl)e	0.011	U	mg/L	EPA 8270		09/17	10/22	G
4-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
n-Nitroso-di-n-Propylam	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Hexachloroethane	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Nitrobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Isophorone	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Nitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4-Dimethylphenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Benzoic Acid	0.011	U	mg/L	EPA 8270		09/17	10/22	G
bis(2-Chloroethoxy)Meth	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4-Dichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
1,2,4-Trichlorobenzene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Naphthalene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
4-Chloroaniline	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Hexachlorobutadiene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
4-Chloro-3-Methylphenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Methylnaphthalene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Hexachlorocyclopentadie	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4,6-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4,5-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Chloronaphthalene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2-Nitroaniline	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Dimethylphthalate	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Acenaphthylene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,6-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
3-Nitroaniline	0.011	U	mg/L	EPA 8270		09/17	10/22	G
Acenaphthene	0.011	U	mg/L	EPA 8270		09/17	10/22	G
2,4-Dinitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G
4-Nitrophenol	0.011	U	mg/L	EPA 8270		09/17	10/22	G

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-2
Client Sample ID :LIS-ST07-SW03 CAPE LISB.
Matrix :WATER

[illegible] B STREET
ANCHORAGE, AK 995
TEL (907) 562-23
FAX (907) 561-53

Dibenzofuran	0.011	U	mg/L	EPA 8270	09/17	10/22
2,4-Dinitrotoluene	0.011	U	mg/L	EPA 8270	09/17	10/22
Diethylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/22
4-Chlorophenyl-Phenylet	0.011	U	mg/L	EPA 8270	09/17	10/22
Fluorene	0.011	U	mg/L	EPA 8270	09/17	10/22
4-Nitroaniline	0.011	U	mg/L	EPA 8270	09/17	10/22
4,6-Dinitro-2-Methylphe	0.011	U	mg/L	EPA 8270	09/17	10/22
n-Nitrosodiphenylamine	0.011	U	mg/L	EPA 8270	09/17	10/22
4-Bromophenyl-Phenyleth	0.011	U	mg/L	EPA 8270	09/17	10/22
Hexachlorobenzene	0.011	U	mg/L	EPA 8270	09/17	10/22
Pentachlorophenol	0.011	U	mg/L	EPA 8270	09/17	10/22
Phenanthrene	0.011	U	mg/L	EPA 8270	09/17	10/22
Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/22
di-n-Butylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/22
Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/22
Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/22
Butylbenzylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/22
3,3-Dichlorobenzidine	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(a)Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/22
Chrysene	0.011	U	mg/L	EPA 8270	09/17	10/22
bis(2-Ethylhexyl)Phthal	0.011	U	mg/L	EPA 8270	09/17	10/22
di-n-Octylphthalate	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(b)Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(k)Fluoranthene	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(a)Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/22
Indeno(1,2,3-cd)Pyrene	0.011	U	mg/L	EPA 8270	09/17	10/22
Dibenz(a,h)Anthracene	0.011	U	mg/L	EPA 8270	09/17	10/22
Benzo(g,h,i)Perylene	0.011	U	mg/L	EPA 8270	09/17	10/22

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-6
Client Sample ID :LIS-ST07-SW03 CAPE LIS DUPLICATE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ 09:35 hrs.
Received :09/04/93 @ 11:00 hrs.
Technical Director:STEPHEN, C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Nonpurgable				EPA 9060	n/a			
...TOC Range	11.5-14.1		mg/L	EPA 9060			09/15	CMR
...TOC Concentration	12.7		mg/L	EPA 9060			09/15	CMR

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-7
Client Sample ID :LIS-ST07-SW03 CAPE LIS SPIKE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ 09:35 hrs.
Received :09/04/93 @ 11:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Nonpurgable				EPA 9060	n/a			
...TOC Range	27.9-29.2		mg/L	EPA 9060			09/15	CMR
...TOC Concentration	28.5		mg/L	EPA 9060			09/15	CMR

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

ICF ID	LIS-ST07-S01	LIS-ST07-S02	LIS-ST07-S02	LIS-ST07-S03
F&BI Number	1656	1658	1658 dup	1660
Sample Type	soil	soil	soil	soil
Date Received	9/2/93	9/2/93	9/2/93	9/2/93
% Dry Weight	45	93	92	91
Sequence Date	#6-09/03/93	#6-09/03/93		#6-09/03/93
Leaded Gas				
JP-4	<1000	<50		<50
Lube Oil	<2000	<100		<100
Diesel	~~75000~~	2300		4500
Spike Level	63000			
Unknown Semi-volatile				
Pentacosane	105	87		94
Sequence Date				
PCB 1221				
PCB 1232				
PCB 1016				
PCB 1242				
PCB 1248				
PCB 1254				
PCB 1260				
Spike Level				
Dibutyl Chlorendate				
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93		#3&4-09/04/93
CCl4	<0.4J	<0.2J		<0.02J
TCA	<0.4J	<0.2J		<0.02J
Benzene	<0.4	<0.7		<0.02
TCE	<0.4J	4J		<0.02J
Toluene	<0.4	<0.7		<0.02
PCE	<0.4J	<0.2J		1.6 J
Ethylbenzene	~~20~~ <2J	<0.6		<0.04
Xylenes	<0.8	<0.5		<0.2
Gasoline	~~5843~~J	~~18~~ BJ		~~3625~~J
Spike level				
BFB	96	90		85

ICF ID	LIS-ST07-S04	LIS-ST07-S05	LIS-ST07-S06
F&BI Number	1662	1612	1614
Sample Type	soil	soil	soil
Date Received	9/2/93	9/2/93	9/2/93
% Dry Weight	91	87	98
Sequence Date	#6-09/03/93	#6-09/03/93	#6-09/03/93
Leaded Gas			
JP-4	<50	<60	<50
Lube Oil	<100	<120	<100
Diesel	<50	<60	<50
Spike Level			
Unknown Semi-volatile			
Pentacosane	91	84	92
Sequence Date			
PCB 1221			
PCB 1232			
PCB 1016			
PCB 1242			
PCB 1248			
PCB 1254			
PCB 1260			
Spike Level			
Dibutyl Chlorendate			
Sequence Date			
alpha-BHC			
beta-BHC			
gamma-BHC			
delta-BHC			
Heptachlor			
Aldrin			
Heptachlor Epoxide			
Endosulfan I			
DDE			
Dieldrin			
Endrin			
Endosulfan II			
DDD			
Endrin Aldehyde			
DDT			
Endosulfan Sulfate			
Endrin Ketone			
Methoxy Chlor			
Chlordane			
Dibutyl Chlorendate			
Spike Level			
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.02 J	<0.02 J	<0.2 J
TCA	<0.02 J	<0.02 J	<0.2 J
Benzene	<0.02	<0.02	<0.2
TCE	2 J	0.6 J	<0.2 J
Toluene	<0.5	<0.2	<0.2
PCE	1.3 J	0.9 J	<0.2 J
Ethylbenzene	<0.6	<0.02	<0.2
Xylenes	<3	<0.8	<0.4
Gasoline	~~32~~ 25 J	<9 ~~possible carryover~~ J	<1 J
Spike level			
BFB	92	89	88

Complete list and final copy

ICF ID	LIS-ST07-S06	LIS-ST07-S06	LIS-ST07-S06	LIS-ST07-S07
F&BI Number	1614 dup	1614 ms	1614 msd	1616
Sample Type	soil	soil	soil	soil
Date Received	9/2/93	9/2/93	9/2/93	9/2/93
% Dry Weight				96
Sequence Date	#6-09/03/93	#6-09/03/93	#6-09/03/93	#6-09/03/93
Leaded Gas				
JP-4	<50			<50
Lube Oil	<100			<100
Diesel	<50	98	93	~~4200~~ 3900
Spike Level		500	500	
Unknown Semi-volatile				
Pentacosane	88	103	120	114
Sequence Date				
PCB 1221				
PCB 1232				
PCB 1016				
PCB 1242				
PCB 1248				
PCB 1254				
PCB 1260				
Spike Level				
Dibutyl Chlorendate				
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.02	82	85	<0.02 J
TCA	<0.02	106	106	<0.02 J
Benzene	<0.02	92	96	<0.02
TCE	<0.02	112	112	0.3 J
Toluene	<0.02	100	102	0.03
PCE	<0.02	120	63	0.2 J
Ethylbenzene	<0.02	108	108	0.05 J
Xylenes	<0.4	102	102	0.1 J
Gasoline	64 possible carryover			<1 J
Spike level				
BFB	89	86	85	99

ICF ID	LIS-ST07-S08	LIS-ST07-S09	LIS-ST07-S10	LIS-ST07-S11
F&BI Number	1618	1620	1622	1624
Sample Type	soil	soil	soil	soil
Date Received	9/2/93	9/2/93	9/2/93	9/2/93
% Dry Weight	91	95	66	93
Sequence Date	#6-09/03/93	#6-09/03/93	#6-09/03/93	#6-09/03/93
Leaded Gas				
JP-4	<50	<50	<80	<50
Lube Oil	<100	<100	<160	<100
Diesel	<50	180	>20000 could not verify results reintegrated area not submitted	~~870~~ 800
Spike Level				
Unknown Semi-volatile				
Pentacosane	92	87	103	113
Sequence Date				
PCB 1221				
PCB 1232				
PCB 1016				
PCB 1242				
PCB 1248				
PCB 1254				
PCB 1260				
Spike Level				
Dibutyl Chlorendate				
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.02 J	<0.02 J	<0.3 J	0.2 J
TCA	<0.02 J	<0.02 J	<0.3 J	2.2 J
Benzene	<0.02	<0.02	1.4 J	<0.02
TCE	<0.02 J	<0.02 J	~~24~~ <0.03 J	0.8 J
Toluene	0.03	0.4	<0.3	<0.02
PCE	<0.02 J	~~3.5~~ <0.02 J	~~66~~ <0.03 J	0.4 J
Ethylbenzene	<0.03	0.6	7	3.2 J
Xylenes	<0.06	0.6 J	10 J	2.3 J
Gasoline	<1 J	~~16~~ 11 J	~~160~~ 111 J	~~64~~ 48 J
Spike level				
BFB	95	116	93	102

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ICF ID	LIS-ST07-2S12	LIS-ST07-2S13	LIS-ST07-2S14	LIS-ST07-2S15
F&BI Number	1929	1930	1931	1932
Sample Type	soil	soil	soil	soil
Date Received	9/13/93	9/13/93	9/13/93	9/13/93
% Dry Weight	90	90	88	87
Sequence Date	#6-09/13/93	#6-09/13/93	#6-09/13/93	#6-09/13/93
Leaded Gas				
JP-4	<60	<60	<70	<70
Lube Oil	<120	<120	<140	<140
Diesel	<60 J	<60	<70 J	<70 J
Spike Level				
Unknown Semi-volatile				
Pentacosane	87	81	86	88
Sequence Date				
PCB 1221				
PCB 1232				
PCB 1016				
PCB 1242				
PCB 1248				
PCB 1254				
PCB 1260				
Spike Level				
Dibutyl Chlorendate				
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence				
CCl4				
TCA				
Benzene				
TCE				
Toluene				
PCE				
Ethylbenzene				
Xylenes				
Gasoline				
Spike level				
BFB				

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ICF ID	LIS-ST07-2S16	LIS-ST07-2S17	LIS-ST07-2S18	LIS-ST07-2S19
F&BI Number	1933	1934	1935	1936
Sample Type	soil	soil	soil	soil
Date Received	9/13/93	9/13/93	9/13/93	9/13/93
% Dry Weight	83	93	77	61
Sequence Date	#6-09/13/93	#6-09/13/93	#6-09/13/93	#6-09/13/93
Leaded Gas				
JP-4	<70	<60	<70	<100
Lube Oil	<140	<120	<140	1200
Diesel	<70 J	<60 J	<70	1100 J
Spike Level				
Unknown Semi-volatile				
Pentacosane	85	75	79	115
Sequence Date				
PCB 1221				
PCB 1232				
PCB 1016				
PCB 1242				
PCB 1248				
PCB 1254				
PCB 1260				
Spike Level				
Dibutyl Chlorendate				
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence				
CCl4				
TCA				
Benzene				
TCE				
Toluene				
PCE				
Ethylbenzene				
Xylenes				
Gasoline				
Spike level				
BFB				

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ICF ID	LIS-ST07-2S20
F&BI Number	1937
Sample Type	soil
Date Received	9/13/93
% Dry Weight	56
Sequence Date	#6-09/13/93
Leaded Gas	
JP-4	<100
Lube Oil	<200
Diesel	490 J
Spike Level	
Unknown Semi-volatile	
Pentacosane	79
Sequence Date	
PCB 1221	
PCB 1232	
PCB 1016	
PCB 1242	
PCB 1248	
PCB 1254	
PCB 1260	
Spike Level	
Dibutyl Chlorendate	
Sequence Date	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
Endosulfan I	
DDE	
Dieldrin	
Endrin	
Endosulfan II	
DDD	
Endrin Aldehyde	
DDT	
Endosulfan Sulfate	
Endrin Ketone	
Methoxy Chlor	
Chlordane	
Dibutyl Chlorendate	
Spike Level	
Vol Sequence	
CCl4	
TCA	
Benzene	
TCE	
Toluene	
PCE	
Ethylbenzene	
Xylenes	
Gasoline	
Spike level	
BFB	

ICF ID	LIS-ST07-SD01	LIS-ST07-SD02	LIS-ST07-SD03
F&BI Number	1644	1646	1648
Sample Type	soil	soil	soil
Date Received	9/2/93	9/2/93	9/2/93
% Dry Weight	82	85	84
Sequence Date	#6-09/03/93	#6-09/03/93	#6-09/03/93
Leaded Gas			
JP-4	<60	<60	<60
Lube Oil	<120	<120	<120
Diesel	1400	<60	<60
Spike Level			
Unknown Semi-volatile			
Pentacosane	93	83	95
Sequence Date			
PCB 1221			
PCB 1232			
PCB 1016			
PCB 1242			
PCB 1248			
PCB 1254			
PCB 1260			
Spike Level			
Dibutyl Chlorendate			
Sequence Date	#6-09/03/93		
alpha-BHC	<0.01		
beta-BHC	<0.01		
gamma-BHC	<0.01		
delta-BHC	<0.01		
Heptachlor	<0.01		
Aldrin	<0.01		
Heptachlor Epoxide	<0.01		
Endosulfan I	<0.01		
DDE	<0.01		
Dieldrin	<0.01		
Endrin	<0.01		
Endosulfan II	<0.01		
DDD	<0.01		
Endrin Aldehyde	<0.01		
DDT	<0.01		
Endosulfan Sulfate	<0.01		
Endrin Ketone	<0.01		
Methoxy Chlor	<0.1		
Chlordane	<0.5		
Dibutyl Chlorendate	93		
Spike Level			
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.02 J	<0.02 J	<0.02 J
TCA	<0.02 J	<0.02 J	<0.02 J
Benzene	<0.02	<0.02	<0.02
TCE	<0.02 J	<0.02 J	<0.02 J
Toluene	<0.02	<0.02	<0.02
PCE	0.3 J	<0.02 J	<0.02 J
Ethylbenzene	0.9	~~<0.02~~ <0.6	<0.8 J
Xylenes	~~2~~ 3.8 J	~~<0.04~~ <0.4	<1.8 J
Gasoline	~~38~~ 130 J	~~78 possible carryover~~ 150 J	~~2 possible carryover~~ <20 J
Spike level			
BFB	102	98	108

Computed by Excel

ICF ID	LIS-ST07-SD04	LIS-ST07-SD05	LIS-ST07-SD06
F&BI Number	1650	1652	1654
Sample Type	soil	soil	soil
Date Received	9/2/93	9/2/93	9/2/93
% Dry Weight	42	54	76
Sequence Date	#6-09/03/93, #6-09/10/93	#6-09/03/93	#6-09/03/93
Leaded Gas			
JP-4	<100	<100	<70
Lube Oil	<200	<200	<130
Diesel	~~2900~~	~~880~~	~~3000~~
Spike Level	2300	650	2400
Unknown Semi-volatile			
Pentacosane	120	120	103
Sequence Date			
PCB 1221			
PCB 1232			
PCB 1016			
PCB 1242			
PCB 1248			
PCB 1254			
PCB 1260			
Spike Level			
Dibutyl Chlorendate			
Sequence Date			#6-09/03/93
alpha-BHC			<0.01
beta-BHC			<0.01
gamma-BHC			<0.01
delta-BHC			<0.01
Heptachlor			<0.01
Aldrin			<0.01
Heptachlor Epoxide			<0.01
Endosulfan I			<0.01
DDE			<0.01
Dieldrin			<0.01
Endrin			<0.01
Endosulfan II			<0.01
DDD			<0.01
Endrin Aldehyde			<0.01
DDT			<0.01
Endosulfan Sulfate			<0.01
Endrin Ketone			<0.01
Methoxy Chlor			<0.1
Chlordane			<0.5
Dibutyl Chlorendate			103
Spike Level			
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.04J	0.1 J	0.3 J
TCA	<0.04J	0.4 J	<0.03 J
Benzene	<0.02	<0.04	0.3
TCE	<0.04J	<0.04J	0.8J
Toluene	<0.04	0.07	0.3
PCE	<0.04J	<0.04 J	0.6J
Ethylbenzene	<0.4	0.9	0.5
Xylenes	<0.9	2J	1.4 J
Gasoline	~~<2~~ <13J	~~32~~ 20J	~~20~~ 14J
Spike level			
BFB	96	109	85

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ICF ID	LIS-ST07-2SD07	LIS-ST07-2SD08
F&BI Number	1938	1939
Sample Type	soil	soil
Date Received	9/13/93	9/13/93
% Dry Weight	48	56
Sequence Date	#6-09/13/93	#6-09/13/93
Leaded Gas		
JP-4	<100	<100
Lube Oil	<200	<200
Diesel	<100 J	<100 J
Spike Level		
Unknown Semi-volatile		
Pentacosane	80	83
Sequence Date		
PCB 1221		
PCB 1232		
PCB 1016		
PCB 1242		
PCB 1248		
PCB 1254		
PCB 1260		
Spike Level		
Dibutyl Chlorendate		
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence		
CCl4		
TCA		
Benzene		
TCE		
Toluene		
PCE		
Ethylbenzene		
Xylenes		
Gasoline		
Spike level		
BFB		

ICF ID	LIS-ST07-SW01	LIS-ST07-SW01	LIS-ST07-SW03
F&BI Number	1631	1632	1639
Sample Type	water	water	water
Date Received	9/2/93	9/2/93	9/2/93
% Dry Weight			
Sequence Date	#6-09/03/93		#6-09/03/93
Leaded Gas			
JP-4	<1000		<1000
Lube Oil	<2000		<2000
Diesel	<1000		<1000
Spike Level			
Unknown Semi-volatile			
Pentacosane	140		140
Sequence Date			
PCB 1221			
PCB 1232			
PCB 1016			
PCB 1242			
PCB 1248			
PCB 1254			
PCB 1260			
Spike Level			
Dibutyl Chlorendate			
Sequence Date	#6-09/03/93		#6-09/03/93
alpha-BHC	<0.2		<0.2
beta-BHC	<0.2		<0.2
gamma-BHC	<0.2		<0.2
delta-BHC	<0.2		<0.2
Heptachlor	<0.2		<0.2
Aldrin	<0.2		<0.2
Heptachlor Epoxide	<0.2		<0.2
Endosulfan I	<0.2		<0.2
DDE	<0.2		<0.2
Dieldrin	<0.2		<0.2
Endrin	<0.2		<0.2
Endosulfan II	<0.2		<0.2
DDD	<0.2		<0.2
Endrin Aldehyde	<0.2		<0.2
DDT	<0.2		<0.2
Endosulfan Sulfate	<0.2		<0.2
Endrin Ketone	<0.2		<0.2
Methoxy Chlor	<2		<2
Chlordane	<10		<10
Dibutyl Chlorendate	110		140
Spike Level			
Vol Sequence		#1&2-09/04/93	
CCl4		<1J	
TCA		<1J	
Benzene		<1	
TCE		<1J	
Toluene		<1	
PCE		<1J	
Ethylbenzene		<1	
Xylenes		<2	
Gasoline		<50J	
Spike level			
BFB		104	

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ICF ID	LIS-ST07-SW03
F&BI Number	1640
Sample Type	water
Date Received	9/2/93
% Dry Weight	
Sequence Date	
Leaded Gas	
JP-4	
Lube Oil	
Diesel	
Spike Level	
Unknown Semi-volatile	
Pentacosane	
Sequence Date	
PCB 1221	
PCB 1232	
PCB 1016	
PCB 1242	
PCB 1248	
PCB 1254	
PCB 1260	
Spike Level	
Dibutyl Chlorendate	
Sequence Date	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
Endosulfan I	
DDE	
Dieldrin	
Endrin	
Endosulfan II	
DDD	
Endrin Aldehyde	
DDT	
Endosulfan Sulfate	
Endrin Ketone	
Methoxy Chlor	
Chlordane	
Dibutyl Chlorendate	
Spike Level	
Vol Sequence	#1&2-09/04/93
CCl4	<1 J
TCA	<1 J
Benzene	<1
TCE	<1 J
Toluene	<1
PCE	<1 J
Ethylbenzene	<1
Xylenes	<2
Gasoline	<50 J
Spike level	
BFB	119

ANALYTICAL DATA SHEETS FOR THE UPPER CAMP TRANSFORMER BUILDING (SS08)

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-4
Client Sample ID :LIS-SS08-S07 CAPE-LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70345
Report Completed :10/28/93
Collected :08/30/93 @ 10:10 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TOC, Soil	67300		mg/Kg	PSEP Ref Lab				

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-4
Client Sample ID	LIS-SS08-3S12
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@16:00 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	29.1	D	mg/Kg	EPA 8080		09/21/94	09/27/94	DSM
------Aroclor 1254								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712/0418/94

5633 B Street, **Anchorage, AK 99518-1600** — Tel: (907) 562-2343 Fax: (907) 561-5301

Compiled by Sept 1 amy ws

ICF ID	LIS-SS08-S01	LIS-SS08-S02
F&BI Number	1399	1400
Sample Type	soil	soil
Date Received	8/31/93	8/31/93
% Dry Weight	97	92
Sequence Date	#6-09/02/93	#6-09/02/93
Leaded Gas		
JP-4	<50	<50
Lube Oil	460	6500
Diesel	~~230 oil~~ 750 J	~~6500 oil~~ 19500 J
Spike Level		
Unknown Semi-volatile		
Pentacosane	110	112
Sequence Date	#6-09/02/93	#6-09/02/93, #6-09/05/93
PCB 1221	<0.1	<1
PCB 1232	<0.1	<1
PCB 1016	<0.1	<1
PCB 1242	<0.1	<1
PCB 1248	<0.1	<1
PCB 1254	<0.1	<1
PCB 1260	~~0.1~~ 9 JN	~~500 outside calibration range~~ 300 JN
Spike Level		
Dibutyl Chlorendate	97	interferences prevented measurement
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence		
CCl4		
TCA		
Benzene		
TCE		
Toluene		
PCE		
Ethylbenzene		
Xylenes		
Gasoline		
Spike level		
BFB		

ICF ID	LIS-SS08-S03	LIS-SS08-S04	LIS-SS08-S05
F&BI Number	1401	1402	1403
Sample Type	soil	soil	soil
Date Received	8/31/93	8/31/93	8/31/93
% Dry Weight	95	96	97
Sequence Date	#6-09/02/93	#6-09/02/93	#6-09/02/93
Leaded Gas			
JP-4	<50	<50	<50
Lube Oil	29000	250	430
Diesel	~~21000 oil~~ 5100 J	~~100 oil~~ 50 J	~~420 oil~~ 330 J
Spike Level			
Unknown Semi-volatile			
Pentacosane	109	98	103
Sequence Date	#6-09/02/93, #6-09/05/93	#6-09/02/93	#6-09/02/93
PCB 1221	<0.1	<0.1	<0.1
PCB 1232	<0.1	<0.1	<0.1
PCB 1016	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1
PCB 1260	~~6~~ 130 JN	0.9 JN	<0.1
Spike Level			
Dibutyl Chlorendate	interferences prevented measurement	96	86
Sequence Date			
alpha-BHC			
beta-BHC			
gamma-BHC			
delta-BHC			
Heptachlor			
Aldrin			
Heptachlor Epoxide			
Endosulfan I			
DDE			
Dieldrin			
Endrin			
Endosulfan II			
DDD			
Endrin Aldehyde			
DDT			
Endosulfan Sulfate			
Endrin Ketone			
Methoxy Chlor			
Chlordane			
Dibutyl Chlorendate			
Spike Level			
Vol Sequence			
CCl4			
TCA			
Benzene			
TCE			
Toluene			
PCE			
Ethylbenzene			
Xylenes			
Gasoline			
Spike level			
BFB			

Completely Surf as long as

ICF ID	LIS-SS08-~~S06~~ S07	LIS-SS08-2S08	LIS-SS08-2S09	LIS-SS08-2S09
F&BI Number	1404	1940	1941	1941 dup
Sample Type	soil	soil	soil	soil
Date Received	8/31/93	9/13/93	9/13/93	9/13/93
% Dry Weight	96	99	97	
Sequence Date	#5-09/04/93	#6-09/13/93	#6-09/13/93	#6-09/13/93
Leaded Gas				
JP-4	<50	<50	<50	<50
Lube Oil	4300	<100	<100	<100
Diesel	~~45000 oil~~ H9000 J	~~2000~~ <100 J	<50	<50
Spike Level				
Unknown Semi-volatile				
Pentacosane	87	103	63	68
Sequence Date	#5-09/04/93	#6-09/13/93	#6-09/13/93	
PCB 1221	<0.1	<0.1	<0.1	
PCB 1232	<0.1	<0.1	<0.1	
PCB 1016	<0.1	<0.1	<0.1	
PCB 1242	<0.1	<0.1	<0.1	
PCB 1248	<0.1	<0.1	<0.1	
PCB 1254	<0.1	<0.1	<0.1	
PCB 1260	18 JN	<0.1	<0.1	
Spike Level				
Dibutyl Chlorendate	87	103	63	
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence				
CCl4				
TCA				
Benzene				
TCE				
Toluene				
PCE				
Ethylbenzene				
Xylenes				
Gasoline				
Spike level				
BFB				

Completed by [illegible] at [illegible]

ICF ID	LIS-SS08-2S09	LIS-SS08-2S09
F&BI Number	1941 ms	1941 msd
Sample Type	soil	soil
Date Received	9/13/93	9/13/93
% Dry Weight		
Sequence Date	#6-09/13/93	#6-09/13/93
Leaded Gas		
JP-4		
Lube Oil		
Diesel	84	78
Spike Level	500	500
Unknown Semi-volatile		
Pentacosane	69	71
Sequence Date		
PCB 1221		
PCB 1232		
PCB 1016		
PCB 1242		
PCB 1248		
PCB 1254		
PCB 1260		
Spike Level		
Dibutyl Chlorendate		
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence		
CCl4		
TCA		
Benzene		
TCE		
Toluene		
PCE		
Ethylbenzene		
Xylenes		
Gasoline		
Spike level		
BFB		

ANALYTICAL DATA SHEETS FOR THE LOWER CAMP TRANSFORMER BUILDINGS (SS09)

Commercial Testing & Engineering Co.

Environmental Laboratory Services

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LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-3
Client Sample ID	LIS-SS09-3S13
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@18:35 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	1010	D	mg/Kg	EPA 8080		09/21/94	09/27/94	DSM
------Aroclor	1254							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712/0-06/94

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Commercial Testing & Engineering Co.

SINCE 1908

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-2
Client Sample ID	LIS-SS09-3S14
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@18:55 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA	Technical Director	STEPHEN C. EDE	
		Released By:	Stephen C. Ede	

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	1720	D	mg/Kg	EPA 8080		09/21/94	09/27/94	DSM
------Aroclor 1254								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712D46/94

5633 B Street, **Anchorage, AK 99518-1600** — Tel: (907) 562-2343 Fax: (907) 561-5301

Commercial Testing & Engineering Co.

SINCE 1908

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-1
Client Sample ID	LIS-SS09-3S15
Matrix	SOIL

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/07/94	@20:36 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@19:10 hrs.
Project#	41096-514-02	Received Date	09/09/94	@11:30 hrs.
PWSID	UA			

Technical Director: STEPHEN C. EDE

Released By: Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	5600	D	mg/Kg	EPA 8080		09/21/94	09/27/94	DSM
------Aroclor 1260								

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

ICF ID	LIS-SS09-S01
F&BI Number	1383
Sample Type	soil
Date Received	8/31/93
% Dry Weight	94
Sequence Date	#6-09/02/93
Leaded Gas	
JP-4	<50
Lube Oil	4500
Diesel	~~4500 oil~~ 760 J
Spike Level	
Unknown Semi-volatile	
Pentacosane	110
Sequence Date	#6-09/05/93
PCB 1221	<0.1
PCB 1232	<0.1
PCB 1016	<0.1
PCB 1242	<0.1
PCB 1248	<0.1
PCB 1254	<0.1
PCB 1260	~~<0.1~~ 340 JN
Spike Level	
Dibutyl Chlorendate	interferences prevented measurement
Sequence Date	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
Endosulfan I	
DDE	
Dieldrin	
Endrin	
Endosulfan II	
DDD	
Endrin Aldehyde	
DDT	
Endosulfan Sulfate	
Endrin Ketone	
Methoxy Chlor	
Chlordane	
Dibutyl Chlorendate	
Spike Level	
Vol Sequence	
CCl4	
TCA	
Benzene	
TCE	
Toluene	
PCE	
Ethylbenzene	
Xylenes	
Gasoline	
Spike level	
BFB	

ICF ID	LIS-SS09-S03	LIS-SS09-S04	LIS-SS09-S05
F&BI Number	1384	1385	1386
Sample Type	soil	soil	soil
Date Received	8/31/93	8/31/93	8/31/93
% Dry Weight	101	99	99
Sequence Date	#6-09/02/93	#6-09/02/93	#6-09/02/93
Leaded Gas			
JP-4	<50	<50	<50
Lube Oil	4500	<100	<100
Diesel	~~4500~~ oil J 13000 J	<50	<50
Spike Level			
Unknown Semi-volatile			
Pentacosane	105	105	88
Sequence Date	#6-09/02/93, #6-09/05/93	#6-09/02/93	#6-09/02/93
PCB 1221	<1	<0.1	<0.1
PCB 1232	<1	<0.1	<0.1
PCB 1016	<1	<0.1	<0.1
PCB 1242	<1	<0.1	<0.1
PCB 1248	<1	<0.1	<0.1
PCB 1254	<1	<0.1	<0.1
PCB 1260	~~180~~ 14 JN	2 JN	0.1
Spike Level			
Dibutyl Chlorendate	interferences prevented measurement	97	84
Sequence Date			
alpha-BHC			
beta-BHC			
gamma-BHC			
delta-BHC			
Heptachlor			
Aldrin			
Heptachlor Epoxide			
Endosulfan I			
DDE			
Dieldrin			
Endrin			
Endosulfan II			
DDD			
Endrin Aldehyde			
DDT			
Endosulfan Sulfate			
Endrin Ketone			
Methoxy Chlor			
Chlordane			
Dibutyl Chlorendate			
Spike Level			
Vol Sequence			
CCl4			
TCA			
Benzene			
TCE			
Toluene			
PCE			
Ethylbenzene			
Xylenes			
Gasoline			
Spike level			
BFB			

Computed by Jack at 1 Aug

ICF ID	LIS-SS09-S05	LIS-SS09-S05	LIS-SS09-S05	LIS-SS09-S06
F&BI Number	1386 dup	1386 ms	1386 msd	1387
Sample Type	soil	soil	soil	soil
Date Received	8/31/93	8/31/93	8/31/93	8/31/93
% Dry Weight	99			95
Sequence Date	#6-09/02/93	#6-09/02/93	#6-09/02/93	#6-09/02/93
Leaded Gas				
JP-4	<50			<50
Lube Oil	<100			<100
Diesel	<50	100	90	<50 J
Spike Level		500	500	
Unknown Semi-volatile				70
Pentacosane	120	107	104	113
Sequence Date	#6-09/02/93	#6-09/02/93	#6-09/02/93	#6-09/02/93
PCB 1221	<0.1			<0.1
PCB 1232	<0.1			<0.1
PCB 1016	<0.1			<0.1
PCB 1242	<0.1			<0.1
PCB 1248	<0.1			<0.1
PCB 1254	<0.1	102	88	<0.1
PCB 1260	0.1			~~0.2~~ 1.4 JN
Spike Level		5	5	
Dibutyl Chlorendate	97	97	91	103
Sequence Date				#6-09/02/93
alpha-BHC				<0.01
beta-BHC				<0.01
gamma-BHC				<0.01
delta-BHC				<0.01
Heptachlor				<0.01
Aldrin				<0.01
Heptachlor Epoxide				<0.01
Endosulfan I				~~0.03~~ R
DDE				<0.01
Dieldrin				<0.01
Endrin				<0.01
Endosulfan II				<0.01
DDD				<0.01
Endrin Aldehyde				~~0.02~~ R
DDT				<0.01
Endosulfan Sulfate				~~0.02~~ R
Endrin Ketone				<0.01
Methoxy Chlor				~~<0.1~~ < 0.5
Chlordane				<10
Dibutyl Chlorendate				86
Spike Level				
Vol Sequence				
CCl4				
TCA				
Benzene				
TCE				
Toluene				
PCE				
Ethylbenzene				
Xylenes				
Gasoline				
Spike level				
BFB				

Corrected by Lab 9/1 Amy D.

ICF ID	LIS-SS09-S07	LIS-SS09-S08
F&BI Number	1388	1389
Sample Type	soil	soil
Date Received	8/31/93	8/31/93
% Dry Weight	97	98
Sequence Date	#6-09/02/93	#6-09/02/93
Leaded Gas		
JP-4	<50	<50
Lube Oil	<100	12000
Diesel	<50	~~12000~~ oil J 30000
Spike Level		
Unknown Semi-volatile		
Pentacosane	95	106
Sequence Date	#6-09/02/93	#6-09/02/93
PCB 1221	<0.1	<1
PCB 1232	<0.1	<1
PCB 1016	<0.1	<1
PCB 1242	<0.1	<1
PCB 1248	<0.1	<1
PCB 1254	<0.1	<1
PCB 1260	<0.1	~~180~~ 380JN
Spike Level		
Dibutyl Chlorendate	91	>150 outside recovery limits
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence		
CCl4		
TCA		
Benzene		
TCE		
Toluene		
PCE		
Ethylbenzene		
Xylenes		
Gasoline		
Spike level		
BFB		

Completed by Smk 10 Aug 95

ICF ID	LIS-SS09-S09
F&BI Number	1390
Sample Type	soil
Date Received	8/31/93
% Dry Weight	98
Sequence Date	#6-09/02/93
Leaded Gas	
JP-4	<50
Lube Oil	2700
Diesel	~~2700~~ oil J
Spike Level	4960
Unknown Semi-volatile	
Pentacosane	115
Sequence Date	#6-09/02/93
PCB 1221	<1
PCB 1232	<1
PCB 1016	<1
PCB 1242	<1
PCB 1248	<1
PCB 1254	<1
PCB 1260	~~260 outside calibration range~~ 350 JN
Spike Level	
Dibutyl Chlorendate	interferences prevented measurement
Sequence Date	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
Endosulfan I	
DDE	
Dieldrin	
Endrin	
Endosulfan II	
DDD	
Endrin Aldehyde	
DDT	
Endosulfan Sulfate	
Endrin Ketone	
Methoxy Chlor	
Chlordane	
Dibutyl Chlorendate	
Spike Level	
Vol Sequence	
CCl4	
TCA	
Benzene	
TCE	
Toluene	
PCE	
Ethylbenzene	
Xylenes	
Gasoline	
Spike level	
BFB	

Compiled by Spike 10/29/93

ICF ID	LIS-SS09-S10	LIS-SS09-S11
F&BI Number	1391	1392
Sample Type	soil	soil
Date Received	8/31/93	8/31/93
% Dry Weight	98	95
Sequence Date	#6-09/02/93	#6-09/02/93
Leaded Gas		
JP-4	<50	<50
Lube Oil	230	<100
Diesel	<50 J	<50
Spike Level		
Unknown Semi-volatile		
Pentacosane	114	101
Sequence Date	#6-09/02/93	#6-09/02/93
PCB 1221	<0.1	<0.1
PCB 1232	<0.1	<0.1
PCB 1016	<0.1	<0.1
PCB 1242	<0.1	<0.1
PCB 1248	<0.1	<0.1
PCB 1254	<0.1	<0.1
PCB 1260	~~1~~ 22 JN	<0.1
Spike Level		
Dibutyl Chlorendate	interferences prevented measurement	94
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence		
CCl4		
TCA		
Benzene		
TCE		
Toluene		
PCE		
Ethylbenzene		
Xylenes		
Gasoline		
Spike level		
BFB		

Compiled by SMF 10/29/93

ICF ID	LIS-SS09-S12
F&BI Number	1393
Sample Type	soil
Date Received	8/31/93
% Dry Weight	97
Sequence Date	#6-09/02/93
Leaded Gas	
JP-4	<50
Lube Oil	13000
Diesel	~~13000~~ 25000 oil J
Spike Level	
Unknown Semi-volatile	
Pentacosane	118
Sequence Date	#6-09/02/93
PCB 1221	<1
PCB 1232	<1
PCB 1016	<1
PCB 1242	<1
PCB 1248	<1
PCB 1254	<1
PCB 1260	~~500~~ outside calibration range 550 JN
Spike Level	
Dibutyl Chlorendate	interferences prevented measurement
Sequence Date	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
Endosulfan I	
DDE	
Dieldrin	
Endrin	
Endosulfan II	
DDD	
Endrin Aldehyde	
DDT	
Endosulfan Sulfate	
Endrin Ketone	
Methoxy Chlor	
Chlordane	
Dibutyl Chlorendate	
Spike Level	
Vol Sequence	
CCl4	
TCA	
Benzene	
TCE	
Toluene	
PCE	
Ethylbenzene	
Xylenes	
Gasoline	
Spike level	
BFB	

Completed by SMF 10/19/93

ANALYTICAL DATA SHEETS FOR THE WATER GALLERY (AOC3)

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-4
Client Sample ID :LIS-AOC3-SW01
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/02/93
Collected :08/30/93 @ 13:20 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8240				
Chloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromomethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Methylene Chloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Carbon Disulfide	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
12-Dichloroethene(total	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chloroform	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
2-Butanone	0.010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
cis-1,3-Dichloropropene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Benzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
trans-1,3-Dichloroprope	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromoform	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
4-Methyl-2-Pentanone	0.010	U	mg/L	EPA 8240		09/01	09/01	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Toluene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Styrene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Xylene (total)	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5533 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-3
Client Sample ID :LIS-AOC3-SW01 CAPE-LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70345
Report Completed :10/28/93
Collected :08/30/93 @ 13:20 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Chlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Benzyl Alcohol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachloroethane	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Nitrobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Isophorone	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Nitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Benzoic Acid	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Naphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Chloroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Nitroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Dimethylphthalate	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Acenaphthylene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
3-Nitroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Acenaphthene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Nitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1929

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-3
Client Sample ID :LIS-AOC3-SW01 CAPE-LIS
Matrix :WATER

Qualifier/Comment

Dibenzofuran	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Diethylphthalate	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Fluorene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
4-Nitroaniline	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Hexachlorobenzene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Pentachlorophenol	0.010	U	mg/L	EPA 8270 (J) -D.1	09/06	10/01	MTT
Phenanthrene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Anthracene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Fluoranthene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Pyrene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Chrysene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270	09/06	10/01	MTT
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA n/a			
Aluminum	0.10	U	mg/L	EPA 6010 (J) - J.1	09/08	09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010	09/08	09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010	09/08	09/10	DLG
Barium	0.10		mg/L	EPA 6010	09/08	09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010	09/08	09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010	09/08	09/10	DLG
Calcium	41		mg/L	EPA 6010	09/08	09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010	09/08	09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010	09/08	09/10	DLG
Copper	0.050	U	mg/L	EPA 6010	09/08	09/10	DLG
Iron	0.10	U	mg/L	EPA 6010	09/08	09/10	DLG
Lead	0.10	U	mg/L	EPA 6010	09/08	09/10	DLG
Magnesium	8.9		mg/L	EPA 6010	09/08	09/10	DLG
Manganese	0.050	U	mg/L	EPA 6010	09/08	09/10	DLG
Molybdenum	0.050	U	mg/L	EPA 6010	09/08	09/10	DLG
Nickel	0.050	U	mg/L	EPA 6010	09/08	09/10	DLG
Potassium	5.0	U	mg/L	EPA 6010	09/08	09/10	DLG
Selenium	0.10	U	mg/L	EPA 6010	09/08	09/10	DLG
Silver	0.050	U	mg/L	EPA 6010	09/08	09/10	DLG
Sodium	4.4		mg/L	EPA 6010	09/08	09/10	DLG

CAP 3.21 94 5.23 94

Compiled by SMF 11.16.94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-3
Client Sample ID :LIS-AOC3-SW01 CAPE-LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Thallium	0.0050	U	mg/L	EPA 7841		09/08 09/08	BMW
Vanadium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Zinc	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Dissolved Metals Analys	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Barium	0.10		mg/L	EPA 6010		09/08 09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Calcium	41		mg/L	EPA 6010		09/08 09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Copper	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Iron	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Lead	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Magnesium	8.9		mg/L	EPA 6010		09/08 09/10	DLG
Manganese	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Molybdenum	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Nickel	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Potassium	5.0	U	mg/L	EPA 6010		09/08 09/10	DLG
Selenium	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Silver	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Sodium	4.6		mg/L	EPA 6010		09/08 09/10	DLG
Thallium	0.0050	U	mg/L	EPA 7841		09/08 09/08	BMW
Vanadium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Zinc	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	5.0	U	mg/L	EPA 9060		09/10	CMR
...TOC Concentration	5.0	U	mg/L	EPA 9060		09/10	CMR
Residue, Non-Filterable	2.5		mg/L	EPA 160.2		09/02 09/02	GPP
Residue,Filterable(TDS)	235		mg/L	EPA 160.1	500	09/14	RJK

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-8
Client Sample ID :LIS-AOC3-GW01
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ 14:22 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director: STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8240				
Chloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromomethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Methylene Chloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Carbon Disulfide	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
12-Dichloroethene(total	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chloroform	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
2-Butanone	0.010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
cis-1,3-Dichloropropene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Benzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
trans-1,3-Dichloroprope	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromoform	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
4-Methyl-2-Pentanone	0.010	U	mg/L	EPA 8240		09/01	09/01	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Toluene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Styrene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Xylene (total)	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-1
Client Sample ID :LIS-AOC3-GW01 CAPE-LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70348
Report Completed :10/27/93
Collected :08/30/93 @ 14:22 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroethyl)ether	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Chlorophenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
1,3-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
1,4-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Benzyl Alcohol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
1,2-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Methylphenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroisopropyl)e	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Methylphenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
n-Nitroso-di-n-Propylam	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachloroethane	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Nitrobenzene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Isophorone	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Nitrophenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dimethylphenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Benzoic Acid	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroethoxy)Meth	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dichlorophenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
1,2,4-Trichlorobenzene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Naphthalene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Chloroaniline	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachlorobutadiene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Chloro-3-Methylphenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Methylnaphthalene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachlorocyclopentadie	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4,6-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4,5-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Chloronaphthalene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Nitroaniline	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Dimethylphthalate	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Acenaphthylene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2,6-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
3-Nitroaniline	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
Acenaphthene	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dinitrophenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Nitrophenol	0.011	U	mg/L	EPA 8270		09/06	10/01	MTT

COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-1
Client Sample ID :LIS-AOC3-GW01 CAPE-LIS
Matrix :WATER

Qualifiers/Comments

Dibenzofuran	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
2,4-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Diethylphthalate	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Chlorophenyl-Phenylet	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Fluorene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Nitroaniline	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
4,6-Dinitro-2-Methylphe	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
n-Nitrosodiphenylamine	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Bromophenyl-Phenyleth	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Hexachlorobenzene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Pentachlorophenol	0.011	U	mg/L	EPA 8270 (J)-D.1		09/06 10/01	MTT
Phenanthrene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Anthracene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
di-n-Butylphthalate	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Fluoranthene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Pyrene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Butylbenzylphthalate	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
3,3-Dichlorobenzidine	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(a)Anthracene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Chrysene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
bis(2-Ethylhexyl)Phthal	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
di-n-Octylphthalate	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(b)Fluoranthene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(k)Fluoranthene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(a)Pyrene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Indeno(1,2,3-cd)Pyrene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Dibenz(a,h)Anthracene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(g,h,i)Perylene	0.011	U	mg/L	EPA 8270		09/06 10/01	MTT
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Barium	0.087		mg/L	EPA 6010		09/10 09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Calcium	41		mg/L	EPA 6010		09/10 09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Iron	0.12		mg/L	EPA 6010		09/10 09/14	DFL
Lead	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Magnesium	8.4		mg/L	EPA 6010		09/10 09/14	DFL
Manganese	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010		09/10 09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Silver	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Sodium	5.1		mg/L	EPA 6010		09/10 09/21	DFL

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ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-1
Client Sample ID :LIS-AOC3-GW01 CAPE-LIS
Matrix :WATER

Thallium	0.0050	U	mg/L	EPA 7841		09/09 09/10	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Zinc	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Dissolved Metals Analys	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Barium	0.085		mg/L	EPA 6010		09/10 09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Calcium	41		mg/L	EPA 6010		09/10 09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Iron	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Lead	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Magnesium	8.4		mg/L	EPA 6010		09/10 09/14	DFL
Manganese	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010		09/10 09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Silver	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Sodium	5.3		mg/L	EPA 6010		09/10 09/14	DFL
Thallium	0.0050	U	mg/L	EPA 7841		09/10 09/21	DFL
Vanadium	0.050	U	mg/L	EPA 6010		09/09 09/10	KAW
Zinc	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
						09/10 09/14	DFL
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	5.0	U	mg/L	EPA 9060		10/13	CMR
...TOC Concentration	5.0	U	mg/L	EPA 9060		10/13	CMR
Residue,Filterable(TDS)	183		mg/L	EPA 160.1	500	09/16 09/17	RJK

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
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TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-7
Client Sample ID :LIS-AOC3-GW01 CAPE-LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70345
Report Completed :10/28/93
Collected :08/30/93 @ 14:22 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Residue, Non-Filterable	4.5		mg/L	EPA 160.2			09/02	TAV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

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ANCHORAGE, AK 99518
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FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-9
Client Sample ID :LIS-AOC3-GW02
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ 15:00 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D. FINAL RESULTS.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8240				
Chloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromomethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Methylene Chloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Carbon Disulfide	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
12-Dichloroethene(total	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chloroform	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
2-Butanone	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
cis-1,3-Dichloropropene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Benzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
trans-1,3-Dichloroprope	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromoform	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
4-Methyl-2-Pentanone	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Toluene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Styrene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Xylene (total)	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-9
Client Sample ID :LIS-AOC3-GW02
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Barium	0.13		mg/L	EPA 6010	09/08 09/10	DL
Beryllium	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Cadmium	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Calcium	41		mg/L	EPA 6010	09/08 09/10	DL
Chromium	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Cobalt	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Copper	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Iron	0.10	U	mg/L	EPA 6010	09/08 09/10	DL
Lead	0.10	U	mg/L	EPA 6010	09/08 09/10	DL
Magnesium	8.7		mg/L	EPA 6010	09/08 09/10	DL
Manganese	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Molybdenum	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Nickel	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Potassium	5.0	U	mg/L	EPA 6010	09/08 09/10	DL
Selenium	0.10	U	mg/L	EPA 6010	09/08 09/10	DL
Silver	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Sodium	5.0		mg/L	EPA 6010	09/08 09/10	DL
Thallium	0.005	U	mg/L	EPA 7841	09/08 09/08	BM
Vanadium	0.050	U	mg/L	EPA 6010	09/08 09/10	DL
Zinc	0.050	U	mg/L	EPA 6010	09/08 09/10	DL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-2
Client Sample ID :LIS-AOC3-GW02 CAPE-LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70348
Report Completed :10/27/93
Collected :08/30/93 @ 15:00 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Chlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Benzyl Alcohol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachloroethane	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Nitrobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Isophorone	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Nitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Benzoic Acid	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Naphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Chloroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Nitroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Dimethylphthalate	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Acenaphthylene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
3-Nitroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Acenaphthene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Nitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-2
Client Sample ID :LIS-AOC3-GW02 CAPE-LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Dibenzofuran	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Diethylphthalate	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Fluorene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Nitroaniline	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Hexachlorobenzene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Pentachlorophenol	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Phenanthrene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Anthracene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Fluoranthene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Pyrene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Chrysene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Dissolved Metals Analys	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Barium	0.12		mg/L	EPA 6010		09/10 09/14	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Calcium	41		mg/L	EPA 6010		09/10 09/14	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Copper	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Iron	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Lead	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Magnesium	8.4		mg/L	EPA 6010		09/10 09/14	DFL
Manganese	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Potassium	5.0	U	mg/L	EPA 6010		09/10 09/14	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/10 09/14	DFL
Silver	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Sodium	5.3		mg/L	EPA 6010		09/10 09/21	DFL

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1968

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-2
Client Sample ID :LIS-AOC3-GW02 CAPE-LIS
Matrix :WATER

Thallium	0.0050	U	mg/L	EPA 7841		09/09 09/10	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/10 09/14	DFL
Zinc	0.080		mg/L	EPA 6010		09/10 09/14	DFL
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	5.0	U	mg/L	EPA 9060		09/13	CMR
...TOC Concentration	5.0	U	mg/L	EPA 9060		09/13	CMR
Residue, Non-Filterable	4		mg/L	EPA 160.2		09/03	TAV

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-8
Client Sample ID :LIS-AOC3-GW02 CAPE-LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70345
Report Completed :10/28/93
Collected :08/30/93 @ 15:00 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Residue,Filterable(TDS)	176		mg/L	EPA 160.1	500		09/14	RJK

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-10
Client Sample ID :LIS-AOC3-GW03
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ 15:30 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D. FINAL RESULTS.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8240				
Chloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromomethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Methylene Chloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Carbon Disulfide	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
12-Dichloroethene(total	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chloroform	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
2-Butanone	0.010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
cis-1,3-Dichloropropene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Benzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
trans-1,3-Dichloroprope	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Bromoform	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
4-Methyl-2-Pentanone	0.010	U	mg/L	EPA 8240		09/01	09/01	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Toluene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Styrene	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Xylene (total)	0.0010	U	mg/L	EPA 8240		09/01	09/01	MCM
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-10
Client Sample ID :LIS-AOC3-GW03
Matrix :WATER

Barium	0.092		mg/L	EPA 6010		09/08 09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Calcium	43		mg/L	EPA 6010		09/08 09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Copper	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Iron	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Lead	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Magnesium	9.3		mg/L	EPA 6010		09/08 09/10	DLG
Manganese	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Molybdenum	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Nickel	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Potassium	5.0	U	mg/L	EPA 6010		09/08 09/10	DLG
Selenium	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Silver	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Sodium	5.3		mg/L	EPA 6010		09/08 09/10	DLG
Thallium	0.005	U	mg/L	EPA 7841		09/08 09/08	BMW
Vanadium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Zinc	0.17		mg/L	EPA 6010		09/08 09/10	DLG
Dissolved Metals Analys	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Barium	0.090		mg/L	EPA 6010		09/08 09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Calcium	42		mg/L	EPA 6010		09/08 09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Copper	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Iron	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Lead	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Magnesium	8.8		mg/L	EPA 6010		09/08 09/10	DLG
Manganese	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Molybdenum	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Nickel	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Potassium	5.0	U	mg/L	EPA 6010		09/08 09/10	DLG
Selenium	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Silver	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Sodium	4.6		mg/L	EPA 6010		09/08 09/10	DLG
Thallium	0.005	U	mg/L	EPA 7841		09/08 09/08	BMW
Vanadium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Zinc	0.21		mg/L	EPA 6010		09/08 09/10	DLG

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1959

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-3
Client Sample ID :LIS-AOC3-GW03 CAPE-LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70348
Report Completed :10/27/93
Collected :08/30/93 @ 15:30 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON. LID BROKEN ON 1 CONTAINER.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Chlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Benzyl Alcohol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachloroethane	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Nitrobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Isophorone	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Nitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Benzoic Acid	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Naphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Chloroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2-Nitroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Dimethylphthalate	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Acenaphthylene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
3-Nitroaniline	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
Acenaphthene	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT
4-Nitrophenol	0.010	U	mg/L	EPA 8270		09/06	10/01	MTT

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-3
Client Sample ID :LIS-AOC3-GW03 CAPE-LIS
Matrix :WATER

Dibenzofuran	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Diethylphthalate	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Fluorene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Nitroaniline	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Hexachlorobenzene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Pentachlorophenol	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Phenanthrene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Anthracene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Fluoranthene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Pyrene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Chrysene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270		09/06 10/01	MTT
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	5.0	U	mg/L	EPA 9060		09/13	CMR
...TOC Concentration	5.0	U	mg/L	EPA 9060		09/13	CMR
Residue, Non-Filterable	4		mg/L	EPA 160.2		09/03	TAV
Residue,Filterable(TDS)	180		mg/L	EPA 160.1	500	09/16 09/17	RJK

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-1
Client Sample ID :LIS-A0C3-2GW04 CAPE LISB.
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 14:20 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260 (J)-A.1		09/21	09/21	MCM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

3-30-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1929

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-1
Client Sample ID :LIS-A0C3-2GW04 CAPE LISB.
Matrix :WATER

Qualifiers/Comments

Methylene Chloride	0.0010	U	mg/L	EPA 8260 (J) A.1	09/21	09/21	MCM
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Toluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Semivolatile Organics				EPA 8270			
Phenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2-Chlorophenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Benzyl Alcohol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2-Methylphenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
4-Methylphenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Hexachloroethane	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Nitrobenzene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Isophorone	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2-Nitrophenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Benzoic Acid	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Naphthalene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
4-Chloroaniline	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV

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COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
5533 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-1
Client Sample ID :LIS-A0C3-2GW04 CAPE LISB.
Matrix :WATER

Qualifiers/Comments

2-Nitroaniline	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Dimethylphthalate	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Acenaphthylene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
3-Nitroaniline	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Acenaphthene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
4-Nitrophenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Dibenzofuran	0.010	U	mg/L	EPA 8270 (J)-D.1	09/17	10/22	GV
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Diethylphthalate	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Fluorene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
4-Nitroaniline	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Hexachlorobenzene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Pentachlorophenol	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Phenanthrene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Anthracene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Fluoranthene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Pyrene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Chrysene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270 (J)-D.1	09/17	10/22	GV
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270 (J)-D.1	09/17	10/22	GV
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270 (J)-D.1	09/17	10/22	GV
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270	09/17	10/22	GV
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA n/a			
Aluminum	0.10	U	mg/L	EPA 6010 (J)-J.1	09/18	09/22	DFL
Antimony	0.10	U	mg/L	EPA 6010	09/18	09/22	DFL
Arsenic	0.10	U	mg/L	EPA 6010	09/18	09/22	DFL
Barium	0.073		mg/L	EPA 6010	09/18	09/22	DFL
Beryllium	0.050	U	mg/L	EPA 6010	09/18	09/22	DFL
Cadmium	0.050	U	mg/L	EPA 6010	09/18	09/22	DFL
Calcium	32		mg/L	EPA 6010	09/18	09/22	DFL
Chromium	0.050	U	mg/L	EPA 6010	09/18	09/22	DFL
Cobalt	0.10	U	mg/L	EPA 6010	09/18	09/22	DFL
Copper	0.050	U	mg/L	EPA 6010	09/18	09/22	DFL
Iron	0.10	U	mg/L	EPA 6010 (J)-J.1	09/18	09/22	DFL
Lead	0.10	U	mg/L	EPA 6010	09/18	09/22	DFL

5-21-94
2-23-94

Compiled
CMQ 11.16.94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-1
Client Sample ID :LIS-A0C3-2GW04 CAPE LISB.
Matrix :WATER

...33 B STREE
ANCHORAGE, AK 9951
TEL (907) 562-234
FAX (907) 561-530

Magnesium	7.0		mg/L	EPA 6010	09/18	09/22	DI
Manganese	0.050	U	mg/L	EPA 6010	09/18	09/22	DI
Molybdenum	0.050	U	mg/L	EPA 6010	09/18	09/22	DI
Nickel	0.050	U	mg/L	EPA 6010	09/18	09/22	DI
Potassium	5.0	U	mg/L	EPA 6010	09/18	09/24	DI
Selenium	0.10	U	mg/L	EPA 6010	09/18	09/22	DI
Silver	0.050	U	mg/L	EPA 6010	09/18	09/22	DI
Sodium	4.8		mg/L	EPA 6010	09/18	09/22	DI
Thallium	0.0050	U	mg/L	EPA 7841	09/18	09/23	KA
Vanadium	0.050	U	mg/L	EPA 6010	09/18	09/22	DI
Zinc	0.19		mg/L	EPA 6010	09/18	09/22	DI

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

ICF ID	LIS-AOC3-SW01	LIS-AOC3-GW01	LIS-AOC3-GW02
F&BI Number	1380	1570	1571
Sample Type	water	water	water
Date Received	8/31/93	9/1/93	9/1/93
% Dry Weight			
Sequence Date	#5-09/01/93		
Leaded Gas			
JP-4	<200		
Lube Oil	<2000		
Diesel	~~<200~~ <1000		
Spike Level			
Unknown Semi-volatile			
Pentacosane	120		
Sequence Date	#5-09/01/93		
PCB 1221	<2 J	<2 J	
PCB 1232	<2		
PCB 1016	<2		
PCB 1242	<2		
PCB 1248	<2		
PCB 1254	<2		
PCB 1260	<2		
Spike Level			
Dibutyl Chlorendate	96		
Sequence Date	#5-09/01/93	#6-09/03/93	#6-09/03/93
alpha-BHC	<0.2	<0.2 J	<0.2
beta-BHC	<0.2	<0.2	<0.2
gamma-BHC	<0.2	<0.2	<0.2
delta-BHC	<0.2	<0.2	<0.2
Heptachlor	<0.2	<0.2	<0.2
Aldrin	<0.2	<0.2	<0.2
Heptachlor Epoxide	<0.2	<0.2	<0.2
Endosulfan I	<0.2	<0.2	<0.2
DDE	<0.2	<0.2	<0.2
Dieldrin	<0.2	<0.2	<0.2
Endrin	<0.2	<0.2	<0.2
Endosulfan II	<0.2	<0.2	<0.2
DDD	<0.2	<0.2	<0.2
Endrin Aldehyde	<0.2	<0.2	<0.2
DDT	<0.2	<0.2	<0.2
Endosulfan Sulfate	<0.2	<0.2	<0.2
Endrin Ketone	<0.2	<0.2	<0.2
Methoxy Chlor	~~<2~~ <10	<10 ~~<2~~	<2
Chlordane	<10	<10	<10
Dibutyl Chlorendate	142	141	
Spike Level			
Vol Sequence			
CCl4			
TCA			
Benzene			
TCE			
Toluene			
PCE			
Ethylbenzene			
Xylenes			
Gasoline			
Spike level			
BFB			

Computer SW

PCB results not reported. Raw data could not be found

data unvalidated - could not locate raw data.

ICF ID	LIS-AOC3-GW03	LIS-AOC3-2GW04
F&BI Number	1572	1928
Sample Type	water	water
Date Received	9/1/93	9/13/93
% Dry Weight		
Sequence Date		#6-09/13/93
Leaded Gas		
JP-4		
Lube Oil		
Diesel		
Spike Level		
Unknown Semi-volatile		
Pentacosane		
Sequence Date		#6-09/13/93
PCB 1221	<2 J	<2
PCB 1232		<2
PCB 1016		<2
PCB 1242		<2
PCB 1248		<2
PCB 1254		<2
PCB 1260		<2
Spike Level		
Dibutyl Chlorendate		158
Sequence Date	#6-09/03/93	#6-09/13/93
alpha-BHC	<0.2 J	<0.2 J
beta-BHC	<0.2	<0.2
gamma-BHC	<0.2	<0.2
delta-BHC	<0.2	<0.2
Heptachlor	<0.2	<0.2
Aldrin	<0.2	<0.2
Heptachlor Epoxide	<0.2	<0.2
Endosulfan I	<0.2	<0.2
DDE	<0.2	<0.2
Dieldrin	<0.2	<0.2
Endrin	<0.2	<0.2
Endosulfan II	<0.2	<0.2
DDD	<0.2	<0.2
Endrin Aldehyde	<0.2	<0.2
DDT	<0.2	<0.2
Endosulfan Sulfate	<0.2	<0.2
Endrin Ketone	<0.2	<0.2
Methoxy Chlor	<10 <2	<2 <10 J
Chlordane	<10	<10 J
Dibutyl Chlorendate	160 outside recovery limits	160 outside recovery limits
Spike Level		
Vol Sequence		
CCl4		
TCA		
Benzene		
TCE		
Toluene		
PCE		
Ethylbenzene		
Xylenes		
Gasoline		
Spike level		
BFB		

ANALYTICAL DATA SHEETS FOR BACKGROUND (BKGD)

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-2
Client Sample ID :LIS-BKGD-S01
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ 14:50 hr
Received :08/31/93 @ 12:00 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Bromobenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Bromochloromethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Bromodichloromethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Bromoform	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Bromomethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
n-Butylbenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
sec-Butylbenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
tert-Butylbenzne	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Carbon Tetrachloride	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Chlorobenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Chloroethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Chloroform	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Chloromethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
2-Chlorotoluene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
4-Chlorotoluene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Dibromochloromethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
12Dibromo3Chloropropane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,2-Dibromoethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Dibromomethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,2-Dichlorobenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,3-Dichlorobenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,4-Dichlorobenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Dichlorodifluoromethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,1-Dichloroethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,2-Dichloroethane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,1-Dichloroethene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
cis-1,2-Dichloroethene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
trans1,2-Dichloroethene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,2-Dichloropropane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,3-Dichloropropane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
2,2-Dichloropropane	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
1,1-Dichloropropene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Ethylbenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Hexachlorobutadiene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
Isopropylbenzene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM
p-Isopropyltoluene	0.040	U	mg/Kg	EPA 8260		09/01	09/07	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-2
Client Sample ID :LIS-BKGD-S01
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
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Methylene Chloride	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
Napthalene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
n-Propylbenzene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
Styrene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1112-Tetrachloroethane	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1122-Tetrachloroethane	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
Tetrachloroethene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
Toluene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1,2,3-Trichlorobenzene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1,2,4-Trichlorobenzene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1,1,1-Trichloroethane	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1,1,2-Trichloroethane	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
Trichloroethene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
Trichlorofluoromethane	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1,2,3-Trichloropropane	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1,2,4-Trimethylbenzene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
1,3,5-Trimethylbenzene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
Vinyl Chloride	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
p+m-Xylene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI
o-Xylene	0.040	U	mg/Kg	EPA 8260	09/01 09/07	KWI

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

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ANCHORAGE, AK 99518
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REPORT of ANALYSIS

Chemlab Ref.# :93.4477-1
Client Sample ID :LIS-BKGD-S01 CAPE-LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70345
Report Completed :10/28/93
Collected :08/30/93 @ 14:50 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. AND JEFF J. DAWSON. 8270: SAMPLE EXCEEDED EXTRACTION HOLDING TIME. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
bis(2-Chloroethyl)ether	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2-Chlorophenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
1,3-Dichlorobenzene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
1,4-Dichlorobenzene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Benzyl Alcohol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
1,2-Dichlorobenzene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2-Methylphenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
bis(2-Chloroisopropyl)e	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
4-Methylphenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
n-Nitroso-di-n-Propylam	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Hexachloroethane	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Nitrobenzene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Isophorone	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2-Nitrophenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2,4-Dimethylphenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Benzoic Acid	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
bis(2-Chloroethoxy)Meth	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2,4-Dichlorophenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
1,2,4-Trichlorobenzene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Naphthalene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
4-Chloroaniline	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Hexachlorobutadiene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
4-Chloro-3-Methylphenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2-Methylnaphthalene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Hexachlorocyclopentadie	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2,4,6-Trichlorophenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2,4,5-Trichlorophenol	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2-Chloronaphthalene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2-Nitroaniline	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Dimethylphthalate	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Acenaphthylene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
2,6-Dinitrotoluene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
3-Nitroaniline	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV
Acenaphthene	0.410	U	mg/Kg	EPA 8270		09/14	10/21	GV

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5633 B STREET
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REPORT of ANALYSIS

Chemlab Ref.# :93.4477-1
Client Sample ID :LIS-BKGD-S01 CAPE-LIS
Matrix :SOIL

Qualifier Comments

2,4-Dinitrophenol	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
4-Nitrophenol	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Dibenzofuran	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
2,4-Dinitrotoluene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Diethylphthalate	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
4-Chlorophenyl-Phenylet	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Fluorene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
4-Nitroaniline	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
4,6-Dinitro-2-Methylphe	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
n-Nitrosodiphenylamine	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
4-Bromophenyl-Phenyleth	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Hexachlorobenzene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Pentachlorophenol	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Phenanthrene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Anthracene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
di-n-Butylphthalate	1.61	B	mg/Kg	EPA 8270	(U) - E.1	09/14 10/21	GV
Fluoranthene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Pyrene	0.410	U	mg/Kg	EPA 8270	original by CBV 3-14-94	09/14 10/21	GV
Butylbenzylphthalate	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
3,3-Dichlorobenzidine	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(a)Anthracene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Chrysene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
bis(2-Ethylhexyl)Phthal	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
di-n-Octylphthalate	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(b)Fluoranthene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(k)Fluoranthene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(a)Pyrene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Indeno(1,2,3-cd)Pyrene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Dibenz(a,h)Anthracene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(g,h,i)Perylene	0.410	U	mg/Kg	EPA 8270		09/14 10/21	GV
Sample Preparation	---			EPA 3050 Digest		Composited Shf 11/16/94	
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA n/a			
Aluminum	4700		mg/Kg	EPA 6010		09/08 09/20	DFL
Antimony	95	U	mg/Kg	EPA 6010	(J) - J.1	09/08 09/20	DFL
Arsenic	9.5	U	mg/Kg	EPA 6010		09/08 09/20	DFL
Barium	590		mg/Kg	EPA 6010		09/08 09/20	DFL
Beryllium	4.8	U	mg/Kg	EPA 6010		09/08 09/20	DFL
Cadmium	48	U	mg/Kg	EPA 6010		09/08 09/20	DFL
Calcium	240000		mg/Kg	EPA 6010		09/08 09/20	DFL
Chromium	9.3		mg/Kg	EPA 6010		09/08 09/20	DFL
Cobalt	11		mg/Kg	EPA 6010		09/08 09/20	DFL
Copper	16		mg/Kg	EPA 6010		09/08 09/20	DFL
Iron	25000		mg/Kg	EPA 6010		09/08 09/20	DFL
Lead	9.5	U	mg/Kg	EPA 6010	~~(J) - 6.1~~	09/08 09/20	DFL
Magnesium	34000		mg/Kg	EPA 6010	(J) - 6.1, J.1	09/08 09/20	DFL
Manganese	1000		mg/Kg	EPA 6010		09/08 09/20	DFL
Molybdenum	4.8	U	mg/Kg	EPA 6010		09/08 09/20	DFL
Nickel	33		mg/Kg	EPA 6010		09/08 09/20	DFL
Potassium	2100		mg/Kg	EPA 6010		09/08 09/21	DFL

CAP 3-23-94 5-11-94

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REPORT of ANALYSIS

Chemlab Ref.# :93.4477-1
Client Sample ID :LIS-BKGD-S01 CAPE-LIS
Matrix :SOIL

Qualifier/Comments

Selenium	95	U	mg/Kg	EPA 6010 (J)-J.1	09/08	09/21	DFL
Silver	48	U	mg/Kg	EPA 6010	09/08	09/21	DFL
Sodium	89		mg/Kg	EPA 6010	09/08	09/21	DFL
Thallium	0.51	U	mg/Kg	EPA 7841	09/08	09/10	KAW
Vanadium	19		mg/Kg	EPA 6010	09/08	09/20	DFL
Zinc	130		mg/Kg	EPA 6010 (J)-G.1	09/08	09/20	DFL
TOC, Soil	77900		mg/Kg	PSEP Ref Lab			

OK 3-23-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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ANCHORAGE, AK 99518
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REPORT of ANALYSIS

Chemlab Ref.# :93.4481-4
Client Sample ID :LIS-BKGD-S02 CAPE-LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70348
Report Completed :10/27/93
Collected :08/30/93 @ 15:45 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON. 8270: SAMPLE EXTRACTION HOLDING TIME WAS EXCEEDED. B - THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Bromobenzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Bromochloromethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Bromodichloromethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Bromoform	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Bromomethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
n-Butylbenzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
sec-Butylbenzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
tert-Butylbenzne	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Carbon Tetrachloride	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Chlorobenzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Chloroethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Chloroform	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Chloromethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
2-Chlorotoluene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
4-Chlorotoluene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Dibromochloromethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
12Dibromo3Chloropropane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,2-Dibromoethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Dibromomethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,2-Dichlorobenzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,3-Dichlorobenzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,4-Dichlorobenzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Dichlorodifluoromethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,1-Dichloroethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,2-Dichloroethane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,1-Dichloroethene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
cis-1,2-Dichloroethene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
trans1,2-Dichloroethene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,2-Dichloropropane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,3-Dichloropropane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
2,2-Dichloropropane	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
1,1-Dichloropropene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Ethylbenzene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM
Hexachlorobutadiene	0.030	U	mg/Kg	EPA 8260		09/13	09/14	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-4
Client Sample ID :LIS-BKGD-S02 CAPE-LIS
Matrix :SOIL

5633 B STREET
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TEL: (907) 562-2343
FAX: (907) 561-5301

Isopropylbenzene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
p-Isopropyltoluene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Methylene Chloride	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Napthalene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
n-Propylbenzene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Styrene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1112-Tetrachloroethane	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1122-Tetrachloroethane	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Tetrachloroethene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Toluene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1,2,3-Trichlorobenzene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1,2,4-Trichlorobenzene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1,1,1-Trichloroethane	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1,1,2-Trichloroethane	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Trichloroethene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Trichlorofluoromethane	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1,2,3-Trichloropropane	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1,2,4-Trimethylbenzene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
1,3,5-Trimethylbenzene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Vinyl Chloride	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
p+m-Xylene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
o-Xylene	0.030	U	mg/Kg	EPA 8260	09/13	09/14	KWM
Semivolatile Organics				EPA 8270			
Phenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
bis(2-Chloroethyl)ether	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
2-Chlorophenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
1,3-Dichlorobenzene	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
1,4-Dichlorobenzene	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
Benzyl Alcohol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
1,2-Dichlorobenzene	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
2-Methylphenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
bis(2-Chloroisopropyl)e	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
4-Methylphenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
n-Nitroso-di-n-Propylam	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
Hexachloroethane	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
Nitrobenzene	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
Isophorone	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
2-Nitrophenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
2,4-Dimethylphenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
Benzoic Acid	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
bis(2-Chloroethoxy)Meth	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
2,4-Dichlorophenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
1,2,4-Trichlorobenzene	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
Naphthalene	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
4-Chloroaniline	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
Hexachlorobutadiene	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
4-Chloro-3-Methylphenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
2-Methylnaphthalene	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
Hexachlorocyclopentadie	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV
2,4,6-Trichlorophenol	0.250	U	mg/Kg	EPA 8270	09/14	10/21	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-4
Client Sample ID :LIS-BKGD-S02 CAPE-LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2,4,5-Trichlorophenol	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
2-Chloronaphthalene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
2-Nitroaniline	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Dimethylphthalate	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Acenaphthylene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
2,6-Dinitrotoluene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
3-Nitroaniline	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Acenaphthene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
2,4-Dinitrophenol	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
4-Nitrophenol	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Dibenzofuran	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
2,4-Dinitrotoluene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Diethylphthalate	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
4-Chlorophenyl-Phenylet	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Fluorene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
4-Nitroaniline	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
4,6-Dinitro-2-Methylphe	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
n-Nitrosodiphenylamine	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
4-Bromophenyl-Phenyleth	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Hexachlorobenzene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Pentachlorophenol	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Phenanthrene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Anthracene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
di-n-Butylphthalate	2.19	B	mg/Kg	EPA 8270		09/14 10/21	GV
Fluoranthene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Pyrene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Butylbenzylphthalate	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
3,3-Dichlorobenzidine	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(a)Anthracene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Chrysene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
bis(2-Ethylhexyl)Phthal	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
di-n-Octylphthalate	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(b)Fluoranthene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(k)Fluoranthene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(a)Pyrene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Indeno(1,2,3-cd)Pyrene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Dibenz(a,h)Anthracene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Benzo(g,h,i)Perylene	0.250	U	mg/Kg	EPA 8270		09/14 10/21	GV
Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	17000		mg/Kg	EPA 6010		09/10 09/23	DFL
Antimony	61	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Arsenic	61	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Barium	1100		mg/Kg	EPA 6010		09/10 09/23	DFL
Beryllium	31	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Cadmium	31	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Calcium	2700		mg/Kg	EPA 6010		09/10 09/23	DFL
Chromium	33		mg/Kg	EPA 6010		09/10 09/23	DFL
Cobalt	13		mg/Kg	EPA 6010		09/10 09/23	DFL

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-4
Client Sample ID :LIS-BKGD-S02 CAPE-LIS
Matrix :SOIL

Copper	36		mg/Kg	EPA 6010	09/10 09/23	DFL
Iron	28000		mg/Kg	EPA 6010	09/10 09/23	DFL
Lead	61	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Magnesium	5100		mg/Kg	EPA 6010	09/10 09/23	DFL
Manganese	270		mg/Kg	EPA 6010	09/10 09/23	DFL
Molybdenum	3.1	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Nickel	60		mg/Kg	EPA 6010	09/10 09/23	DFL
Potassium	2600		mg/Kg	EPA 6010	09/10 09/24	DFL
Selenium	61	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Silver	31	U	mg/Kg	EPA 6010	09/10 09/23	DFL
Sodium	100		mg/Kg	EPA 6010	09/10 09/24	DFL
Thallium	0.31	U	mg/Kg	EPA 7841	09/10 09/13	KAW
Vanadium	46		mg/Kg	EPA 6010	09/10 09/23	DFL
Zinc	130		mg/Kg	EPA 6010	09/10 09/23	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-5
Client Sample ID :LIS-BKGD-S03 CAPE-LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70348
Report Completed :10/27/93
Collected :08/30/93 @ 16:20 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON. 8270 SAMPLE WAS NOT ANALIZED DUE TO FAILURE DURING EXTRACTION.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromobenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromochloromethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromodichloromethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromoform	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromomethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
n-Butylbenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
sec-Butylbenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
tert-Butylbenzne	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Carbon Tetrachloride	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Chlorobenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Chloroethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Chloroform	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Chloromethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
2-Chlorotoluene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
4-Chlorotoluene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Dibromochloromethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
12Dibromo3Chloropropane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,2-Dibromoethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Dibromomethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,2-Dichlorobenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,3-Dichlorobenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,4-Dichlorobenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Dichlorodifluoromethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,1-Dichloroethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,2-Dichloroethane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,1-Dichloroethene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
cis-1,2-Dichloroethene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
trans1,2-Dichloroethene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,2-Dichloropropane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,3-Dichloropropane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
2,2-Dichloropropane	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,1-Dichloropropene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Ethylbenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Hexachlorobutadiene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Isopropylbenzene	0.160	U	mg/Kg	EPA 8260		09/01	09/14	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-5
Client Sample ID :LIS-BKGD-S03 CAPE-LIS
Matrix :SOIL

p-Isopropyltoluene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Methylene Chloride	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Napthalene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
n-Propylbenzene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Styrene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1112-Tetrachloroethane	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1122-Tetrachloroethane	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Tetrachloroethene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Toluene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,2,3-Trichlorobenzene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,2,4-Trichlorobenzene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,1,1-Trichloroethane	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,1,2-Trichloroethane	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Trichloroethene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Trichlorofluoromethane	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,2,3-Trichloropropane	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,2,4-Trimethylbenzene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,3,5-Trimethylbenzene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Vinyl Chloride	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
p+m-Xylene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
o-Xylene	0.160	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	5000		mg/Kg	EPA 6010		09/10 09/23	DFL
Antimony	110	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Arsenic	11	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Barium	940		mg/Kg	EPA 6010		09/10 09/23	DFL
Beryllium	5.4	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Cadmium	54	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Calcium	26000		mg/Kg	EPA 6010		09/10 09/23	DFL
Chromium	13		mg/Kg	EPA 6010		09/10 09/23	DFL
Cobalt	11	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Copper	71		mg/Kg	EPA 6010		09/10 09/23	DFL
Iron	11000		mg/Kg	EPA 6010		09/10 09/23	DFL
Lead	11	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Magnesium	2400		mg/Kg	EPA 6010		09/10 09/23	DFL
Manganese	780		mg/Kg	EPA 6010		09/10 09/23	DFL
Molybdenum	5.4	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Nickel	80		mg/Kg	EPA 6010		09/10 09/23	DFL
Potassium	540	U	mg/Kg	EPA 6010		09/10 09/24	DFL
Selenium	110	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Silver	54	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Sodium	120		mg/Kg	EPA 6010		09/10 09/24	DFL
Thallium	0.52	U	mg/Kg	EPA 7841		09/10 09/13	KAW
Vanadium	32		mg/Kg	EPA 6010		09/10 09/23	DFL
Zinc	250		mg/Kg	EPA 6010		09/10 09/23	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-6
Client Sample ID :LIS-BKGD-S04 CAPE-LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70348
Report Completed :10/27/93
Collected :08/30/93 @ 16:35 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON. 8270 SAMPLE WAS NOT ANALIZED DUE TO FAILURE DURING EXTRACTION.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromobenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromochloromethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromodichloromethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromoform	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Bromomethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
n-Butylbenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
sec-Butylbenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
tert-Butylbenzne	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Carbon Tetrachloride	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Chlorobenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Chloroethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Chloroform	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Chloromethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
2-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
4-Chlorotoluene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Dibromochloromethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
12Dibromo3Chloropropane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,2-Dibromoethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Dibromomethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,2-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,3-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,4-Dichlorobenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Dichlorodifluoromethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,1-Dichloroethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,2-Dichloroethane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,1-Dichloroethene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
cis-1,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
transl,2-Dichloroethene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,3-Dichloropropane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
2,2-Dichloropropane	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
1,1-Dichloropropene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Ethylbenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Hexachlorobutadiene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM
Isopropylbenzene	0.100	U	mg/Kg	EPA 8260		09/01	09/14	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1939

REPORT of ANALYSIS

Chemlab Ref.# :93.4481-6
Client Sample ID :LIS-BKGD-S04 CAPE-LIS
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

p-Isopropyltoluene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Methylene Chloride	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Napthalene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
n-Propylbenzene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Styrene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1112-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1122-Tetrachloroethane	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Tetrachloroethene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Toluene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,2,3-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,2,4-Trichlorobenzene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,1,1-Trichloroethane	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,1,2-Trichloroethane	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Trichloroethene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Trichlorofluoromethane	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,2,3-Trichloropropane	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,2,4-Trimethylbenzene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
1,3,5-Trimethylbenzene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Vinyl Chloride	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
p+m-Xylene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
o-Xylene	0.100	U	mg/Kg	EPA 8260		09/01 09/14	KWM
Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	10500		mg/Kg	EPA 6010		09/10 09/23	DFL
Antimony	69	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Arsenic	69	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Barium	2000		mg/Kg	EPA 6010		09/10 09/23	DFL
Beryllium	35	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Cadmium	35	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Calcium	8900		mg/Kg	EPA 6010		09/10 09/23	DFL
Chromium	24		mg/Kg	EPA 6010		09/10 09/23	DFL
Cobalt	17		mg/Kg	EPA 6010		09/10 09/23	DFL
Copper	50		mg/Kg	EPA 6010		09/10 09/23	DFL
Iron	39000		mg/Kg	EPA 6010		09/10 09/23	DFL
Lead	69	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Magnesium	2000		mg/Kg	EPA 6010		09/10 09/23	DFL
Manganese	910		mg/Kg	EPA 6010		09/10 09/23	DFL
Molybdenum	35	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Nickel	34		mg/Kg	EPA 6010		09/10 09/23	DFL
Potassium	570		mg/Kg	EPA 6010		09/10 09/24	DFL
Selenium	69	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Silver	35	U	mg/Kg	EPA 6010		09/10 09/23	DFL
Sodium	110		mg/Kg	EPA 6010		09/10 09/24	DFL
Thallium	0.35	U	mg/Kg	EPA 7841		09/10 09/13	KAW
Vanadium	58		mg/Kg	EPA 6010		09/10 09/23	DFL
Zinc	67		mg/Kg	EPA 6010		09/10 09/23	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-3
Client Sample ID :LIS-BKGD-SD01
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ 14:10 hr
Received :08/31/93 @ 12:00 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Bromoform	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Carbon Tetrachloride	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Chloroform	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,4-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Ethylbenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
Isopropylbenzene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI
p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260		09/01	09/07	KWI

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-3
Client Sample ID :LIS-BKGD-SD01
Matrix :SOIL

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
Napthalene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
n-Propylbenzene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
Styrene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
Toluene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1,2,3-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1,2,4-Trichlorobenzene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
Trichloroethene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1,2,4-Trimethylbenzene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
1,3,5-Trimethylbenzene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
p+m-Xylene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM
o-Xylene	0.025	U	mg/Kg	EPA 8260	09/01	09/07	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5533 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-2
Client Sample ID :LIS-BKGD-SD01 CAPE-LIS
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70345
Report Completed :10/28/93
Collected :08/30/93 @ 14:10 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. AND JEFF J. DAWSON. 8270: SAMPLE WAS RE-EXTRACTED 9-14-93 TO VERIFY EXTRACTION. B = THIS FLAG IS USED WHEN THE ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
bis(2-Chloroethyl)ether	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2-Chlorophenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
1,3-Dichlorobenzene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
1,4-Dichlorobenzene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Benzyl Alcohol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
1,2-Dichlorobenzene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2-Methylphenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
bis(2-Chloroisopropyl)e	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
4-Methylphenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
n-Nitroso-di-n-Propylam	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Hexachloroethane	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Nitrobenzene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Isophorone	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2-Nitrophenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2,4-Dimethylphenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Benzoic Acid	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
bis(2-Chloroethoxy)Meth	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2,4-Dichlorophenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
1,2,4-Trichlorobenzene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Naphthalene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
4-Chloroaniline	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Hexachlorobutadiene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
4-Chloro-3-Methylphenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2-Methylnaphthalene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Hexachlorocyclopentadie	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2,4,6-Trichlorophenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2,4,5-Trichlorophenol	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2-Chloronaphthalene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2-Nitroaniline	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Dimethylphthalate	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
Acenaphthylene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
2,6-Dinitrotoluene	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV
3-Nitroaniline	4.23	U	mg/Kg	EPA 8270		09/13	10/21	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-2
Client Sample ID :LIS-BKGD-SD01 CAPE-LIS
Matrix :SOIL

Qualifiers/Comments

Acenaphthene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
2,4-Dinitrophenol	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
4-Nitrophenol	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Dibenzofuran	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
2,4-Dinitrotoluene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Diethylphthalate	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
4-Chlorophenyl-Phenylet	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Fluorene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
4-Nitroaniline	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
4,6-Dinitro-2-Methylphe	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
n-Nitrosodiphenylamine	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
4-Bromophenyl-Phenyleth	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Hexachlorobenzene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Pentachlorophenol	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Phenanthrene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Anthracene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
di-n-Butylphthalate	20.4	B	mg/Kg	EPA 8270 (J) - E.1	09/13	10/21	GV
Fluoranthene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Pyrene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Butylbenzylphthalate	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
3,3-Dichlorobenzidine	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Benzo(a)Anthracene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Chrysene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
bis(2-Ethylhexyl)Phthal	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
di-n-Octylphthalate	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Benzo(b)Fluoranthene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Benzo(k)Fluoranthene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Benzo(a)Pyrene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Indeno(1,2,3-cd)Pyrene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Dibenz(a,h)Anthracene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV
Benzo(g,h,i)Perylene	4.23	U	mg/Kg	EPA 8270	09/13	10/21	GV

original by CB 3-14-94

Sample Preparation	---			EPA 3050 Digest			
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA n/a			
Aluminum	6300		mg/Kg	EPA 6010	09/08	09/20	DFL
Antimony	63	U	mg/Kg	EPA 6010 (J) - J.1	09/08	09/20	DFL
Arsenic	6.3	U	mg/Kg	EPA 6010	09/08	09/20	DFL
Barium	800		mg/Kg	EPA 6010	09/08	09/20	DFL
Beryllium	3.2	U	mg/Kg	EPA 6010	09/08	09/20	DFL
Cadmium	32	U	mg/Kg	EPA 6010	09/08	09/20	DFL
Calcium	8500		mg/Kg	EPA 6010	09/08	09/20	DFL
Chromium	11		mg/Kg	EPA 6010	09/08	09/20	DFL
Cobalt	6.3	U	mg/Kg	EPA 6010	09/08	09/20	DFL
Copper	12		mg/Kg	EPA 6010	09/08	09/20	DFL
Iron	5400		mg/Kg	EPA 6010	09/08	09/20	DFL
Lead	7.0		mg/Kg	EPA 6010	09/08	09/20	DFL
Magnesium	1000		mg/Kg	EPA 6010 ~~(J) G.1~~	09/08	09/20	DFL
Manganese	15		mg/Kg	EPA 6010 (J) - G.1, J.1	09/08	09/20	DFL
Molybdenum	3.2	U	mg/Kg	EPA 6010	09/08	09/20	DFL
Nickel	13		mg/Kg	EPA 6010	09/08	09/20	DFL

Compiled by SMF 11/6/94

CB 3-23-94
5-11-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-2
Client Sample ID :LIS-BKGD-SD01 CAPE-LIS
Matrix :SOIL

Qualifier Comments

Potassium	640		mg/Kg	EPA 6010	09/08	09/21	DFL
Selenium	63	U	mg/Kg	EPA 6010	09/08	09/20	DFL
Silver	32	U	mg/Kg	EPA 6010 (J)-5.1	09/08	09/20	DFL
Sodium	58		mg/Kg	EPA 6010	09/08	09/20	DFL
Thallium	0.31	U	mg/Kg	EPA 7841	09/08	09/10	KAW
Vanadium	21		mg/Kg	EPA 6010	09/08	09/20	DFL
Zinc	40		mg/Kg	EPA 6010 (J)-6.1	09/08	09/20	DFL
TOC, Soil	25700		mg/Kg	PSEP Ref Lab			

OK 3-23-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

CT&E Ref.# 95.2592 1
Matrix SOIL
Client Sample ID LTR-RKSD-SSD01

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 06/27/95 @ 16:41 hrs.
Collected Date 06/23/95 @ 08:52 hrs.
Received Date 06/25/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	93.1		%	SM17 2540G			06/26/95	ECG
PCBs in Soil	0.02	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2592-2
Matrix SOIL
Client Sample ID LTR-RWSD-SSD02

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 06/27/95 @ 15:41 hrs.
Collected Date 06/23/95 @ 08:54 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	86.6		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.03	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
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U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2502-17
Matrix SOIL
Client Sample ID SPIKE-LIS-BKGD-SSD03

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 06/29/95 @ 16:10 hrs.
Collected Date 06/23/95 @ 08:54 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	86.6		%	SM17 2540G			06/28/95	CAV
PCBs in Soil	0.249		mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2592-18
Matrix SOIL
Client Sample ID SPIKE DUP-LIS-BKGD-SSD02

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINT CAPE LISBURNE ITD

RUSH Order 15769
Printed Date 06/29/95 @ 16:10 hrs.

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	86.6		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.192		mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2592-3
Matrix SOIL
Client Sample ID LIS-BKGD-SSD03-2

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 06/27/95 @ 16:41 hrs.
Collected Date 06/23/95 @ 08:54 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	92.1		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.04	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
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D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2593-4
Matrix SOIL
Client Sample ID LTS-BKGD-SSD04

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 06/27/95 @ 16:41 hrs.
Collected Date 06/23/95 @ 08:56 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	81.1		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.02	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2593-5
Matrix SOIL
Client Sample ID LTA-BKGD-SSD05

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15769
Printed Date 06/27/95 @ 16:41 hrs.
Collected Date 06/23/95 @ 08:55 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M./JEFF DAWSON. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Percent Solids	93.1		%	SM17 2540G			06/26/95	CAV
PCBs in Soil	0.02	U	mg/Kg	EPA 8080		06/26/95	06/27/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2714-7
Matrix SOIL
Client Sample ID LIS-BKGD-5SD08

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE (DEW LINE) IRA
Project# 4196-614-02
PWSID UA

WORK Order 15995
Printed Date 07/14/95 @ 14:07 hrs.
Collected Date 06/27/95 @ 20:08 hrs.
Received Date 06/30/95 @ 10:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.02	U	mg/Kg	EPA 8080		07/03/95	07/07/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2714-8
Matrix SOIL
Client Sample ID LIS-BKGD-5SD09

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE (DEW LINE) IRA
Project# 4196-614-02
PWSID UA

WORK Order 15995
Printed Date 07/14/95 @ 14:07 hrs.
Collected Date 06/27/95 @ 20:31 hrs.
Received Date 06/30/95 @ 10:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Soil	0.09	U	mg/Kg	EPA 8080		07/03/95	07/07/95	ECG
------Aroclor	---							

* See Special Instructions Above
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U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Chemlab Ref.# :93.4476-6
Client Sample ID :LIS-BKGD-SW01
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ 13:40 hr:
Received :08/31/93 @ 12:00 hr:
Technical Director: STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-6
Client Sample ID :LIS-BKGD-SW01
Matrix :WATER

Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Napthalene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Styrene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Toluene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
o-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Semivolatile Organics				EPA 8270			
Phenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Chlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzyl Alcohol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachloroethane	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Nitrobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Isophorone	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Nitrophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzoic Acid	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Naphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Chloroaniline	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-6
Client Sample ID :LIS-BKGD-SW01
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2-Nitroaniline	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Dimethylphthalate	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Acenaphthylene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
3-Nitroaniline	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Acenaphthene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Nitrophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Dibenzofuran	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Diethylphthalate	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Fluorene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Nitroaniline	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Pentachlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Phenanthrene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Anthracene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Fluoranthene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Pyrene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Chrysene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-5
Client Sample ID :LIS-BKGD-SW01 CAPE-LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70345
Report Completed :10/28/93
Collected :08/30/93 @ 13:40 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Barium	0.092		mg/L	EPA 6010		09/08	09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Calcium	41		mg/L	EPA 6010		09/08	09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Copper	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Iron	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Lead	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Magnesium	9.0		mg/L	EPA 6010		09/08	09/10	DLG
Manganese	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Molybdenum	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Nickel	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Potassium	5.0	U	mg/L	EPA 6010		09/08	09/10	DLG
Selenium	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Silver	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Sodium	4.0		mg/L	EPA 6010		09/08	09/10	DLG
Thallium	0.0050	U	mg/L	EPA 7841		09/08	09/08	BMW
Vanadium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Zinc	0.26		mg/L	EPA 6010		09/08	09/10	DLG
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010 (J) - J.1		09/08	09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Barium	0.089		mg/L	EPA 6010		09/08	09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Calcium	41		mg/L	EPA 6010		09/08	09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Copper	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG

3.73.91

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-5
Client Sample ID :LIS-BKGD-SW01 CAPE-LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
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FAX: (907) 561-5301

Iron	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Lead	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Magnesium	8.8		mg/L	EPA 6010		09/08 09/10	DLG
Manganese	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Molybdenum	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Nickel	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Potassium	5.0	U	mg/L	EPA 6010		09/08 09/10	DLG
Selenium	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Silver	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Sodium	3.9		mg/L	EPA 6010		09/08 09/10	DLG
Thallium	0.0050	U	mg/L	EPA 7841		09/08 09/08	BMW
Vanadium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Zinc	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	5.0	U	mg/L	EPA 9060		09/10	CMR
...TOC Concentration	5.0	U	mg/L	EPA 9060		09/10	CMR
Residue, Non-Filterable	2.5		mg/L	EPA 160.2		09/02 09/02	GPP
Residue,Filterable(TDS)	245		mg/L	EPA 160.1	500	09/14	RJK

* See Special Instructions Above
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D = Secondary dilution.

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NA = Not Analyzed
LT = Less Than
GT = Greater Than

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5633 B STREET
ANCHORAGE, AK 99518
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REPORT of ANALYSIS

Chemlab Ref.# :93.4476-7
Client Sample ID :LIS-BKGD-SW02
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ 14:40 hr:
Received :08/31/93 @ 12:00 hr:
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
transi,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-7
Client Sample ID :LIS-BKGD-SW02
Matrix :WATER

Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Napthalene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Styrene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Toluene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
o-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Semivolatile Organics				EPA 8270			
Phenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Chlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzyl Alcohol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachloroethane	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Nitrobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Isophorone	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Nitrophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzoic Acid	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Naphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Chloroaniline	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT

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ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS ACL

Chemlab Ref.# :93.4476-7
Client Sample ID :LIS-BKGD-SW02
Matrix :WATER

2-Nitroaniline	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Dimethylphthalate	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Acenaphthylene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
3-Nitroaniline	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Acenaphthene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
4-Nitrophenol	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Dibenzofuran	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Diethylphthalate	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Fluorene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
4-Nitroaniline	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Hexachlorobenzene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Pentachlorophenol	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Phenanthrene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Anthracene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Fluoranthene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Pyrene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Chrysene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270	09/04 09/27	MT

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-6
Client Sample ID :LIS-BKGD-SW02 CAPE-LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS
Project# :41096-412-01
PWSID :UA

WORK Order :70345
Report Completed :10/28/93
Collected :08/30/93 @ 14:40 hrs.
Received :08/31/93 @ 12:00 hrs.
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C. AND JEFF J. DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Barium	0.079		mg/L	EPA 6010		09/08	09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Calcium	28		mg/L	EPA 6010		09/08	09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Copper	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Iron	0.19		mg/L	EPA 6010		09/08	09/10	DLG
Lead	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Magnesium	4.5		mg/L	EPA 6010		09/08	09/10	DLG
Manganese	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Molybdenum	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Nickel	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Potassium	5.0	U	mg/L	EPA 6010		09/08	09/10	DLG
Selenium	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Silver	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Sodium	5.6		mg/L	EPA 6010		09/08	09/10	DLG
Thallium	0.005	U	mg/L	EPA 7841		09/08	09/08	BMW
Vanadium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Zinc	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Barium	0.073		mg/L	EPA 6010		09/08	09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Calcium	28		mg/L	EPA 6010		09/08	09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010		09/08	09/10	DLG
Copper	0.050	U	mg/L	EPA 6010		09/08	09/10	DLG

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1938

REPORT of ANALYSIS

Chemlab Ref.# :93.4477-6
Client Sample ID :LIS-BKGD-SW02 CAPE-LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Iron	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Lead	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Magnesium	4.5		mg/L	EPA 6010		09/08 09/10	DLG
Manganese	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Molybdenum	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Nickel	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Potassium	5.0	U	mg/L	EPA 6010		09/08 09/10	DLG
Selenium	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Silver	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Sodium	6.0		mg/L	EPA 6010		09/08 09/10	DLG
Thallium	0.005	U	mg/L	EPA 7841		09/08 09/08	BMW
Vanadium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Zinc	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
TOC, Nonpurgable				EPA 9060	n/a		
...TOC Range	14.7-16.3		mg/L	EPA 9060		09/10	CMR
...TOC Concentration	15.6		mg/L	EPA 9060		09/10	CMR
Residue, Non-Filterable	3		mg/L	EPA 160.2		09/02	TAV
Residue,Filterable(TDS)	203		mg/L	EPA 160.1	500	09/14	RJK

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

ICF ID	LIS-BKGD-S01	LIS-BKGD-S01	LIS-BKGD-S02
F&BI Number	1382	1554	1555
Sample Type	soil	soil	soil
Date Received	8/31/93	9/1/93	9/1/93
% Dry Weight	38	55	78
Sequence Date	#6-09/02/93		#6-09/05/93
Leaded Gas			
JP-4	<130		<60
Lube Oil	<160		<120
Diesel	<130		<60
Spike Level			
Unknown Semi-volatile			
Pentacosane	128		105
Sequence Date	#6-09/02/93		
PCB 1221	<0.1		
PCB 1232	<0.1		
PCB 1016	<0.1		
PCB 1242	<0.1		
PCB 1248	<0.1		
PCB 1254	<0.1		
PCB 1260	~~7.8~~ 20 JN		
Spike Level			
Dibutyl Chlorendate	interferences prevented measurement		
Sequence Date	#6-09/02/93		
alpha-BHC	<0.01		
beta-BHC	<0.01		
gamma-BHC	<0.01		
delta-BHC	<0.01		
Heptachlor	<0.01		
Aldrin	<0.01		
Heptachlor Epoxide	<0.01		
Endosulfan I	<0.01		
DDE	co < eluted ~~with~~ dieldrin R		
Dieldrin	~~0.07~~ R		
Endrin	~~<5~~ < 0.05		
Endosulfan II	~~<5~~		
DDD	~~<5~~		
Endrin Aldehyde	~~<5~~		
DDT	~~<5~~		
Endosulfan Sulfate	~~<5~~		
Endrin Ketone	~~<5~~		
Methoxy Chlor	~~<10~~ < 0.5		
Chlordane	<0.5		
Dibutyl Chlorendate	87		
Spike Level			
Vol Sequence		#3&4-09/04/93	#3&4-09/04/93
CCl4		<0.04 J	<0.03 J
TCA		<0.04 J	<0.03 J
Benzene		<0.04	<0.03
TCE		<0.04 J	<0.03 J
Toluene		<0.04	<0.03
PCE		<0.04 J	<0.03 J
Ethylbenzene		<0.04	<0.03
Xylenes		<0.08	<0.06
Gasoline		~~<224~~ J	~~<142~~ J
Spike level			
BFB		100	100

ICF ID	LIS-BKGD-S02	LIS-BKGD-S03	LIS-BKGD-S04	LIS-BKGD-SD01
F&BI Number	1556	1574	1576	1381
Sample Type	soil	soil	soil	soil
Date Received	9/1/93	9/1/93	9/1/93	8/31/93
% Dry Weight		43	33	81
Sequence Date		#6-09/05/93	#6-09/05/93	#6-09/02/93
Leaded Gas				
JP-4		<120	<150	<60
Lube Oil		<240	<300	<120
Diesel		<120	<150	<60
Spike Level				
Unknown Semi-volatile			60 biological	
Pentacosane		125	109	95
Sequence Date	#6-09/05/93	#6-09/05/93	#6-09/05/93	#6-09/02/93
PCB 1221	<0.1	<0.1 ~~<0.2~~	<0.1 ~~<0.3~~	<0.1
PCB 1232	<0.1	<0.1	<0.1	<0.1
PCB 1016	<0.1	<0.1	<0.1	<0.1
PCB 1242	<0.1	<0.1	<0.1	<0.1
PCB 1248	<0.1	<0.1	<0.1	<0.1
PCB 1254	<0.1	<0.1	<0.1	<0.1
PCB 1260	<0.1	<0.1	<0.1	<0.1
Spike Level				
Dibutyl Chlorendate	81	86	112	90
Sequence Date	#6-09/05/93	#6-09/05/93	#6-09/05/93	#6-09/02/93
alpha-BHC	<0.1 J	<0.01 J	<0.01 J	<0.01
beta-BHC	<0.01	<0.01	<0.01	<0.01
gamma-BHC	<0.01	<0.01	<0.01	<0.01
delta-BHC	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	<0.01	<0.01	<0.01	<0.01
Endosulfan I	<0.01	<0.01	<0.01	<0.01
DDE	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	<0.01	<0.01
Endosulfan II	<0.01	<0.01	<0.01	<0.01
DDD	<0.01	<0.01	<0.01	<0.01
Endrin Aldehyde	<0.01	<0.01	<0.01	<0.01
DDT	<0.01	<0.01	<0.01	<0.01
Endosulfan Sulfate	<0.01	<0.01	<0.01	<0.01
Endrin Ketone	<0.01	<0.01	<0.01	<0.01
Methoxy Chlor	~~<0.1~~ <0.5 J	~~<0.8~~ ~~<0.1~~	~~<0.8~~ ~~<0.1~~	~~<0.1~~ <0.5
Chlordane	<0.5 J	<0.5	<0.5	<0.5
Dibutyl Chlorendate	81	86	112	87
Spike Level				
Vol Sequence		#3&4-09/04/93	#3&4-09/04/93	
CCl4		<0.04 J	<0.06 J	
TCA		<0.04	<0.06 J	
Benzene		<0.04 J	<0.06	
TCE		<0.04 J	<0.06 J	
Toluene		<0.04	<0.06	
PCE		<0.04 J	<0.06 J	
Ethylbenzene		<0.04	<0.06	
Xylenes		<0.08	<0.12	
Gasoline		~~<2~~ 24 J	~~<1~~ 26 J	
Spike level				
BFB		103	96	

Compiled by SMC 1 Aug 95

ICF ID	LIS-BKGD-SD01	LIS-BKGD-SD01	LIS-BKGD-SD01	LIS-BKGD-SD01
F&BI Number	1557	1557 dup	1557 ms	1557 msd
Sample Type	soil	soil	soil	soil
Date Received	9/1/93	9/1/93	9/1/93	9/1/93
% Dry Weight	82			
Sequence Date	#6-09/05/93	#6-09/05/93		#6-09/05/93
Leaded Gas				
JP-4	<60	<60		
Lube Oil	<120	<120		
Diesel	<60	<60		105
Spike Level				500
Unknown Semi-volatile				
Pentacosane	120	112		113
Sequence Date	#6-09/05/93	#6-09/05/93		#6-09/05/93
PCB 1221	<0.1	<0.1		
PCB 1232	<0.1	<0.1		
PCB 1016	<0.1	<0.1		
PCB 1242	<0.1	<0.1		
PCB 1248	<0.1	<0.1		
PCB 1254	<0.1	<0.1		120
PCB 1260	<0.1	<0.1		
Spike Level				5
Dibutyl Chlorendate	76	92		107
Sequence Date				
alpha-BHC				
beta-BHC				
gamma-BHC				
delta-BHC				
Heptachlor				
Aldrin				
Heptachlor Epoxide				
Endosulfan I				
DDE				
Dieldrin				
Endrin				
Endosulfan II				
DDD				
Endrin Aldehyde				
DDT				
Endosulfan Sulfate				
Endrin Ketone				
Methoxy Chlor				
Chlordane				
Dibutyl Chlorendate				
Spike Level				
Vol Sequence	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93	#3&4-09/04/93
CCl4	<0.02 J	<0.02		
TCA	<0.02 J	<0.02	72	82
Benzene	<0.02	<0.02	93	96
TCE	<0.02 J	<0.02	97	89
Toluene	<0.02	<0.02	130	74
PCE	<0.02 J	<0.02	141	92
Ethylbenzene	<0.02	<0.02	127	73
Xylenes	<0.04	<0.04	136	85
Gasoline	<12J	<1		
Spike level			1	1
BFB	108	106	108	103

ICF ID	LIS-BKGD-SW01	LIS-BKGD-SW01	LIS-BKGD-SW02
F&BI Number	1562	1564	1566
Sample Type	water	water	water
Date Received	9/1/93	9/1/93	9/1/93
% Dry Weight			
Sequence Date	#6-09/03/93		#6-09/03/93
Leaded Gas			
JP-4	<1000		<1000
Lube Oil	<2000		<2000
Diesel	<1000J		<1000
Spike Level			
Unknown Semi-volatile			
Pentacosane	140		130
Sequence Date	#6-09/03/93		#6-09/03/93
PCB 1221	~~<10~~ <2J		~~<10~~ <2J
PCB 1232	~~<10~~		~~<10~~
PCB 1016	~~<10~~		~~<10~~
PCB 1242	~~<10~~		~~<10~~
PCB 1248	~~<10~~		~~<10~~
PCB 1254	~~<10~~		~~<10~~
PCB 1260	~~<10~~		~~<10~~
Spike Level			
Dibutyl Chlorendate	140		130
Sequence Date	#6-09/03/93		#6-09/03/93
alpha-BHC	<0.2 J		<0.2
beta-BHC	<0.2		<0.2
gamma-BHC	<0.2		<0.2
delta-BHC	<0.2		<0.2
Heptachlor	<0.2		<0.2
Aldrin	<0.2		<0.2
Heptachlor Epoxide	<0.2		<0.2
Endosulfan I	<0.2		<0.2
DDE	<0.2		<0.2
Dieldrin	<0.2		<0.2
Endrin	<0.2		<0.2
Endosulfan II	<0.2		<0.2
DDD	<0.2		<0.2
Endrin Aldehyde	<0.2		<0.2
DDT	<0.2		<0.2
Endosulfan Sulfate	<0.2		<0.2
Endrin Ketone	<0.2		<0.2
Methoxy Chlor	~~<2~~ <10		~~<2~~ <10
Chlordane	<10		<10
Dibutyl Chlorendate	137		129
Spike Level			
Vol Sequence		#1&2-09/04/93	
CCl4		<1J	
TCA		<1J	
Benzene		5 NJ	
TCE		<1J	
Toluene		1 N	
PCE		<1J	
Ethylbenzene		2 N	
Xylenes		5 NJ	
Gasoline		<50J	
Spike level			
BFB		98	

Completed by SAF 1 Aug 95

data unusable/rejected - could not locate raw data

ICF ID	LIS-BKGD-SW02
F&BI Number	1568
Sample Type	water
Date Received	9/1/93
% Dry Weight	
Sequence Date	
Leaded Gas	
JP-4	
Lube Oil	
Diesel	
Spike Level	
Unknown Semi-volatile	
Pentacosane	
Sequence Date	
PCB 1221	
PCB 1232	
PCB 1016	
PCB 1242	
PCB 1248	
PCB 1254	
PCB 1260	
Spike Level	
Dibutyl Chlorendate	
Sequence Date	
alpha-BHC	
beta-BHC	
gamma-BHC	
delta-BHC	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
Endosulfan I	
DDE	
Dieldrin	
Endrin	
Endosulfan II	
DDD	
Endrin Aldehyde	
DDT	
Endosulfan Sulfate	
Endrin Ketone	
Methoxy Chlor	
Chlordane	
Dibutyl Chlorendate	
Spike Level	
Vol Sequence	#1&2-09/04/93
CCl4	<1 J
TCA	<1 J
Benzene	<1
TCE	<1 J
Toluene	<1
PCE	<1 J
Ethylbenzene	2 J
Xylenes	5 NJ
Gasoline	<50 J
Spike level	
BFB	97

Computed by SAF 10/19/93

ANALYTICAL DATA SHEETS FOR QA/QC

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1909

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-3
Client Sample ID :LIS-AB01 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 08:48 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
Chloroform	0.0010	U	mg/L	EPA 8260	UJ/ L.1	09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260	UJ /L.1	09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1958

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-3
Client Sample ID :LIS-AB01 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Methylene Chloride	0.013		mg/L	EPA 8260	J /L.1	09/04 09/04	SGM
Napthalene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Styrene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Toluene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Trichloroethene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	UJ / L.1	09/04 09/04	SGM
p+m-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM
o-Xylene	0.0010	U	mg/L	EPA 8260		09/04 09/04	SGM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-1
Client Sample ID LIS-LF01-AB01
Matrix WATER

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-514-02
PWSID UA

WORK Order 82360
Printed Date 11/02/94 @ 12:55 hrs.
Collected Date 09/12/94 @ 13:05 hrs.
Received Date 09/16/94 @ 11:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Paxton

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON. SEE WORKORDER 94.4763 FOR WATER SPIKE AND SPIKE DUPLICATE.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-1
Client Sample ID LIS-LF01-AB01
Matrix WATER

Isopropylbenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Napthalene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Styrene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Toluene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-5
Client Sample ID :LIS-EB01
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ 15:30 hrs
Received :08/31/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By : Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-5
Client Sample ID :LIS-EB01
Matrix :WATER

Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Napthalene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Styrene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Toluene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
o-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KW
Semivolatile Organics				EPA 8270			
Phenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Chlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Benzyl Alcohol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachloroethane	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Nitrobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Isophorone	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Nitrophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4-Dimethylphenol	0.012		mg/L	EPA 8270	09/04	09/27	MT
Benzoic Acid	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Naphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Chloroaniline	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270	09/04	09/27	MT
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270	09/04	09/27	MT

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-5
Client Sample ID :LIS-EB01
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2-Nitroaniline	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Dimethylphthalate	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Acenaphthylene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
3-Nitroaniline	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Acenaphthene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
4-Nitrophenol	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Dibenzofuran	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Diethylphthalate	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Fluorene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
4-Nitroaniline	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Hexachlorobenzene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Pentachlorophenol	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Phenanthrene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Anthracene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
di-n-Butylphthalate	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Fluoranthene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Pyrene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Chrysene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270		09/04 09/27	MT
Total Metals Analysis	---			-			
ICP Screen, ICF				EPA	n/a		
Aluminum	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Antimony	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Arsenic	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Barium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Beryllium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Cadmium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Calcium	0.21		mg/L	EPA 6010		09/08 09/10	DLG
Chromium	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Cobalt	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG
Copper	0.050	U	mg/L	EPA 6010		09/08 09/10	DLG
Iron	0.11		mg/L	EPA 6010		09/08 09/10	DLG
Lead	0.10	U	mg/L	EPA 6010		09/08 09/10	DLG

COMMERCIAL TESTING & ENGINEERING CO.
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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-5
Client Sample ID :LIS-EB01
Matrix :WATER

Magnesium	0.20	U	mg/L	EPA 6010	09/08	09/10	DL(
Manganese	0.050	U	mg/L	EPA 6010	09/08	09/10	DL(
Molybdenum	0.050	U	mg/L	EPA 6010	09/08	09/10	DL(
Nickel	0.050	U	mg/L	EPA 6010	09/08	09/10	DL(
Potassium	5.0	U	mg/L	EPA 6010	09/08	09/10	DL(
Selenium	0.10	U	mg/L	EPA 6010	09/08	09/10	DL(
Silver	0.050	U	mg/L	EPA 6010	09/08	09/10	DL(
Sodium	0.36		mg/L	EPA 6010	09/08	09/10	DL(
Thallium	0.005	U	mg/L	EPA 7841	09/08	09/08	BM(
Vanadium	0.050	U	mg/L	EPA 6010	09/08	09/10	DL(
Zinc	0.050	U	mg/L	EPA 6010	09/08	09/10	DL(

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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REPORT of ANALYSIS

Chemlab Ref.# :93.4512-1
Client Sample ID :LIS-EB02 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ 08:56 hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

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TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-1
Client Sample ID :LIS-EB02 CAPE LIS
Matrix :WATER

Methylene Chloride	0.012		mg/L	EPA 8260	09/04	09/04	SGM
Napthalene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Styrene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Toluene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	SGM

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REPORT of ANALYSIS

Chemlab Ref.# :93.4513-1
Client Sample ID :LIS-EB02 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70393
Report Completed :09/24/93
Collected :08/31/93 @ 08:56 hr
Received :09/01/93 @ 12:00 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethyl)ether	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,3-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,4-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzyl Alcohol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2-Dichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroisopropyl)e	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
n-Nitroso-di-n-Propylam	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachloroethane	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Nitrobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Isophorone	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dimethylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Benzoic Acid	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
bis(2-Chloroethoxy)Meth	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
1,2,4-Trichlorobenzene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Naphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorobutadiene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Chloro-3-Methylphenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Methylnaphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Hexachlorocyclopentadie	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,6-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4,5-Trichlorophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Chloronaphthalene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2-Nitroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Dimethylphthalate	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthylene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,6-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
3-Nitroaniline	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
Acenaphthene	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
2,4-Dinitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT
4-Nitrophenol	0.011	U	mg/L	EPA 8270		09/07	09/23	MTT

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REPORT of ANALYSIS

Chemlab Ref.# :93.4513-1
Client Sample ID :LIS-EB02 CAPE LIS
Matrix :WATER

Dibenzofuran	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
2,4-Dinitrotoluene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Diethylphthalate	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
4-Chlorophenyl-Phenylet	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Fluorene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
4-Nitroaniline	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
4,6-Dinitro-2-Methylphe	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
n-Nitrosodiphenylamine	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
4-Bromophenyl-Phenyleth	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Hexachlorobenzene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Pentachlorophenol	0.011	U	mg/L	EPA 8270	J / D.1	09/07 09/23	MT
Phenanthrene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Anthracene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
di-n-Butylphthalate	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Fluoranthene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Pyrene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Butylbenzylphthalate	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
3,3-Dichlorobenzidine	0.011	U	mg/L	EPA 8270	J / D.1	09/07 09/23	MT
Benzo(a)Anthracene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Chrysene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
bis(2-Ethylhexyl)Phthal	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
di-n-Octylphthalate	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Benzo(b)Fluoranthene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Benzo(k)Fluoranthene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Benzo(a)Pyrene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Indeno(1,2,3-cd)Pyrene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Dibenz(a,h)Anthracene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT
Benzo(g,h,i)Perylene	0.011	U	mg/L	EPA 8270		09/07 09/23	MT

* See Special Instructions Above
** See Sample Remarks Above
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LT = Less Than
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REPORT of ANALYSIS

Chemlab Ref.# :93.4511-1
Client Sample ID :LIS-EB02 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70389
Report Completed :09/22/93
Collected :08/31/93 @ 08:56 hr:
Received :09/01/93 @ 12:00 hr:
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: J.P. AND JEFF J. DAWSON.

Qualifier Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Barium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Calcium	0.20	U	mg/L	EPA 6010		09/11	09/14	DFI
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Iron	0.10		mg/L	EPA 6010		09/11	09/14	DFI
Lead	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Magnesium	0.20	U	mg/L	EPA 6010		09/11	09/14	DFI
Manganese	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Molybdenum	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Nickel	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Potassium	5.0	U	mg/L	EPA 6010		09/11	09/14	DFI
Selenium	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Silver	0.050	U	mg/L	EPA 6010(J)-J.1		09/11	09/14	DFI
Sodium	0.34		mg/L	EPA 6010		09/11	09/14	DFI
Thallium	0.0050	U	mg/L	EPA 7841		09/10	09/13	KAV
Vanadium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Zinc	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Dissolved Metals Analys	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Antimony	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Arsenic	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Barium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Beryllium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Cadmium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Calcium	0.20	U	mg/L	EPA 6010		09/11	09/14	DFI
Chromium	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI
Cobalt	0.10	U	mg/L	EPA 6010		09/11	09/14	DFI
Copper	0.050	U	mg/L	EPA 6010		09/11	09/14	DFI

CAS 3-21-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4511-1
Client Sample ID :LIS-EB02 CAPE LIS
Matrix :WATER

Qualifier Comments

Iron	0.10	U	mg/L	EPA 6010	09/11	09/14	DFT
Lead	0.10	U	mg/L	EPA 6010	09/11	09/14	DFT
Magnesium	0.20	U	mg/L	EPA 6010	09/11	09/14	DFT
Manganese	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT
Molybdenum	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT
Nickel	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT
Potassium	5.0	U	mg/L	EPA 6010	09/11	09/14	DFT
Selenium	0.10	U	mg/L	EPA 6010	09/11	09/14	DFT
Silver	0.050	U	mg/L	EPA 6010(J)-J.1	09/11	09/14	DFT
Sodium	0.38		mg/L	EPA 6010	09/11	09/14	DFT
Thallium	0.0050	U	mg/L	EPA 7841	09/10	09/13	KAH
Vanadium	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT
Zinc	0.050	U	mg/L	EPA 6010	09/11	09/14	DFT

CD
3-21-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5333 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-2
Client Sample ID :LIS-EB03 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ 16:00 hrs
Received :09/04/93 @ 11:00 hrs
Technical Director:STEPHEN, C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/09	09/09	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-2
Client Sample ID :LIS-EB03 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
Napthalene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
Styrene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
Toluene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/09	09/09	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

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COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-10
Client Sample ID :LIS-2EB04
Matrix :WATER

5333 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 17:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN, C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Hydrocarbons VPH	0.020	U	mg/L	EPA 5030/8015M		09/13	09/13	WLS
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260 (J) - A.1		09/21	09/21	MCM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

3-30-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-10
Client Sample ID :LIS-2EB04
Matrix :WATER

Caution/Comments

Isopropylbenzene	0.0010	U	mg/L	EPA 8260 (5)-#.1	09/21	09/21	MCM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Methylene Chloride	0.0035		mg/L	EPA 8260	09/21	09/21	MCM
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Toluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM

CB
5-30-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
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GT = Greater Than

Commercial Testing & Engineering Co.

SINCE 1908

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4608-5
Client Sample ID	LIS-SS03-3EB01
Matrix	WATER

Client Name	ICF KAISER ENGINEERING	WORK Order	82118	
Ordered By	JEFF DAWSON	Printed Date	10/10/94	@ 11:23 hrs.
Project Name	DEW LINE SP. LISBURNE IRA	Collected Date	09/07/94	@ 14:00 hrs.
Project#	41096-514-02	Received Date	09/09/94	@ 11:30 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Paxton

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & JOHN F.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Liquid	1.00	U	microg/L	EPA 8080		09/14/94	09/16/94	DSM
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
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UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-71204/6/94

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4742-2
Client Sample ID	LIS-LF01-3EB02
Matrix	WATER

Client Name	ICF KAISER ENGINEERING	WORK Order	82363	
Ordered By	JEFF DAWSON	Printed Date	09/27/94	@ 10:07 hrs.
Project Name	DEW LINE IRA	Collected Date	09/11/94	@ 20:00 hrs.
Project#	41096-514-02	Received Date	09/15/94	@ 15:45 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Paxton

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Liquid	0.001	U	mg/L	EPA 8080		09/16/94	09/19/94	DSM
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-712/0-16/94

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

Commercial Testing & Engineering Co.

Environmental Laboratory Services

SINCE 1908

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-4
Client Sample ID	LIS-ST07-3EB03
Matrix	WATER

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@ 16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/09/94	@ 09:37 hrs.
Project#	41096-514-02	Received Date	09/10/94	@ 11:00 hrs.
PWSID	UA			
		Technical Director	STEPHEN C. EDE	

Released By: Shawn Pruton

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Diesel Range Organics	0.100	U	mg/L	AK 102.0 (2-93)		09/13/94	09/29/94	WAA
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM
Toluene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM
Ethylbenzene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM
p&m Xylene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM
o-Xylene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-71:9/046/94

5633 B Street, Anchorage, AK 99518-1600 — Tel: (907) 562-2343 Fax: (907) 561-5301

CT&E Environmental Services Inc.

CT&E Ref.# 95.2593-2
Matrix LIQUID
Client Sample ID LIS-SEB01

Client Name TOP KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15784
Printed Date 06/29/95 @ 16:20 hrs.
Collected Date 06/23/95 @ 15:45 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE
Released By Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962. SAMPLE CONTAINS AN ESTIMATED 0.691 MG/L OF 2-BUTANONE. FINAL RESULTS.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
12Dibrome3Chloropropane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,3 Dichloropropane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM

CT&E Environmental Services Inc.

CT&E Ref.# 95.2593-2
Matrix LIQUID
Client Sample ID LIS-SEB01

Isopropylbenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Napthalene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Styrene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Toluene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,1,2 Trichloroethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2714-3
Matrix WATER
Client Sample ID LIS-5EB02

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE (DEW LINE) IRA
Project# 4196-614-02
PWSID UA

WORK Order 15995
Printed Date 07/14/95 @ 14:07 hrs.
Collected Date 06/27/95 @ 19:17 hrs.
Received Date 06/30/95 @ 10:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
PCBs in Liquid	0.01	U	mg/L	EPA 8080		07/03/95	07/05/95	ECG
------Aroclor	---							

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

ICF ID	LIS-EB01	LIS-EB01	LIS-EB02	LIS-EB02	LIS-EB03
F&BI Number	1558	1561	1510	1542	1625
Sample Type	water	water	water	water	water
Date Received	9/1/93	9/1/93	9/1/93	9/1/93	9/2/93
% Dry Weight					
Sequence Date		#6-09/03/93		#6-09/03/93	#6-09/03/93
Leaded Gas					
JP-4		<1000		<1000	<1000
Lube Oil		<2000		<2000	<2000
Diesel		<1000 J		<1000 J	<1000
Spike Level					
Unknown Semi-volatile					
Pentacosane		130		120	130
Sequence Date		#6-09/03/93		#6-09/03/93	
PCB 1221		<10 <2 J		<10 <2 J	
PCB 1232		<10		<10	
PCB 1016		<10		<10	
PCB 1242		<10		<10	
PCB 1248		<10		<10	
PCB 1254		<10		<10	
PCB 1260		<10		<10	
Spike Level					
Dibutyl Chlorendate		130		120	
Sequence Date		#6-09/03/93		#6-09/03/93	#6-09/03/93
alpha-BHC		<0.2 J		<0.2 J	<0.2
beta-BHC		<0.2		<0.2	<0.2
gamma-BHC		<0.2		<0.2	<0.2
delta-BHC		<0.2		<0.2	<0.2
Heptachlor		<0.2		<0.2	<0.2
Aldrin		<0.2		<0.2	<0.2
Heptachlor Epoxide		<0.2		<0.2	<0.2
Endosulfan I		<0.2		<0.2	<0.2
DDE		<0.2		<0.2	<0.2
Dieldrin		<0.2		<0.2	<0.2
Endrin		<0.2		<0.2	<0.2
Endosulfan II		<0.2		<0.2	<0.2
DDD		<0.2		<0.2	<0.2
Endrin Aldehyde		<0.2		<0.2	<0.2
DDT		<0.2		<0.2	<0.2
Endosulfan Sulfate		<0.2		<0.2	<0.2
Endrin Ketone		<0.2		<0.2	<0.2
Methoxy Chlor		<10 <2		<2 <10 R	<2
Chlordane		<10		<10	<10
Dibutyl Chlorendate		134		119	130
Spike Level					
Vol Sequence	#1&2-09/04/93		#1&2-09/04/93		
CCl4	<10 J		<1 J		
TCA	<10 J		<1 J		
Benzene	<1		<1		
TCE	<10 J		<1 J		
Toluene	<1		<1		
PCE	<1 J		<1 J		
Ethylbenzene	<1		<1		
Xylenes	<2		<2		
Gasoline	<50 J		<50 J		
Spike level					
BFB	86		113		

Corrected by GMF 1 Aug. 95

ICF ID	LIS-EB03	LIS-2EB04
F&BI Number	1628	1924
Sample Type	water	water
Date Received	9/2/93	9/13/93
% Dry Weight		
Sequence Date		#6-09/13/93
Leaded Gas		
JP-4		<2000
Lube Oil		<4000
Diesel		~~<2000~~ <1000
Spike Level		
Unknown Semi-volatile		
Pentacosane		80
Sequence Date		#6-09/13/93
PCB 1221		<2
PCB 1232		<2
PCB 1016		<2
PCB 1242		<2
PCB 1248		<2
PCB 1254		<2
PCB 1260		<2
Spike Level		
Dibutyl Chlorendate		~~80~~ 88
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence	#1&2-09/04/93	
CCl4	<1J	
TCA	<1J	
Benzene	<1	
TCE	<1J	
Toluene	<1	
PCE	<1J	
Ethylbenzene	<1	
Xylenes	<2	
Gasoline	<50J	
Spike level		
BFB	100	

Compiled by Sml as 1 Aug.

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4476-1
Client Sample ID :LIS-TB01
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Client Name :ICF KAISER ENGINEERING
Ordered By :SHERI K ACE
Project Name :DEW LINE RI/FS
Project# :41096-41201
PWSID :UA

WORK Order :70343
Report Completed :09/29/93
Collected :08/30/93 @ hr:
Received :08/31/93 @ 12:00 hr:
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: R.C.C., J.J.D.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	KWI

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Chemlab Ref.# :93.4476-1
Client Sample ID :LIS-TB01
Matrix :WATER

Methylene Chloride	0.0017		mg/L	EPA 8260	09/04	09/04	KWM
Napthalene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
Styrene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
Toluene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/04	09/04	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-2
Client Sample ID :LIS-TB02 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70391
Report Completed :11/03/93
Collected :08/31/93 @ hrs
Received :09/01/93 @ 12:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: JEFF J. DAWSON AND J.P.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromoform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloroform	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/04	09/04	SGM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4512-2
Client Sample ID :LIS-TB02 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Methylene Chloride	0.0028		mg/L	EPA 8260	09/04 09/04	SGM
Napthalene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
Styrene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
Toluene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/04 09/04	SGM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-1
Client Sample ID :LIS-TB03 CAPE LIS
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LIS
Project# :41096-412-01
PWSID :UA

WORK Order :70591
Report Completed :10/28/93
Collected :09/01/93 @ hrs
Received :09/04/93 @ 11:00 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ROBERT C.C.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/08	09/08	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4614-1
Client Sample ID :LIS-TB03 CAPE LIS
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Methylene Chloride	0.0024		mg/L	EPA 8260	09/08	09/08	KWM
Napthalene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
Styrene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
Toluene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/08	09/08	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-9
Client Sample ID :LIS-2TB04
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 11:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

3.30.94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-9
Client Sample ID :LIS-2TB04
Matrix :WATER

Qualifiers / Comments

Methylene Chloride	0.0070		mg/L	EPA 8260 (J)-A.J	09/21	09/21	MCM
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Toluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM

3.30-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

Commercial Testing & Engineering Co.
Environmental Laboratory Services
SINCE 1908

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-6
Client Sample ID LIS-LF01-3TB01
Matrix WATER

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-514-02
PWSID UA

WORK Order 82360
Printed Date 11/02/94 @ 12:57 hrs.
Collected Date 09/11/94 @ 08:00 hrs.
Received Date 09/16/94 @ 11:00 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON. BOTTLES INCORRECTLY LABELED FOR 8240.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/24/94	09/24/94	KWM

5633 B Street, **Anchorage, AK 99518-1600** — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-6
Client Sample ID LIS-LF01-3TB01
Matrix WATER

Isopropylbenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Napthalene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Styrene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Toluene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/24/94	09/24/94	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

5633 B Street, **Anchorage, AK 99518-1600** — Tel: (907) 562-2343 Fax: (907) 561-5301

ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.#	94.4639-3
Client Sample ID	LIS-ST07-3TB01
Matrix	WATER

Client Name	ICF KAISER ENGINEERING	RUSH Order	82116	
Ordered By	JEFF DAWSON	Printed Date	09/30/94	@16:17 hrs.
Project Name	DEW LINE CAPE LISBURNE IRA	Collected Date	09/07/94	@20:00 hrs.
Project#	41096-514-02	Received Date	09/10/94	@11:00 hrs.
PWSID	UA			

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON & SMF.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Aromatics-BTEX				ADEC 18AAC 78				
Benzene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM
Toluene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM
Ethylbenzene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM
p&m Xylene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM
o-Xylene	0.0010	U	mg/L	EPA 8020		09/12/94	09/12/94	SPM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

F-7/12/04/94

Commercial Testing & Engineering Co.
Environmental Laboratory Services
SINCE 1908

5633 B Street
Anchorage, AK 99518-1600
Tel: (907) 562-2343
Fax: (907) 561-5301

REPORT of ANALYSIS

CT&E Ref.# :94.4763-1
Client Sample ID :LIS-ST07-3TB02
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :JEFF DAWSON
Project Name :DEW LINE CAPE LISBURNE IRA
Project# :41096-514-02
PWSID :UA

WORK Order :82368
Printed Date :10/14/94 @ 13:36 hrs.
Collected Date :09/13/94 @ 08:00 hrs.
Received Date :09/16/94 @ 11:00 hrs.
Technical Director :STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
transi,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		09/24	09/24	KWM

F-7:0010/0/94

Commercial Testing & Engineering Co.
Environmental Laboratory Services
SINCE 1908

5633 B Street
Anchorage, AK 99518-1600
Tel: (907) 562-2343
Fax: (907) 561-5301

REPORT of ANALYSIS

CT&E Ref.# :94.4763-1
Client Sample ID :LIS-ST07-3TB02
Matrix :WATER

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
Napthalene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
Styrene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
Toluene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/24	09/24	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

SGS Member of the SGS Group (Société Générale de Surveillance)
ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

CT&E Environmental Services Inc.

Laboratory Division

CT&E Ref.# 95.1850-1
Matrix WATER
Client Sample ID LIZ-LF01-4TB1

Laboratory Analysis Report

Client Name ICF KAISER ENGINEERING
Ordered By JOHN FRERICH
Project Name CAPE LISBURNE-LF01
Project# 41096-614-02
PWSID UA

WORK Order 14633
Printed Date 05/31/95 @ 14:58 hrs.
Collected Date 05/05/95 @ hrs.
Received Date 05/11/95 @ 12:30 hrs.

Technical Director STEPHEN C. EDE

Released By

Sample Remarks: SAMPLE COLLECTED BY: C.C. AND JOHN P. FRERICH.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Bromobenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Bromochloromethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Bromoform	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Bromomethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Chlorobenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Chloroethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Chloroform	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Chloromethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Dibromomethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Ethylbenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		05/15/95	05/15/95	BLS

Rev 3/20/95

CT&E Environmental Services Inc.

CT&E Ref.# 95.1350-1
Matrix WATER
Client Sample ID LIZ-LF01-4TB1

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
Methylene Chloride	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
Napthalene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
Styrene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
Toluene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
1,1,1-Trichloroethane	0.011		mg/L	EPA 8260	05/15/95	05/15/95	BLS
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
Trichloroethene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
p+m-Xylene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS
o-Xylene	0.0010	U	mg/L	EPA 8260	05/15/95	05/15/95	BLS

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2593-3
Matrix LIQUID
Client Sample ID LIS-5TB01

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

RUSH Order 15784
Printed Date 06/29/95 @ 16:20 hrs.
Collected Date 06/23/95 @ 15:20 hrs.
Received Date 06/26/95 @ 09:00 hrs.

Technical Director STEPHEN C. EDE
Released By Stephen C. Ede

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962. FINAL RESULTS.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromoform	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Bromomethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Chloroethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Chloroform	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Chloromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Dibromomethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		06/28/95	06/28/95	KWM

CT&E Environmental Services Inc.

CT&E Ref.# 95.2593-3
Matrix LIQUID
Client Sample ID LIS-5TB01

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Napthalene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Styrene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Toluene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Trichloroethene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM
o-Xylene	0.0010	U	mg/L	EPA 8260	06/28/95	06/28/95	KWM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-10
Matrix WATER
Client Sample ID LIS-5TB02

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEWLINE CAPE LISBURNE IRA
Project# 41096-614-02
PWSID UA

WORK Order 15814
Printed Date 07/13/95 @ 09:17 hrs.
Collected Date 06/26/95 @ 13:00 hrs.
Received Date 06/27/95 @ 08:10 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Preston

Sample Remarks: SAMPLE COLLECTED BY: S.M. QUOTE #1962.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Bromobenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Bromoform	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Bromomethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Chloroethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Chloroform	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM
Isopropylbenzene	0.0010	U	mg/L	EPA 8260		07/03/95	07/03/95	MCM

CT&E Environmental Services Inc.

CT&E Ref.# 95.2610-10
Matrix WATER
Client Sample ID LIS-5TB02

p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
Napthalene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
Styrene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
Toluene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM
o-Xylene	0.0010	U	mg/L	EPA 8260	07/03/95	07/03/95	MCM

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

ICF ID	LIS-TB01	LIS-TB02	LIS-TB03
F&BI Number	1552	1514	1626
Sample Type	water	water	water
Date Received	9/1/93	9/1/93	9/2/93
% Dry Weight			
Sequence Date			
Leaded Gas			
JP-4			
Lube Oil			
Diesel			
Spike Level			
Unknown Semi-volatile			
Pentacosane			
Sequence Date			
PCB 1221			
PCB 1232			
PCB 1016			
PCB 1242			
PCB 1248			
PCB 1254			
PCB 1260			
Spike Level			
Dibutyl Chlorendate			
Sequence Date			
alpha-BHC			
beta-BHC			
gamma-BHC			
delta-BHC			
Heptachlor			
Aldrin			
Heptachlor Epoxide			
Endosulfan I			
DDE			
Dieldrin			
Endrin			
Endosulfan II			
DDD			
Endrin Aldehyde			
DDT			
Endosulfan Sulfate			
Endrin Ketone			
Methoxy Chlor			
Chlordane			
Dibutyl Chlorendate			
Spike Level			
Vol Sequence	#1&2-09/04/93	#1&2-09/04/93	#1&2-09/04/93
CCl4	<1 J	<1 J	<1 J
TCA	<1 J	<1 J	<1 J
Benzene	5 NJ	<1	<1
TCE	<1 J	<1 J	<1 J
Toluene	1 N	<1	<1
PCE	<1 J	<1 J	15 J
Ethylbenzene	1 N	<1	<1
Xylenes	5 NJ	<2	<2
Gasoline	<50 J	<50 J	<50 J
Spike level			
BFB	91	121	99

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5333 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-11
Client Sample ID :LIS-W01
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 18:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. A LARGE UNIDENTIFIED PEAK WAS EVIDENT ON THE 8260 RUN. A LIBRARY SEARCH IDENTIFIED THE PEAK AS 3-METHYL-PENTANE.

Qualifier Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.0010	U	mg/L	EPA 8260 (J)-11.1		09/21	09/21	MCM
Bromobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromodichloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromoform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Bromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
n-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
sec-Butylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
tert-Butylbenzne	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Carbon Tetrachloride	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloroform	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Chloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
4-Chlorotoluene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromochloromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
12Dibromo3Chloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dibromoethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dibromomethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Dichlorodifluoromethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
cis-1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
trans1,2-Dichloroethene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,3-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
2,2-Dichloropropane	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
1,1-Dichloropropene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Ethylbenzene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM
Hexachlorobutadiene	0.0010	U	mg/L	EPA 8260		09/21	09/21	MCM

3.30.94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-11
Client Sample ID :LIS-W01
Matrix :WATER

5533 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

Quality Assurance (J) - A.1

Isopropylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
p-Isopropyltoluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Methylene Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Napthalene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
n-Propylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Styrene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1112-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1122-Tetrachloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Tetrachloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Toluene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trichlorobenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,1-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,1,2-Trichloroethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichloroethene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Trichlorofluoromethane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,3-Trichloropropane	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,2,4-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
1,3,5-Trimethylbenzene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
Vinyl Chloride	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
p+m-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM
o-Xylene	0.0010	U	mg/L	EPA 8260	09/21	09/21	MCM

OK
3-30-94

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1958

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-9
Client Sample ID :LIS-W01 CAPE LISB.
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 17:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By : C. Homestead

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Qualifier Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Chlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
1,4-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Benzyl Alcohol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Methylphenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
4-Methylphenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
n-Nitroso-di-n-Propylam	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Hexachloroethane	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Nitrobenzene	0.010	U	mg/L	EPA 8270	(R)-F.1	09/17	10/24	GV
Isophorone	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Nitrophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Benzoic Acid	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
1,2,4-Trichlorobenzene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Naphthalene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
4-Chloroaniline	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
4-Chloro-3-Methylphenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Nitroaniline	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Dimethylphthalate	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Acenaphthylene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
3-Nitroaniline	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Acenaphthene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
4-Nitrophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV

5-10-94

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1929

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-9
Client Sample ID :LIS-W01 CAPE LISB.
Matrix :WATER

Qualifiers/Comments

Dibenzofuran	0.010	U	mg/L	EPA 8270 (R)-F.1	09/17	10/24	GV
2,4-Dinitrotoluene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Diethylphthalate	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Fluorene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
4-Nitroaniline	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270 ✓	09/17	10/24	GV
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Hexachlorobenzene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Pentachlorophenol	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Phenanthrene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Anthracene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
di-n-Butylphthalate	0.128		mg/L	EPA 8270	09/17	10/24	GV
Fluoranthene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Pyrene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270 (R)-F.1	09/17	10/24	GV
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Chrysene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
bis(2-Ethylhexyl)Phthal	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270	09/17	10/24	GV
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270 ✓	09/17	10/24	GV
Organochlorine Pest				EPA 8080			
Aldrin	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Alpha-BHC	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Beta-BHC	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Delta-BHC	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Gamma-BHC	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Chlordane	0.050	U	mg/L	EPA 8080	09/16	09/23	NRC
4,4'-DDD	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
4,4'-DDE	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
4,4'-DDT	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Dieldrin	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Endosulfan I	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Endosulfan II	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Endosulfan Sulfate	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Endrin	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Endrin Aldehyde	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Heptachlor	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Heptachlor Epoxide	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Methoxychlor	0.005	U	mg/L	EPA 8080	09/16	09/23	NRC
Toxaphene	0.050	U	mg/L	EPA 8080	09/16	09/23	NRC
PCB-1016	0.050	U	mg/L	EPA 8080	09/16	09/23	NRC
PCB-1221	0.050	U	mg/L	EPA 8080	09/16	09/23	NRC

5-10-17

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-9
Client Sample ID :LIS-W01 CAPE LISB.
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

PCB-1232	0.050	U	mg/L	EPA 8080		09/16 09/23	NR
PCB-1242	0.050	U	mg/L	EPA 8080		09/16 09/23	NR
PCB-1248	0.050	U	mg/L	EPA 8080		09/16 09/23	NR
PCB-1254	0.050	U	mg/L	EPA 8080		09/16 09/23	NR
PCB-1260	0.050	U	mg/L	EPA 8080		09/16 09/23	NR
Chlorinated Herbicides				EPA 8150			
2,4-D	0.0005	U	mg/L	EPA 8150		09/16 09/19	NR
2,4-DB	0.0005	U	mg/L	EPA 8150		09/16 09/19	NR
2,4,5-T	0.0005	U	mg/L	EPA 8150		09/16 09/19	NR
2,4,5-TP (Silvex)	0.0005	U	mg/L	EPA 8150		09/16 09/19	NR
Dalapon	0.0005	U	mg/L	EPA 8150		09/16 09/19	NR
Dicamba	0.0005	U	mg/L	EPA 8150		09/16 09/19	NR
Dichloroprop	0.0005	U	mg/L	EPA 8150		09/16 09/19	NR
Dinoseb	0.0005	U	mg/L	EPA 8150		09/16 09/19	NR
MCPA	0.500	U	mg/L	EPA 8150		09/16 09/19	NR
MCPP	0.500	U	mg/L	EPA 8150		09/16 09/19	NR
Total Metals Analysis	---			-			
ICP Screen, ICP				EPA	n/a		
Aluminum	6.7		mg/L	EPA 6010		09/18 09/22	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/18 09/22	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/18 09/22	DFL
Barium	0.83		mg/L	EPA 6010		09/18 09/22	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/18 09/22	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/18 09/22	DFL
Calcium	29		mg/L	EPA 6010		09/18 09/22	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/18 09/22	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/18 09/22	DFL
Copper	0.16		mg/L	EPA 6010		09/18 09/22	DFL
Iron	12		mg/L	EPA 6010		09/18 09/22	DFL
Lead	0.10	U	mg/L	EPA 6010		09/18 09/22	DFL
Magnesium	6.6		mg/L	EPA 6010		09/18 09/22	DFL
Manganese	0.41		mg/L	EPA 6010		09/18 09/22	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/18 09/22	DFL
Nickel	0.051		mg/L	EPA 6010		09/18 09/22	DFL
Potassium	25		mg/L	EPA 6010		09/18 09/22	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/18 09/22	DFL
Silver	0.050	U	mg/L	EPA 6010		09/18 09/22	DFL
Sodium	52		mg/L	EPA 6010		09/18 09/24	DFL
Thallium	0.0050	U	mg/L	EPA 7841		09/18 09/23	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/18 09/22	DFL
Zinc	0.87		mg/L	EPA 6010		09/18 09/22	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-10
Client Sample ID :LIS-W01 DUPLICATE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 17:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN. C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Total Metals Analysis	---			-				
ICP Screen, ICF				EPA	n/a			
Aluminum	5.6		mg/L	EPA 6010		09/18	09/22	DFL
Antimony	0.10	U	mg/L	EPA 6010		09/18	09/22	DFL
Arsenic	0.10	U	mg/L	EPA 6010		09/18	09/22	DFL
Barium	0.77		mg/L	EPA 6010		09/18	09/22	DFL
Beryllium	0.050	U	mg/L	EPA 6010		09/18	09/22	DFL
Cadmium	0.050	U	mg/L	EPA 6010		09/18	09/22	DFL
Calcium	28		mg/L	EPA 6010		09/18	09/22	DFL
Chromium	0.050	U	mg/L	EPA 6010		09/18	09/22	DFL
Cobalt	0.10	U	mg/L	EPA 6010		09/18	09/22	DFL
Copper	0.15		mg/L	EPA 6010		09/18	09/22	DFL
Iron	11		mg/L	EPA 6010		09/18	09/22	DFL
Lead	0.10	U	mg/L	EPA 6010		09/18	09/22	DFL
Magnesium	6.3		mg/L	EPA 6010		09/18	09/22	DFL
Manganese	0.38		mg/L	EPA 6010		09/18	09/22	DFL
Molybdenum	0.050	U	mg/L	EPA 6010		09/18	09/22	DFL
Nickel	0.050	U	mg/L	EPA 6010		09/18	09/22	DFL
Potassium	24		mg/L	EPA 6010		09/18	09/22	DFL
Selenium	0.10	U	mg/L	EPA 6010		09/18	09/22	DFL
Silver	0.050	U	mg/L	EPA 6010		09/18	09/22	DFL
Sodium	49		mg/L	EPA 6010		09/18	09/24	DFL
Thallium	0.0050	U	mg/L	EPA 7841		09/18	09/23	KAW
Vanadium	0.050	U	mg/L	EPA 6010		09/18	09/22	DFL
Zinc	0.81		mg/L	EPA 6010		09/18	09/22	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-11
Client Sample ID :LIS-W01 SPIKE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 17:00 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. 8270: FOR SPIKE/SURROGATE RECOVERIES AND RSD, PLEASE REFER TO QC SUMMARY SHEETS. QNS = QUANTITY NOT SUFFICIENT.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Semivolatile Organics				EPA 8270				
Phenol	0.038		mg/L	EPA 8270		09/17	10/24	GV
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Chlorophenol	0.059		mg/L	EPA 8270		09/17	10/24	GV
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
1,4-Dichlorobenzene	0.050		mg/L	EPA 8270		09/17	10/24	GV
Benzyl Alcohol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Methylphenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
4-Methylphenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
n-Nitroso-di-n-Propylam	0.066		mg/L	EPA 8270		09/17	10/24	GV
Hexachloroethane	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Nitrobenzene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Isophorone	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Nitrophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Benzoic Acid	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
1,2,4-Trichlorobenzene	0.071		mg/L	EPA 8270		09/17	10/24	GV
Naphthalene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
4-Chloroaniline	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
4-Chloro-3-Methylphenol	0.060		mg/L	EPA 8270		09/17	10/24	GV
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2-Nitroaniline	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Dimethylphthalate	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Acenaphthylene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
3-Nitroaniline	0.010	U	mg/L	EPA 8270		09/17	10/24	GV
Acenaphthene	0.075		mg/L	EPA 8270		09/17	10/24	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-11
Client Sample ID :LIS-W01 SPIKE
Matrix :WATER

2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
4-Nitrophenol	0.014		mg/L	EPA 8270	09/17 10/24	GV
Dibenzofuran	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
2,4-Dinitrotoluene	0.073		mg/L	EPA 8270	09/17 10/24	GV
Diethylphthalate	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Fluorene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
4-Nitroaniline	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Hexachlorobenzene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Pentachlorophenol	0.012		mg/L	EPA 8270	09/17 10/24	GV
Phenanthrene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Anthracene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
di-n-Butylphthalate	0.069		mg/L	EPA 8270	09/17 10/24	GV
Fluoranthene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Pyrene	0.075		mg/L	EPA 8270	09/17 10/24	GV
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Chrysene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
bis(2-Ethylhexyl)Phthal	0.124		mg/L	EPA 8270	09/17 10/24	GV
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270	09/17 10/24	GV

Organochlorine Pest			EPA 8080	
Aldrin	QNS		mg/Kg	EPA 8080
Alpha-BHC	QNS		mg/Kg	EPA 8080
Beta-BHC	QNS		mg/Kg	EPA 8080
Delta-BHC	QNS		mg/Kg	EPA 8080
Gamma-BHC	QNS		mg/Kg	EPA 8080
Chlordane	QNS		mg/Kg	EPA 8080
4,4'-DDD	QNS		mg/Kg	EPA 8080
4,4'-DDE	QNS		mg/Kg	EPA 8080
4,4'-DDT	QNS		mg/Kg	EPA 8080
Dieldrin	QNS		mg/Kg	EPA 8080
Endosulfan I	QNS		mg/Kg	EPA 8080
Endosulfan II	QNS		mg/Kg	EPA 8080
Endosulfan Sulfate	QNS		mg/Kg	EPA 8080
Endrin	QNS		mg/Kg	EPA 8080
Endrin Aldehyde	QNS		mg/Kg	EPA 8080
Heptachlor	QNS		mg/Kg	EPA 8080
Heptachlor Epoxide	QNS		mg/Kg	EPA 8080
Methoxychlor	QNS		mg/Kg	EPA 8080
Toxaphene	QNS		mg/Kg	EPA 8080

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES
SINCE 1908

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-11
Client Sample ID :LIS-W01 SPIKE
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

PCB-1016	QNS	mg/Kg	EPA 8080			
PCB-1221	QNS	mg/Kg	EPA 8080			
PCB-1232	QNS	mg/Kg	EPA 8080			
PCB-1242	QNS	mg/Kg	EPA 8080			
PCB-1248	QNS	mg/Kg	EPA 8080			
PCB-1254	QNS	mg/Kg	EPA 8080			
PCB-1260	QNS	mg/Kg	EPA 8080			
Chlorinated Herbicides			EPA 8150			
2,4-D	QNS	mg/L	EPA 8150			
2,4-DB	QNS	mg/L	EPA 8150			
2,4,5-T	QNS	mg/L	EPA 8150			
2,4,5-TP (Silvex)	QNS	mg/L	EPA 8150			
Dalapon	QNS	mg/L	EPA 8150			
Dicamba	QNS	mg/L	EPA 8150			
Dichloroprop	QNS	mg/L	EPA 8150			
Dinoseb	QNS	mg/L	EPA 8150			
MCPA	QNS	mg/L	EPA 8150			
MCPP	QNS	mg/L	EPA 8150			
Total Metals Analysis	---		-			
ICP Screen, ICF			EPA	n/a		
Aluminum	6.8	mg/L	EPA 6010		09/18 09/22	DFL
Antimony	0.73	mg/L	EPA 6010		09/18 09/22	DFL
Arsenic	0.93	mg/L	EPA 6010		09/18 09/22	DFL
Barium	1.76	mg/L	EPA 6010		09/18 09/22	DFL
Beryllium	0.37	mg/L	EPA 6010		09/18 09/22	DFL
Cadmium	0.46	mg/L	EPA 6010		09/18 09/22	DFL
Calcium	38	mg/L	EPA 6010		09/18 09/22	DFL
Chromium	0.98	mg/L	EPA 6010		09/18 09/22	DFL
Cobalt	0.91	mg/L	EPA 6010		09/18 09/22	DFL
Copper	1.05	mg/L	EPA 6010		09/18 09/22	DFL
Iron	12	mg/L	EPA 6010		09/18 09/22	DFL
Lead	0.92	mg/L	EPA 6010		09/18 09/22	DFL
Magnesium	15	mg/L	EPA 6010		09/18 09/22	DFL
Manganese	1.33	mg/L	EPA 6010		09/18 09/22	DFL
Molybdenum	0.93	mg/L	EPA 6010		09/18 09/22	DFL
Nickel	0.96	mg/L	EPA 6010		09/18 09/22	DFL
Potassium	35	mg/L	EPA 6010		09/18 09/22	DFL
Selenium	0.90	mg/L	EPA 6010		09/18 09/22	DFL
Silver	0.16	mg/L	EPA 6010		09/18 09/22	DFL
Sodium	61	mg/L	EPA 6010		09/18 09/24	DFL
Thallium	0.018	mg/L	EPA 7841		09/18 09/23	KAW
Vanadium	0.90	mg/L	EPA 6010		09/18 09/22	DFL
Zinc	1.75	mg/L	EPA 6010		09/18 09/22	DFL

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
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NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4728-12
Client Sample ID :LIS-W01 SPIKE DUPLICATE
Matrix :WATER

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70816
Report Completed :11/08/93
Collected :09/09/93 @ 17:00 hr
Received :09/10/93 @ 15:55 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. SAMPLE WAS QNS FOR 8080 SPIKE. 8270: FOR SPIKE/SURROGATE RECOVERIES AND RSD, PLEASE REFER TO QC SUMMARY SHEETS.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Ini
Semivolatile Organics				EPA 8270				
Phenol	0.033		mg/L	EPA 8270		09/12	10/24	GV
bis(2-Chloroethyl)ether	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2-Chlorophenol	0.053		mg/L	EPA 8270		09/12	10/24	GV
1,3-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
1,4-Dichlorobenzene	0.037		mg/L	EPA 8270		09/12	10/24	GV
Benzyl Alcohol	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
1,2-Dichlorobenzene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2-Methylphenol	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
bis(2-Chloroisopropyl)e	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
4-Methylphenol	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
n-Nitroso-di-n-Propylam	0.049		mg/L	EPA 8270		09/12	10/24	GV
Hexachloroethane	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
Nitrobenzene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
Isophorone	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2-Nitrophenol	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2,4-Dimethylphenol	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
Benzoic Acid	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
bis(2-Chloroethoxy)Meth	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2,4-Dichlorophenol	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
1,2,4-Trichlorobenzene	0.053		mg/L	EPA 8270		09/12	10/24	GV
Naphthalene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
4-Chloroaniline	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
Hexachlorobutadiene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
4-Chloro-3-Methylphenol	0.055		mg/L	EPA 8270		09/12	10/24	GV
2-Methylnaphthalene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
Hexachlorocyclopentadie	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2,4,6-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2,4,5-Trichlorophenol	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2-Chloronaphthalene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2-Nitroaniline	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
Dimethylphthalate	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
Acenaphthylene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
2,6-Dinitrotoluene	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
3-Nitroaniline	0.010	U	mg/L	EPA 8270		09/12	10/24	GV
Acenaphthene	0.062		mg/L	EPA 8270		09/12	10/24	GV

COMMERCIAL TESTING & ENGINEERING CO.
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REPORT of ANALYSIS

Chemlab Ref.# :93.4728-12
Client Sample ID :LIS-W01 SPIKE DUPLICATE
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

2,4-Dinitrophenol	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
4-Nitrophenol	0.023		mg/L	EPA 8270	09/12 10/24	GV
Dibenzofuran	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
2,4-Dinitrotoluene	0.058		mg/L	EPA 8270	09/12 10/24	GV
Diethylphthalate	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
4-Chlorophenyl-Phenylet	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Fluorene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
4-Nitroaniline	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
4,6-Dinitro-2-Methylphe	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
n-Nitrosodiphenylamine	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
4-Bromophenyl-Phenyleth	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Hexachlorobenzene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Pentachlorophenol	0.044		mg/L	EPA 8270	09/12 10/24	GV
Phenanthrene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Anthracene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
di-n-Butylphthalate	0.056		mg/L	EPA 8270	09/12 10/24	GV
Fluoranthene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Pyrene	0.059		mg/L	EPA 8270	09/12 10/24	GV
Butylbenzylphthalate	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
3,3-Dichlorobenzidine	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Benzo(a)Anthracene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Chrysene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
bis(2-Ethylhexyl)Phthal	0.099		mg/L	EPA 8270	09/12 10/24	GV
di-n-Octylphthalate	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Benzo(b)Fluoranthene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Benzo(k)Fluoranthene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Benzo(a)Pyrene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Indeno(1,2,3-cd)Pyrene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Dibenz(a,h)Anthracene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV
Benzo(g,h,i)Perylene	0.010	U	mg/L	EPA 8270	09/12 10/24	GV

Organochlorine Pest			EPA 8080	
Aldrin	QNS		mg/Kg	EPA 8080
Alpha-BHC	QNS		mg/Kg	EPA 8080
Beta-BHC	QNS		mg/Kg	EPA 8080
Delta-BHC	QNS		mg/Kg	EPA 8080
Gamma-BHC	QNS		mg/Kg	EPA 8080
Chlordane	QNS		mg/Kg	EPA 8080
4,4'-DDD	QNS		mg/Kg	EPA 8080
4,4'-DDE	QNS		mg/Kg	EPA 8080
4,4'-DDT	QNS		mg/Kg	EPA 8080
Dieldrin	QNS		mg/Kg	EPA 8080
Endosulfan I	QNS		mg/Kg	EPA 8080
Endosulfan II	QNS		mg/Kg	EPA 8080
Endosulfan Sulfate	QNS		mg/Kg	EPA 8080
Endrin	QNS		mg/Kg	EPA 8080
Endrin Aldehyde	QNS		mg/Kg	EPA 8080
Heptachlor	QNS		mg/Kg	EPA 8080
Heptachlor Epoxide	QNS		mg/Kg	EPA 8080
Methoxychlor	QNS		mg/Kg	EPA 8080
Toxaphene	QNS		mg/Kg	EPA 8080

COMMERCIAL TESTING & ENGINEERING CO.
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REPORT of ANALYSIS

Chemlab Ref.# :93.4728-12
Client Sample ID :LIS-W01 SPIKE DUPLICATE
Matrix :WATER

5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

PCB-1016	QNS	mg/Kg	EPA 8080
PCB-1221	QNS	mg/Kg	EPA 8080
PCB-1232	QNS	mg/Kg	EPA 8080
PCB-1242	QNS	mg/Kg	EPA 8080
PCB-1248	QNS	mg/Kg	EPA 8080
PCB-1254	QNS	mg/Kg	EPA 8080
PCB-1260	QNS	mg/Kg	EPA 8080
Chlorinated Herbicides			EPA 8150
2,4-D	QNS	mg/L	EPA 8150
2,4-DB	QNS	mg/L	EPA 8150
2,4,5-T	QNS	mg/L	EPA 8150
2,4,5-TP (Silvex)	QNS	mg/L	EPA 8150
Dalapon	QNS	mg/L	EPA 8150
Dicamba	QNS	mg/L	EPA 8150
Dichloroprop	QNS	mg/L	EPA 8150
Dinoseb	QNS	mg/L	EPA 8150
MCPA	QNS	mg/L	EPA 8150
MCPP	QNS	mg/L	EPA 8150

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5933 B STREET
ANCHORAGE AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-12
Client Sample ID :LIS-W02
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 18:10 hrs
Received :09/10/93 @ 15:55 hrs
Technical Director: STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. LOW SURROGATE RECOVERY ON 8270 POSSIBLY DUE TO MATRIX INTERFERENCE. A WHITE EMULSION FORMED WHEN NAOH WAS ADDED.

Qualifiers/Comments

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics				EPA 8260				
Benzene	0.069		mg/Kg	EPA 8260(5)-A.1		09/15	10/01	KWM
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
n-Butylbenzene	0.029		mg/Kg	EPA 8260		09/15	10/01	KWM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Carbon Tetrachloride	0.515		mg/Kg	EPA 8260		09/15	10/01	KWM
Chlorobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,4-Dichlorobenzene	0.052		mg/Kg	EPA 8260		09/15	10/01	KWM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Ethylbenzene	0.237		mg/Kg	EPA 8260		09/15	10/01	KWM
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM

3.30.cpf

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5633 B STREET
ANCHORAGE, AK 99518
TEL: (907) 562-2343
FAX: (907) 561-5301

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-12
Client Sample ID :LIS-W02
Matrix :SOIL

Qualifiers/Comments

Isopropylbenzene	0.025	U	mg/Kg	EPA 8260 (J)-A.1		09/15	10/01	KWM
p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Methylene Chloride	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Napthalene	0.029		mg/Kg	EPA 8260		09/15	10/01	KWM
n-Propylbenzene	0.069		mg/Kg	EPA 8260		09/15	10/01	KWM
Styrene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Toluene	0.751		mg/Kg	EPA 8260		09/15	10/01	KWM
1,2,3-Trichlorobenzene	1.16		mg/Kg	EPA 8260		09/15	10/01	KWM
1,2,4-Trichlorobenzene	6.84	D	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Trichloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2,4-Trimethylbenzene	0.418		mg/Kg	EPA 8260		09/15	10/01	KWM
1,3,5-Trimethylbenzene	0.142		mg/Kg	EPA 8260		09/15	10/01	KWM
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
p+m-Xylene	1.06		mg/Kg	EPA 8260		09/15	10/01	KWM
o-Xylene	0.384		mg/Kg	EPA 8260		09/15	10/01	KWM
TCLP Extraction	---			SW 846 1311 3.30.94		09/16		BJS
TCLP Extraction/ZHE	---			EPA 1311				
Toxicity Characteristic Characterization, Full	---			EPA 1311				
Aqueous Phase, Total	---		% Vol					
.....Water Content	---		% Vol	Karl Fischer				
.....Glycol Content	---		% Vol	G.C.				
.....Alcohol Content	---		% Vol	G.C.				
Oil Phase, Total	---		% Vol					
Solid Phase, Total	100		% Vol				09/15	TJV

Arsenic	0.005	U	mg/L	EPA 7060/7061	5.0	09/19	09/20	BMW
Barium	10		mg/L	EPA 7080/6010	100.0	09/19	09/20	DLG
Benzene	0.0010	U	mg/L	EPA 8020/8240	0.5	09/17	09/27	MCM
Cadmium	0.50	U	mg/L	EPA 7131/6010	1.0	09/19	09/20	DLG
Carbon Tetrachloride	0.012		mg/L	EPA 8010/8240	0.5	09/17	09/27	MCM
Chlordane	0.010	U	mg/L	EPA 8080/8270	0.03			
Chlorobenzene	0.0010	U	mg/L	EPA 8010/8240	100	09/17	09/27	MCM
Chloroform	0.010	U	mg/L	EPA 8010/8240	6.0	09/17	09/27	MCM
Chromium	0.50	U	mg/L	EPA 6010/7191	5.0	09/19	09/20	DLG
o-Cresol	0.017	U	mg/L	EPA 8040/8270	200	09/21	10/10	GV
m-Cresol	0.017	U	mg/L	EPA 8040/8270	200	09/21	10/10	GV
p-Cresol	0.017	U	mg/L	EPA 8040/8270	200	09/21	10/10	GV
2,4-D	0.00080	U	mg/L	EPA 8150	10.0	09/22	09/24	NRC
1,4-Dichlorobenzene	0.0010	U	mg/L	EPA 8010/8240	7.5	09/17	09/27	MCM
1,2-Dichloroethane	0.0010	U	mg/L	EPA 8080/8240	0.5	09/17	09/27	MCM
1,1-Dichloroethylene	0.0010	U	mg/L	EPA 8010/8240	0.7	09/17	09/27	MCM
2,4-Dinitrotoluene	0.017	U	mg/L	EPA 8270	0.13	09/21	10/10	GV

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-12
Client Sample ID :LIS-W02
Matrix :SOIL

Endrin	0.0010	U	mg/L	EPA 8080	0.02	09/22	09/24	I
Heptachlor	0.0010	U	mg/L	EPA 8080	0.008	09/22	09/24	I
Hexachlorobenzene	0.017	U	mg/L	EPA 8270	0.13	09/21	10/10	
Hexachloro-1,3-Butadien	0.017	U	mg/L	EPA 8270	0.5	09/21	10/10	
Hexachloroethane	0.017	U	mg/L	EPA 8270	3.0	09/21	10/10	
Lead	1.0	U	mg/L	EPA 7421/6010	5.0	09/19	09/20	D
Lindane	0.0010	U	mg/L	EPA 8080	0.4	09/22	09/24	N
Mercury	0.002	U	mg/L	EPA 7470	0.2	09/20	09/20	M
Methoxychlor	0.0010	U	mg/L	EPA 8080	10.0	09/22	09/24	N
Methyl Ethyl Ketone	0.010	U	mg/L	EPA 8015/8240	200.0	09/17	09/27	M
Nitrobenzene	0.017	U	mg/L	EPA 8270	2.0	09/21	10/10	
Pentachlorophenol	0.017	U	mg/L	EPA 8270	100.0	09/21	10/10	
Pyridine	0.017	U	mg/L	EPA 8270	5.0	09/21	10/10	
Selenium	0.005	U	mg/L	EPA 7740/7741	1.0	09/19	09/20	B
Silver	0.1	U	mg/L	EPA 7760/6010	5.0	09/19	09/20	B
Tetrachloroethylene	0.0010	U	mg/L	EPA 8010/8240	0.7	09/17	09/27	M
Toxaphene	0.010	U	mg/L	EPA 8080	0.5	09/22	09/24	N
Trichloroethylene	0.0010	U	mg/L	EPA 8010/8240	0.5	09/17	09/27	M
2,4,5-Trichlorophenol	0.017	U	mg/L	EPA 8270	400	09/21	10/10	C
2,4,6-Trichlorophenol	0.017	U	mg/L	EPA 8270	2.0	09/21	10/10	C
2,4,5-TP(Silvex)	0.00080	U	mg/L	EPA 8150	1.0	09/22	09/24	N
Vinyl Chloride	0.0010	U	mg/L	EPA 8010/8240	0.2	09/17	09/27	M

Ignitability, Setaflash	GT 200		deg F	EPA 1020	140 min		09/21	LE
pH, Corrosivity	6.8			EPA 9040	2.0 - 12.5		09/21	BJ
Reactivity	NONREACT			EPA SW846,7.3.2	non react		09/21	TJ

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

5633 B STREET
ANCHORAGE, AK 995
TEL (907) 562-33
FAX (907) 561-53

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-14
Client Sample ID :LIS W02 SPIKE
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 18:10 hr
Received :09/10/93 @ 15:55 hr
Technical Director: STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. SEE QC PACKAGE FOR SPIKE CONCENTRATION AND % RSD. FOR 8260 SPIKE DUPLICATE RECOVERIES AND RPD, SEE QC SUMMARY. SPIKE WAS NOT DONE ON TCLP EXTRACT OF #12, QNS.
E = THIS FLAG IDENTIFIES COMPOUNDS WHOSE CONCENTRATIONS EXCEED THE CALIBRATION RANGE OF THE INSTRUMENT FOR THAT SPECIFIC ANALYSIS.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics								
Benzene	0.328		mg/Kg	EPA 8260				
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
n-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Carbon Tetrachloride	0.501		mg/Kg	EPA 8260		09/15	10/01	KWM
Chlorobenzene	0.248		mg/Kg	EPA 8260		09/15	10/01	KWM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,4-Dichlorobenzene	0.057		mg/Kg	EPA 8260		09/15	10/01	KWM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloroethene	0.052		mg/Kg	EPA 8260		09/15	10/01	KWM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-14
Client Sample ID :LIS-W02 SPIKE
Matrix :SOIL

[illegible] Street
[illegible] AK 9951
TEL [illegible] 562-2343
FAX [illegible] 561-5301

Ethylbenzene	0.245		mg/Kg	EPA 8260	09/15	10/01	K
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
Isopropylbenzene	0.026		mg/Kg	EPA 8260	09/15	10/01	K
p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
Napthalene	0.028		mg/Kg	EPA 8260	09/15	10/01	K
n-Propylbenzene	0.076		mg/Kg	EPA 8260	09/15	10/01	K
Styrene	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
Toluene	0.972		mg/Kg	EPA 8260	09/15	10/01	K
1,2,3-Trichlorobenzene	1.16		mg/Kg	EPA 8260	09/15	10/01	K
1,2,4-Trichlorobenzene	5.48	E	mg/Kg	EPA 8260	09/15	10/01	K
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
Trichloroethene	0.241		mg/Kg	EPA 8260	09/15	10/01	K
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
1,2,4-Trimethylbenzene	0.438		mg/Kg	EPA 8260	09/15	10/01	K
1,3,5-Trimethylbenzene	0.144		mg/Kg	EPA 8260	09/15	10/01	K
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/15	10/01	K
p+m-Xylene	1.08		mg/Kg	EPA 8260	09/15	10/01	K
o-Xylene	0.388		mg/Kg	EPA 8260	09/15	10/01	K

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

SGS Member of the SGS Group [illegible] Surveillance
ENVIRONMENTAL SERVICES IN ALASKA COLORADO [illegible]

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

2633 B STREET
ANCHORAGE, AK 995
TEL (907) 562-23
FAX (907) 561-52

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-15
Client Sample ID :LIS-W02 SPIKE DUPLICATE
Matrix :SOIL

Client Name :ICF KAISER ENGINEERING
Ordered By :RAY MORRIS
Project Name :DEW LINE RI/FS CAPE LISB.
Project# :41096-412-01
PWSID :UA

WORK Order :70811
Report Completed :10/29/93
Collected :09/09/93 @ 18:10 hr
Received :09/10/93 @ 15:55 hr
Technical Director:STEPHEN C. EDE
Released By :

Sample Remarks: SAMPLE COLLECTED BY: ALEX POLANSKY. SEE QC PACKAGE FOR SPIKE CONC. AND % RSD. FOR 8260 SPIKE AND SPIKE DUPLICATE RECOVERIES AND RPD, SEE QC SUMMARY. SPIKE DUPLICATE NOT DONE ON #12 TCLP, QNS.
E = THIS FLAG IDENTIFIES COMPOUNDS WHOSE CONCENTRATIONS EXCEED THE CALIBRATION RANGE OF THE INSTRUMENT FOR THAT SPECIFIC ANALYSIS.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
Volatile Organics								
Benzene	0.338		mg/Kg	EPA 8260				
Bromobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromochloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromodichloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromoform	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Bromomethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
n-Butylbenzene	0.027		mg/Kg	EPA 8260		09/15	10/01	KWM
sec-Butylbenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
tert-Butylbenzne	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Carbon Tetrachloride	0.485		mg/Kg	EPA 8260		09/15	10/01	KWM
Chlorobenzene	0.264		mg/Kg	EPA 8260		09/15	10/01	KWM
Chloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Chloroform	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Chloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
2-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
4-Chlorotoluene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Dibromochloromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
12Dibromo3Chloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dibromoethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
Dibromomethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,3-Dichlorobenzene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,4-Dichlorobenzene	0.056		mg/Kg	EPA 8260		09/15	10/01	KWM
Dichlorodifluoromethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichloroethane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloroethene	0.059		mg/Kg	EPA 8260		09/15	10/01	KWM
cis-1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
trans1,2-Dichloroethene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,3-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
2,2-Dichloropropane	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM
1,1-Dichloropropene	0.025	U	mg/Kg	EPA 8260		09/15	10/01	KWM

COMMERCIAL TESTING & ENGINEERING CO.
ENVIRONMENTAL LABORATORY SERVICES

REPORT of ANALYSIS

Chemlab Ref.# :93.4727-15
Client Sample ID :LIS-W02 SPIKE DUPLICATE
Matrix :SOIL

Ethylbenzene	0.245		mg/Kg	EPA 8260	09/15	10/01	KW
Hexachlorobutadiene	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
Isopropylbenzene	0.025		mg/Kg	EPA 8260	09/15	10/01	KW
p-Isopropyltoluene	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
Methylene Chloride	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
Napthalene	0.028		mg/Kg	EPA 8260	09/15	10/01	KW
n-Propylbenzene	0.076		mg/Kg	EPA 8260	09/15	10/01	KW
Styrene	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
1112-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
1122-Tetrachloroethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
Tetrachloroethene	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
Toluene	0.959		mg/Kg	EPA 8260	09/15	10/01	KW
1,2,3-Trichlorobenzene	1.10		mg/Kg	EPA 8260	09/15	10/01	KW
1,2,4-Trichlorobenzene	5.43	E	mg/Kg	EPA 8260	09/15	10/01	KW
1,1,1-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
1,1,2-Trichloroethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
Trichloroethene	0.250		mg/Kg	EPA 8260	09/15	10/01	KW
Trichlorofluoromethane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
1,2,3-Trichloropropane	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
1,2,4-Trimethylbenzene	0.451		mg/Kg	EPA 8260	09/15	10/01	KW
1,3,5-Trimethylbenzene	0.151		mg/Kg	EPA 8260	09/15	10/01	KW
Vinyl Chloride	0.025	U	mg/Kg	EPA 8260	09/15	10/01	KW
p+m-Xylene	1.09		mg/Kg	EPA 8260	09/15	10/01	KW
o-Xylene	0.401		mg/Kg	EPA 8260	09/15	10/01	KW

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

SGS Member of the SGS Group (Societe Generale de Surveillance)

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-2
Client Sample ID LIS-LF01-3W04 HIGH CONCENTRATIONS RRPH
Matrix SOIL

Client Name ICF KAISER ENGINEERING
Ordered By JEFF DAWSON
Project Name DEW LINE CAPE LISBURNE IRA
Project# 41096-514-02
PWSID UA

WORK Order 82360
Printed Date 11/02/94 @ 12:55 hrs.
Collected Date 09/12/94 @ 13:30 hrs.
Received Date 09/16/94 @ 11:00 hrs.

Technical Director STEPHEN C. EDE

Released By Shawn Paxton

Sample Remarks: SAMPLE COLLECTED BY: JEFF DAWSON. B- THIS FLAG IS USED WHEN AN ANALYTE IS FOUND IN THE ASSOCIATED BLANK AS WELL AS IN THE SAMPLE. J-INDICATES AN ANALYTE DETECTED BELOW THE CALIBRATION RANGE. FINAL RESULTS.

Parameter	Results	QC Qual	Units	Method	Allowable Limits	Ext. Date	Anal Date	Init
TCLP Extraction	---			SW 846 1311				
Organochlorine Pest&PCB				EPA 8080				
Aldrin	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Alpha-BHC	0.070	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Beta-BHC	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Delta-BHC	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Gamma-BHC	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Chlordane	0.20	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
4,4'-DDD	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
4,4'-DDE	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
4,4'-DDT	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Dieldrin	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Endosulfan I	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Endosulfan II	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Endosulfan Sulfate	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Endrin	0.070	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Endrin Aldehyde	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Heptachlor	0.030	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Heptachlor Epoxide	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Methoxychlor	0.020	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
Toxaphene	0.20	U	microg/L	EPA 8080		09/23/94	09/27/94	ECG
PCB-1016	0.060	U	mg/L	EPA 8080		09/23/94	09/24/94	DSM
PCB-1221	0.060	U	mg/L	EPA 8080		09/23/94	09/24/94	DSM
PCB-1232	0.060	U	mg/L	EPA 8080		09/23/94	09/24/94	DSM
PCB-1242	0.060	U	mg/L	EPA 8080		09/23/94	09/24/94	DSM
PCB-1248	0.060	U	mg/L	EPA 8080		09/23/94	09/24/94	DSM
PCB-1254	0.060	U	mg/L	EPA 8080		09/23/94	09/24/94	DSM
PCB-1260	0.060	U	mg/L	EPA 8080		09/23/94	09/24/94	DSM
Semivolatile Organics				EPA 8270				
Phenol	0.005	U	mg/L	EPA 8270		09/23/94	09/28/94	JBH
bis(2-Chloroethyl)ether	0.005	U	mg/L	EPA 8270		09/23/94	09/28/94	JBH
2-Chlorophenol	0.005	U	mg/L	EPA 8270		09/23/94	09/28/94	JBH
1,3-Dichlorobenzene	0.005	U	mg/L	EPA 8270		09/23/94	09/28/94	JBH
1,4-Dichlorobenzene	0.005	U	mg/L	EPA 8270		09/23/94	09/28/94	JBH

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-2
Client Sample ID LIS-LF01-3W04 HIGH CONCENTRATIONS RRPH
Matrix SOIL

Benzyl Alcohol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
1,2-Dichlorobenzene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2-Methylphenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
bis(2-Chloroisopropyl)e	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
4-Methylphenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
n-Nitroso-di-n-Propylam	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Hexachloroethane	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Nitrobenzene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Isophorone	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2-Nitrophenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2,4-Dimethylphenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Benzoic Acid	0.020	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
bis(2-Chloroethoxy)Meth	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2,4-Dichlorophenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
1,2,4-Trichlorobenzene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Naphthalene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
4-Chloroaniline	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Hexachlorobutadiene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
4-Chloro-3-Methylphenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2-Methylnaphthalene	0.0038	J	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Hexachlorocyclopentadie	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2,4,6-Trichlorophenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2,4,5-Trichlorophenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2-Chloronaphthalene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2-Nitroaniline	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Dimethylphthalate	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Acenaphthylene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2,6-Dinitrotoluene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
3-Nitroaniline	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Acenaphthene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2,4-Dinitrophenol	0.020	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
4-Nitrophenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Dibenzofuran	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
2,4-Dinitrotoluene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Diethylphthalate	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
4-Chlorophenyl-Phenylet	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Fluorene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
4-Nitroaniline	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
4,6-Dinitro-2-Methylphe	0.020	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
n-Nitrosodiphenylamine	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
4-Bromophenyl-Phenyleth	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Hexachlorobenzene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Pentachlorophenol	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Phenanthrene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Anthracene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
di-n-Butylphthalate	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Fluoranthene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Pyrene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Butylbenzylphthalate	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
3,3-Dichlorobenzidine	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Benzo(a)Anthracene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH
Chrysene	0.005	U	mg/L	EPA 8270	09/23/94	09/28/94	JBH

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ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

Commercial Testing & Engineering Co.
Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-2
Client Sample ID LIS-LF01-SW04 HIGH CONCENTRATIONS RRPH
Matrix SOIL

bis(2-Ethylhexyl)Phthal	0.005	U	mg/L	EPA 8270		09/23/94	09/26/94	JBH
di-n-Octylphthalate	0.005	U	mg/L	EPA 8270		09/23/94	09/26/94	JBH
Benzo(b)Fluoranthene	0.005	U	mg/L	EPA 8270		09/23/94	09/26/94	JBH
Benzo(k)Fluoranthene	0.005	U	mg/L	EPA 8270		09/23/94	09/26/94	JBH
Benzo(a)Pyrene	0.005	U	mg/L	EPA 8270		09/23/94	09/26/94	JBH
Indeno(1,2,3-cd)Pyrene	0.005	U	mg/L	EPA 8270		09/23/94	09/26/94	JBH
Dibenz(a,h)Anthracene	0.005	U	mg/L	EPA 8270		09/23/94	09/26/94	JBH
Benzo(g,h,i)Perylene	0.005	U	mg/L	EPA 8270		09/23/94	09/26/94	JBH
TCLP Extraction	---			SW 846 1311		09/22/94		BJS
TCLP Metals				EPA 1311				
Arsenic	0.0050	U	mg/L	EPA 7060/7061	5.0	09/23/94	09/26/94	CLC
Barium	1.7	D	mg/L	EPA 7080/6010	100.0	09/23/94	09/27/94	EMW
Cadmium	0.50	U	mg/L	EPA 7131/6010	1.0	09/23/94	09/27/94	EMW
Chromium	0.50	U	mg/L	EPA 7191/6010	5.0	09/23/94	09/27/94	EMW
Lead	1.9	D	mg/L	EPA 7421/6010	5.0	09/23/94	09/27/94	EMW
Mercury	0.002	U	mg/L	EPA 7470/7471	0.2	09/26/94	09/26/94	AFK
Selenium	0.0050	U	mg/L	EPA 7740/7741	1.0	09/23/94	09/26/94	CLC
Silver	0.1	U	mg/L	EPA 7760/6010	5.0	09/23/94	09/26/94	BJS
TCLP Extraction/ZHE	---		mg/L	EPA 1311				
Volatile Organics				EPA 8240				
Chloromethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Bromomethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Vinyl Chloride	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Chloroethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Methylene Chloride	1.72	B J	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Carbon Disulfide	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
1,1-Dichloroethene	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
1,1-Dichloroethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
t-1,2-Dichloroethene	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Chloroform	0.184	D	mg/L	EPA 8240		09/23/94	09/24/94	BLS
1,2-Dichloroethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
2-Butanone	1.00	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
1,1,1-Trichloroethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Carbon Tetrachloride	0.326	D	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Bromodichloromethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
1,2-Dichloropropane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
cis-1,3-Dichloropropene	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Trichloroethene	0.577	D	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Dibromochloromethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
1,1,2-Trichloroethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Benzene	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
trans-1,3-Dichloroprope	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Bromoform	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
4-Methyl-2-Pentanone	1.00	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Tetrachloroethene	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
1122-Tetrachloroethane	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Toluene	1.35	B J	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Chlorobenzene	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Ethylbenzene	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS
Styrene	0.100	U	mg/L	EPA 8240		09/23/94	09/24/94	BLS

VALIDATION QUALIFIER → J (F.2) — COMMENT ↓

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ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

SINCE 1908

Commercial Testing & Engineering Co.

Environmental Laboratory Services

LABORATORY ANALYSIS REPORT

CT&E Ref.# 94.4762-2
Client Sample ID LIS-LF01-3W04 HIGH CONCENTRATIONS RRPH
Matrix SOIL

Xylene (total)	0.100	U	mg/L	EPA 8240	09/23/94	09/24/94	BLS

* See Special Instructions Above
** See Sample Remarks Above
U = Undetected, Reported value is the practical quantification limit.
D = Secondary dilution.

UA = Unavailable
NA = Not Analyzed
LT = Less Than
GT = Greater Than

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ENVIRONMENTAL FACILITIES IN ALASKA, COLORADO, FLORIDA, ILLINOIS, MARYLAND, NEW JERSEY, OHIO, UTAH, WEST VIRGINIA

ICF ID	LIS-W01	LIS-W02
F&BI Number	1925	1926
Sample Type	water	soil
Date Received	9/13/93	9/13/93
% Dry Weight		54
Sequence Date	#6-09/13/93	#6-09/13/93
Leaded Gas		
JP-4	<2000	<150
Lube Oil	<4000	<300
Diesel	~~<2000~~ <1000	~~<150~~ <90
Spike Level		
Unknown Semi-volatile		
Pentacosane	120	107
Sequence Date		
PCB 1221		
PCB 1232		
PCB 1016		
PCB 1242		
PCB 1248		
PCB 1254		
PCB 1260		
Spike Level		
Dibutyl Chlorendate		
Sequence Date		
alpha-BHC		
beta-BHC		
gamma-BHC		
delta-BHC		
Heptachlor		
Aldrin		
Heptachlor Epoxide		
Endosulfan I		
DDE		
Dieldrin		
Endrin		
Endosulfan II		
DDD		
Endrin Aldehyde		
DDT		
Endosulfan Sulfate		
Endrin Ketone		
Methoxy Chlor		
Chlordane		
Dibutyl Chlorendate		
Spike Level		
Vol Sequence		
CCl4		
TCA		
Benzene		
TCE		
Toluene		
PCE		
Ethylbenzene		
Xylenes		
Gasoline		
Spike level		
BFB		

Compiled by SMF 10/11/93

APPENDIX G

DATA VALIDATION SUMMARIES

ICF KAISER ENGINEERS

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1800 HARRISON STREET
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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No.41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Frank Milam, ICF Kaiser Engineers
ANALYSIS: Volatile Organic Compounds by USEPA Method 8260
MATRIX: Soil
DATE: May 11, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (Anchorage, AK) received three (3) soil samples for volatile organic compounds (VOC) analyses by USEPA Method 8260 on September 1, 1993. The samples were analyzed for VOCs by gas chromatography/mass spectrometry (GC/MS) on September 6, 1993.

The ICF site identification numbers and corresponding Commercial Testing & Engineering Co. sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-SD03	93.4514-02	Soil
LIS-LF01-SD08	93.4514-07	Soil
LIS-LF01-S05	93.4514-11	Soil

The following QC sample designations were included in project documentation: sample number LIS-LF01-SD03 was designated as a "MS/MSD sample" and sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were designated as a "field duplicate pair."

Soil sample results and quantitation limits were reported by the laboratory with an adjustment for moisture content.

It should be noted, that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan for USEPA Method 8260. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared according to the USEPA draft document "National Functional Guidelines

for Organic Data Review" (December 1990), USEPA SW-846 Method 8260, and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:
A.1 Technical holding time QC criteria were met for all project sample analyses.

B. GC/MS Instrument Performance Check:
B.1 All QC criteria for the bromofluorobenzene (BFB) tunes were met and the results are considered acceptable.

C. Initial Calibration:
C.1 All QC criteria for the initial calibration were met and the results are considered acceptable.

D. Continuing Calibration:
D.1 All QC criteria for the continuing calibration were met and the results are considered acceptable.

E. Laboratory Blanks:
E.1 No target analytes were detected in the method blank at concentrations above the Practical Quantitation Limits (PQL) and the results are considered acceptable.

F. Surrogate Recoveries:
F.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

G. Field Blanks:
G.1 No field blank analysis is included with the project documentation.

H. Laboratory Control Sample Analysis:
H.1 Laboratory control sample QC criteria were met for all "blank spike" analyses and the results are considered acceptable.

I. Laboratory Replicate Analysis:
I.1 No laboratory replicate analysis is included with the project documentation.

J. Field Duplicate Analysis:
J.1 A QC limit for precision of $\leq$50%, as measured by the Relative Percent Difference (RPD) between sample values, was specified for field duplicate comparability.

Sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were utilized for the field duplicate analysis. The results of the field duplicate analysis met all applicable QC criteria and the results are considered acceptable.

K. Matrix Spike/Matrix Spike Duplicate Analysis:
K.1 The recoveries of 1,1-Dichloroethane in the matrix spike (MS) and matrix spike duplicate (MSD) analyses associated these soil samples did not meet the laboratory established QC limits as noted below.

Sample No.	% Recovery	QC Limits
LIS-LF01-SD03 MS	64	80-120%
LIS-LF01-SD03 MSD	68	80-120%

According to USEPA data validation guidelines, organic data are not qualified based on MS/MSD QC outliers alone. It is the opinion of the reviewer that the low recoveries in these samples are due to sample matrix interferences, and the affect on the quality of the data is not known.

L. Internal Standards:

L.1 Internal standard areas for all sample analyses were within specified QC criteria and the results are considered acceptable.

M. Quantitation and Identification:

M.1 No problems were observed with analyte quantitation and identification in project sample analyses.

N. Conclusion:

N.1 All data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No.41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Cynthia Schlag, ICF Kaiser Engineers
ANALYSIS: Volatile Organic Compounds by USEPA Method 8260
MATRIX: Water and Soil
DATE: May 6, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (Anchorage, AK) received six (6) soils and nine (9) water samples for volatile organic compounds (VOC) analyses by USEPA Method 8260 on August 30, and September 10, 1993. The samples were analyzed for VOCs by gas chromatography/mass spectrometry (GC/MS) on September 4, 7, 21, 22, and October 1, 2, 4, 1993.

The ICF site identification numbers and corresponding Commercial Testing & Engineering Co. sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-TB01	93.4476-01	Water
LIS-BKGD-S01	93.4476-02	Soil
LIS-BKGD-SD01	93.4476-03	Soil
LIS-EB01	93.4476-05	Water
LIS-BKGD-SW01	93.4476-06	Water
LIS-AOC3-2GW04	93.4727-01	Water
LIS-LF01-2SW08	93.4727-04	Water
LIS-2TB04	93.4727-09	Water
LIS-2EB04	93.4727-10	Water
LIS-W01	93.4727-11	Water
LIS-W02	93.4727-12	Water
LIS-LF01-2SD09	93.4728-01	Soil
LIS-LF01-2SD13	93.4728-07	Soil
LIS-ST07-2SD07	93.4728-13	Soil
LIS-ST07-2S12	93.4728-15	Soil

The following QC sample designations were included in project documentation: sample number LIS-TB01 and LIS-2TB04 were designated as "trip blanks;" sample number LIS-EB01 and LIS-2EB04 were designated as "equipment blanks;" and sample numbers LIS-LF01-2SD09 and LIS-LF01-2SD13 were designated as a "field duplicate pair."

Soil sample results and quantitation limits were reported by the laboratory with an adjustment for moisture content.

Laboratory reports for matrix spike (MS) and matrix spike duplicate (MSD) analyses associated with some project samples were note included with the data package. Therefore, the corresponding ICF sample numbers could not be determined and the laboratory sample numbers were referenced in comment K.1 instead.

It should be noted, that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan for USEPA Method 8260. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared according to the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA SW-846 Method 8260, and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 The following exceeded technical holding time criteria as noted below:

Sample No.	Collection Date	Analysis Date	Days Exceeded
LIS-AOC3-2GW04	09/09/93	09/21/93	5
LIS-LF01-2SW08	09/09/93	09/21/93	5
LIS-2TB04	09/09/93	09/22/93	6
LIS-2EB04	09/09/93	09/22/93	6
LIS-W01	09/09/93	09/22/93	6
LIS-W02	09/09/93	10/01/93	15
LIS-LF01-2SD09	09/09/93	10/02/93	9
LIS-LF01-2SD13	09/09/93	10/02/93	9
LIS-ST07-2SD07	09/09/93	10/04/93	11
LIS-ST07-2S12	09/09/93	10/04/93	11

The quantitation limits and detected results for the above noted samples are considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

A.2 Technical holding time QC criteria were met for all other project sample analyses.

B. GC/MS Instrument Performance Check:

B.1 All QC criteria for the bromofluorobenzene (BFB) tunes were met and the results are considered acceptable.

C. Initial Calibration:

C.1 All QC criteria for the initial calibrations were met and the results are considered acceptable.

D. Continuing Calibration:

D.1 All QC criteria for the continuing calibrations were met and the results are considered acceptable.

E. Laboratory Blanks:

E.1 No target analytes were detected in the method blanks at concentrations above the Practical Quantitation Limits (PQLs) and the results are considered acceptable.

F. Surrogate Recoveries:

F.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

G. Field Blanks:

G.1 The following analytes were detected in the field at concentrations above the PQL:

Sample No.	Analyte	Concentration
LIS-TB01	methylene chloride	0.0017 mg/L
LIS-2TB04	methylene chloride	0.0070 mg/L
LIS-2EB04	methylene chloride	0.0035 mg/L

Although methylene chloride was detected in the field blanks noted above, methylene chloride was not detected in the field samples and therefore, the data are not qualified.

G.2 No other target analytes were detected in the field blanks at concentrations above the PQLs and the results are considered acceptable.

H. Laboratory Control Sample Analysis:

H.1 Laboratory control sample QC criteria were met for all "blank spike" analyses and the results are considered acceptable.

I. Laboratory Replicate Analysis:

I.1 No laboratory replicate analysis was included with the project documentation.

J. Field Duplicate Analysis:

J.1 A QC limit of $\leq$50%, as measured by the Relative Percent Difference (RPD) between sample values, was specified for field duplicate comparability.

Sample numbers LIS-LF01-2SD09 and LIS-LF01-2SD13 were utilized for the field duplicate analysis. The following RPD values were reported:

Analyte	RPD	QC Limit
ethylbenzene	128%	50%
toluene	145%	50%
1,2,4-trimethylbenzene	139%	50%
1,3,5-trimethylbenzene	137%	50%
p&m-xylene	131%	50%
o-xylene	130%	50%

Due to the exceeded RPD limits, the detected results reported for the analytes noted above for sample numbers LIS-LF01-2SD09 and LIS-LF01-2SD13 are considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

K. Matrix Spike/Matrix Spike Duplicate Analysis:

K.1 The recoveries of 1,1-dichloroethene in the matrix spike (MS) and matrix spike duplicate (MSD) analyses of the following samples did not meet applicable QC limits as noted below:

Sample No.	% Recovery	QC Limits
LIS-LF01-2SD09 MS	26	80-120%
LIS-LF01-2SD09 MSD	26	80-120%
93.4397-02 MS	18	80-120%
93.4397-03 MSD	16	80-120%

According to USEPA data validation guidelines, organic data are not qualified based on MS/MSD QC outliers alone. It is the opinion of the reviewer that the low recoveries in these samples are due to sample matrix interferences, and the affect on the quality of the data is not known.

K.2 All other MS and MSD analyses met all applicable QC criteria and the results are considered acceptable.

L. Internal Standards:

L.1 Internal standard areas for all sample analyses were within specified QC criteria and the results are considered acceptable.

M. Quantitation and Identification:

M.1 No problems were observed with analyte quantitation and identification in project sample analyses.

N. Conclusion:

N.1 Due to deficiencies in the field duplicate analysis and exceeded technical holding times, select data are considered estimated and usable for limited purposes only.

N.2 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No.41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Frank Milam, ICF Kaiser Engineers
ANALYSIS: Volatile Organic Compounds by USEPA Method 8260
MATRIX: Water and Soil
DATE: May 6, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (Anchorage, AK) received three (3) water samples and two (2) soil samples for volatile organic compounds (VOC) analyses by USEPA Method 8260 on September 4, 1993. The samples were analyzed for VOCs by gas chromatography/mass spectrometry (GC/MS) on September 8 and 23, 1993.

The ICF site identification numbers and corresponding Commercial Testing & Engineering Co. sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-TB03	93.4614-01	Water
LIS-EB03	93.4614-02	Water
LIS-ST07-SW02	93.4614-04	Water
LIS-ST07-SD01	93.4614-08	Soil
LIS-ST07-SD06	93.4614-10	Soil

The following QC sample designations were included in project documentation: sample number LIS-EB03 was designated as an "equipment blank;" sample number LIS-TB03 was designated as a "trip blank;" and sample numbers LIS-ST07-SD01 and LIS-ST07-SD06 were designated as a "field duplicate pair."

Soil sample results and quantitation limits were reported by the laboratory with an adjustment for moisture content.

It should be noted, that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan for USEPA Method 8260. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared according to the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA SW-846 Method 8260, and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 Technical holding time QC criteria were met for all project sample analyses.

B. GC/MS Instrument Performance Check:

B.1 All QC criteria for the bromofluorobenzene (BFB) tunes were met and the results are considered acceptable.

C. Initial Calibration:

C.1 All QC criteria for the initial calibration were met and the results are considered acceptable.

D. Continuing Calibration:

D.1 All QC criteria for the continuing calibration were met and the results are considered acceptable.

E. Laboratory Blanks:

E.1 No target analytes were detected in the method blank at concentrations above the Practical Quantitation Limits (PQL) and the results are considered acceptable.

F. Surrogate Recoveries:

F.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

G. Field Blanks:

G.1 Methylene chloride was detected in sample number LIS-TB03 at a concentration of 0.0024 mg/L which is above the PQL. Since methylene chloride was not detected in the associated samples, data are not qualified based on the field blank contamination noted above.

G.2 No other target analytes were detected in the field blanks at concentration above the PQL and the results are considered acceptable.

H. Laboratory Control Sample Analysis:

H.1 Laboratory control sample QC criteria were met for all "blank spike" analyses and the results are considered acceptable.

I. Laboratory Replicate Analysis:

I.1 No laboratory replicate analysis is included with the project documentation.

J. Field Duplicate Analysis:

J.1 A QC limit for precision of $\leq$50%, as measured by the Relative Percent Difference (RPD) between sample values, was specified for field duplicate comparability.

Sample numbers LIS-ST07-SD01 and LIS-ST07-SD06 were utilized for the field duplicate analysis. The results of the field duplicate analysis failed to meet applicable QC criteria as noted below:

Analyte	RPD
sec-butylbenzene	100%
ethylbenzene	57%
isopropylbenzene	85%
p-isopropylbenzene	55%
n-propylbenzene	84%
toluene	67%
o-xylene	61%

Due to high RPD values between sample numbers LIS-ST07-SD01 and LIS-ST07-SD06, detected results and quantitation limits for the analytes are considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

K. Matrix Spike/Matrix Spike Duplicate Analysis:

K.1 The following recoveries of 1,1-dichloroethane in the matrix spike (MS) and matrix spike duplicate (MSD) analyses did not meet the laboratory established QC limits as noted below:

Sample No.	% Recovery	QC Limits
93.4627-17 MS	57	80-120%
93.4627-18 MSD	64	80-120%

According to USEPA guidelines, organic data are not qualified based on MS/MSD recoveries alone. It is the opinion of the reviewer that the low recoveries in these samples are due to sample matrix interferences, and the affect on the quality of the data is not known.

K.2 All other MS/MSD analyses met the QC criteria and are considered acceptable.

L. Internal Standards:

L.1 Internal standard areas for all sample analyses were within specified QC criteria and the results are considered acceptable.

M. Quantitation and Identification:

M.1 No problems were observed with analyte quantitation and identification in project sample analyses.

N. Conclusion:

N.1 Due to the above deficiencies in field duplicate analyses, select data are considered as estimates and usable for limited purposes only.

N.2 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Frank Milam, ICF Kaiser Engineers
ANALYSIS: Semivolatiles by USEPA Method 8270
MATRIX: Soil
DATE: May 11, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (Anchorage, AK) received one (3) soil samples for semivolatile compound analysis by USEPA Method 8270 on September 1, 1993. The samples were extracted on September 14, 1993 and analyzed for semivolatile compounds by gas chromatography/mass spectrometry (GC/MS) on October 16, 1993.

The ICF site identification number and corresponding Commercial Testing & Engineering Co. sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-SD03	93.4514-02	Soil
LIS-LF01-SD08	93.4514-07	Soil
LIS-LF01-S05	93.4514-11	Soil

The following QC sample designation was included in project documentation: Sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were designated as a field duplicate pair.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared in accordance with USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA SW-846 Method 8270 and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 Technical holding time QC criteria were met for all project sample analyses.

B. GC Instrument Performance Check:

B.1 All QC criteria for the decafluorotriphenylphosphine (DFTPP) tunes were met and the results are considered acceptable.

C. Initial Calibration:

C.1 All QC criteria for the initial calibration were met and the results are considered acceptable.

D. Continuing Calibration:

D.1 The percent differences (%Ds) in the continuing calibrations exceeded the $\leq \pm 25\%$ QC validation criteria for several analytes in the continuing calibrations performed on October 16, 1993. The detected results and quantitation limits for the analytes listed on Table A are considered estimated (J) and usable for limited purposes only (see modified sample data sheets and Table A).

E. Laboratory Blanks:

E.1 Target analyte di-n-butylphthalate was detected in the soil method blank listed at concentrations above the Practical Quantitation Limit (PQL):

Date extracted	Analyte	Concentration
09/14/93	di-n-butylphthalate	0.878 mg/Kg

Due to method blank contamination, the result reported for di-n-butylphthalate in sample number LIS-LF01-SD03 is considered non-detected (U) (see modified sample data sheets).

F. Surrogate Recoveries:

F.1 The following percent recoveries for sample numbers LIS-LF01-SD03 MS, LIS-LF01-SD03 MSD and LIS-LF01-S05 were outside method QC limits:

Sample No.	Analyte	Recovery	QC criteria
LIS-LF01-SD03 MS	2-fluorobiphenyl	119%	30-115%
LIS-LF01-SD03 MSD	2-fluorobiphenyl	118%	30-115%
LIS-LF01-S05	2-fluorobiphenyl	130%	30-115%

Although the above listed surrogate recoveries did not meet the QC limits in these samples, no data are qualified based on USEPA validation guidelines.

F.2 All other surrogate recoveries met applicable QC criteria and the results are considered acceptable.

G. Field Blanks:

G.1 No field blank analysis is included with the project documentation.

H. Laboratory Control Sample Analysis:

H.1 The laboratory control sample and duplicate met all QC criteria and are considered acceptable.

I. Laboratory Replicate Analysis:

I.1 No laboratory replicate analysis is included with the project documentation.

J. Field Duplicate Analysis:

J.1 A QC limit for precision of $\leq$50%, as measured by the Relative Percent Difference (RPD) between sample values, was specified for field duplicate comparability.

J.2 Sample numbers LIS-LF01-SD08 and LIS-LF01-SD03 were utilized for the field duplicate analysis. The results of the field duplicate analysis met all applicable QC criteria and the results are considered acceptable.

K. Matrix Spike/Matrix Spike Duplicate Analysis:

K.1 The MS/MSD recoveries in sample numbers LIS-LF01-SD03 MS and LIS-LF01-SD03 MSD did not meet the QC criteria as noted below.

Sample No.	Compound	Recovery	QC Limits
LIS-LF01-SD03 MS	phenol	114%	26-90%
LIS-LF01-SD03 MS	N-nitroso-di-n-propylamine	128%	41-126%
LIS-LF01-SD03 MS	4-chloro-3-methylphenol	117%	26-103%
LIS-LF01-SD03 MS	2,4-dinitrotoluene	101%	28-89%
LIS-LF01-SD03 MS	pentachlorophenol	110%	17-109%
LIS-LF01-SD03 MS	di-n-butylphthalate	227%	1-118%
LIS-LF01-SD03 MSD	phenol	120%	26-90%
LIS-LF01-SD03 MSD	1,4-dichlorobenzene	104%	25-102%
LIS-LF01-SD03 MSD	N-nitroso-di-n-propylamine	130%	41-126%
LIS-LF01-SD03 MSD	4-chloro-3-methylphenol	120%	26-103%
LIS-LF01-SD03 MSD	2,4-dinitrotoluene	100%	28-89%
LIS-LF01-SD03 MSD	pentachlorophenol	115%	17-109%
LIS-LF01-SD03 MSD	di-n-butylphthalate	356%	1-118%

According to USEPA guidelines, organic data are not qualified based on MS/MSD recoveries alone. It is the opinion of the reviewer that the recoveries in these samples are due to sample matrix interferences and the affect on the quality of the data is not known.

K.2 All other MS and MSD analyses met the QC criteria and are considered acceptable.

L. Internal Standards:

L.1 Internal standard areas for all analyses met applicable QC criteria and the results are considered acceptable.

M. Quantitation and Identification:

M.1 No problems were observed with analyte quantitation and identification in project sample analyses.

N. Conclusion:

N.1 Due to the above noted deficiencies in continuing calibration performance select data are considered as estimates and usable for limited purposes only.

N.2 All other data are considered valid and usable for all purposes.

TABLE A
CALIBRATIONS OUTSIDE %D CRITERIA

Date	Compound	%D	Samples
Continuing Calibration - October 16, 1993	3,3'-dichlorobenzidine	29.90	Blank
	di-n-octylphthalate	31.56	LIS-LF01-SD03
	benzo(k)fluoranthene	28.56	LIS-LF01-SD03 MS
	dibenz(a,h)anthracene	26.49	LIS-LF01-SD03 MSD
			LIS-LF01-SD08
			LIS-LF01-S05

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Frank Milam, ICF Kaiser Engineers
ANALYSIS: Semivolatiles by USEPA Method 8270
MATRIX: Water
DATE: May 11, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (Anchorage, AK) received two (2) water sample for semivolatile compound analysis by USEPA Method 8270 on September 1, 1993. The sample was extracted on September 7, 1993 and analyzed for semivolatile compounds by gas chromatography/mass spectrometry (GC/MS) on September 23, 1993.

The ICF site identification number and corresponding Commercial Testing & Engineering Co. sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-EB02	93.4513-1	Water
LIS-LF01-SW04	93.4513-3	Water

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared in accordance with USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA SW-846 Method 8270 and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:
A.1 Technical holding time QC criteria were met for all project sample analysis.

B. GC Instrument Performance Check:
B.1 All QC criteria for the decafluorotriphenylphosphine (DFTPP) were met and the results are considered acceptable.

C. Initial Calibration:

C.1 All QC criteria for the initial calibration were met and the results are considered acceptable.

D. Continuing Calibration:

D.1 The percent differences (%Ds) exceeded the $\leq \pm 25\%$ QC validation criteria for several analytes in the continuing calibrations performed on September 23, 1993. The detected results and quantitation limits for the analytes listed on Table A are considered estimated (J) and usable for limited purposes only (see modified sample data sheets and Table A).

E. Laboratory Blanks:

E.1 No target analytes were detected in the method blanks at concentrations above the Practical Quantitation Limit (PQL) and the results are considered acceptable.

F. Surrogate Recoveries:

F.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

G. Field Blanks:

G.1 The field blank analysis met applicable QC criteria and the results are considered acceptable.

H. Laboratory Control Sample Analysis:

H.1 The laboratory control duplicate sample did not meet applicable QC criteria as noted below:

Sample No.	Compound	Recovery	QC Limits
Method Spike	1,2,4-trichlorobenzene	38%	44-142%
Method Spike	acenapthene	46%	47-145%
Method Spike Dup.	1,2,4-trichlorobenzene	41%	44-142%

According to USEPA guidelines, organic data are not qualified based on low LCS recoveries alone. It is the opinion of the reviewer that the quality of the data is not known.

H.2 Laboratory control sample QC criteria were met for all other "blank spike" analyses and the results are considered acceptable.

I. Laboratory Replicate Analysis:

I.1 No laboratory replicate analysis is included with the project documentation.

J. Field Duplicate Analysis:

J.1 No field duplicate analysis is included with project documentation.

K. Matrix Spike/Matrix Spike Duplicate Analysis:

K.1 The MS/MSD recoveries in sample numbers LIS-LF01-SW04 MS/MSD did not meet the QC criteria as noted below:

Sample No.	Compound	Recovery	QC Limit
LIS-LF01-SW04 MS	pentachlorophenol	0%	14-176%
Sample No.	**Compound**	**RPD**	**QC Limit**
LIS-LF01-SW04 MS/MSD	4-nitrophenol	128%	50%

According to USEPA guidelines, organic data are not qualified based on MS/MSD recoveries alone. It is the opinion of the reviewer that the recoveries in these samples are due to sample matrix interferences and the affect on the quality of the data is not known.

K.2 All other MS and MSD analyses met the QC criteria and are considered acceptable.

L. Internal Standards:

L.1 Due to a high internal standard (IS) area for perylene-d12 in sample number LIS-LF01-SW04 MS, the detected results for the associated analytes are considered estimated (J) (see modified sample data sheets):

Sample No.	Internal Standard	IS area	QC Limit Range
LIS-LF01-SW04 MS	perlene-d12	4699928	1109330-4437318

M. Quantitation and Identification:

M.1 No problems were observed with analyte quantitation and identification in project sample analyses.

N. Conclusion:

N.1 Due to the above noted deficiencies in continuing calibration performance and internal standard performance, select data are considered as estimates and usable for limited purposes only.

N.2 All other data are considered valid and usable for all purposes.

TABLE A
CALIBRATIONS OUTSIDE %D CRITERIA

Date	Compound	%D	Samples
Continuing Calibration - September 23, 1993	pentachlorophenol 3,3'-dichlorobenzidine	30.0 37.7	Blank LIS-EB02 LIS-LF01-SW04 LIS-LF01-SW04 MS LIS-LF01-SW04 MSD

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Frank Milam, ICF Kaiser Engineers
ANALYSIS: Semivolatiles by USEPA Method 8270
MATRIX: Soil
DATE: May 11, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (Anchorage, AK) received two (2) soil sample for semivolatile compound analysis by USEPA Method 8270 on September 4, 1993. The sample was extracted on September 7, 1993 and analyzed for semivolatile compounds by gas chromatography/mass spectrometry (GC/MS) on October 22, 1993.

The ICF site identification number and corresponding Commercial Testing & Engineering Co. sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-ST07-SD04	93.4614-9	Soil
LIS-ST07-SD06	93.4614-10	Soil

There were no QC sample designations included in the project documentation.

Soil sample results and quantitation limits were reported by the laboratory with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared in accordance with USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA SW-846 Method 8270 and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 Technical holding time QC criteria were met for all project sample analysis.

B. GC Instrument Performance Check:

B.1 All QC criteria for the decafluorotriphenylphosphine (DFTPP) were met and the results are considered acceptable.

C. Initial Calibration:

C.1 All QC criteria for the initial calibration were met and the results are considered acceptable.

D. Continuing Calibration:

D.1 The percent differences (%Ds) exceeded the $\leq \pm 25\%$ QC validation criteria for several analytes in the continuing calibrations performed on September 23, 1993. The detected results and quantitation limits for the analytes listed on Table A are considered estimated (J) and usable for limited purposes only (see modified sample data sheets and Table A).

E. Laboratory Blanks:

E.1 Di-n-butylphthalate was detected in the soil method blank listed at a concentration above the Practical Quantitation Limit (PQL):

Date Extracted	Analyte	Concentration
0/15/93	di-n-butylphthalate	0.741 mg/Kg

Due to method blank contamination, the reported for di-n-butylphthalate in sample number LIS-ST07-SD04 is considered estimated (J) and usable for limited purposes only. Sample number LIS-ST07-SD06 is considered nondetected (U) for di-n-butylphthalate. (see modified sample data sheets).

E.2 No other target analytes were detected in the method blanks at concentrations above the PQL and the results are considered acceptable.

F. Surrogate Recoveries:

F.1 The following percent recoveries for sample number LIS-ST07-SD06 were outside method QC limits:

Sample No.	Analyte	Recovery	QC Criteria
LIS-ST07-SD06	2-fluorophenol	151%	25-121%
LIS-ST07-SD06	phenol-d6	148%	24-113%
LIS-ST07-SD06	nitrobenzene-d5	214%	23-120%

Due to the above noted deviations, naphthalene and 2-methylnaphthalene in sample number LIS-ST07-SD06 are considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

F.2 All other surrogate recoveries met applicable QC criteria and the results are considered acceptable.

G. Field Blanks:

G.1 No field blank analysis is included in the project documentation.

H. Laboratory Control Sample Analysis:

H.1 The laboratory control duplicate sample did not meet applicable QC criteria as noted below:

Sample No.	Compound	Recovery	QC Limits
Method Spike	2,4-dinitrotoluene	90%	28-89%

Sample No.	Compound	RPD	QC Limits
Method Spike	acenaphthene	20%	19%

According to USEPA guidelines, organic data are not qualified based on low LCS recoveries alone. It is the opinion of the reviewer that the quality of the data is not known.

H.2 Laboratory control sample QC criteria were met for all other "blank spike" analyses and the results are considered acceptable.

I. Laboratory Replicate Analysis:

I.1 No laboratory replicate analysis is included with the project documentation.

J. Field Duplicate Analysis:

J.1 Sample number LIS-ST07-SD01 was designated as a field duplicate for sample number LIS-ST07-SD06, however, results were not reported due to the sample being advertently spiked with 100ppm of spiking solution by the laboratory.

K. Matrix Spike/Matrix Spike Duplicate Analysis:

K.1 The MS/MSD recoveries in sample numbers LIS-LF01-SD03 MS/MSD did not meet the QC criteria as noted below:

Sample No.	Compound	Recovery	QC Limit
LIS-LF01-SD03 MS	phenol	114%	26-90%
LIS-LF01-SD03 MS	n-nitroso-di-n-propylamine	128%	41-126%
LIS-LF01-SD03 MS	4-chloro-3-methylphenol	117%	26-103%
LIS-LF01-SD03 MS	2,4-dinitrotoluene	101%	28-89%
LIS-LF01-SD03 MS	pentachlorophenol	110%	17-107%
LIS-LF01-SD03 MS	di-n-butylphthalate	227%	1 -118%
LIS-LF01-SD03 MSD	phenol	120%	26-90%
LIS-LF01-SD03 MSD	1,4-dichlorobenzene	104%	25-102%
LIS-LF01-SD03 MSD	n-nitroso-di-n-propylamine	130%	41-126%
LIS-LF01-SD03 MSD	4-chloro-3-methylphenol	120%	26-103%
LIS-LF01-SD03 MSD	2,4-dinitrotoluene	100%	28-89%
LIS-LF01-SD03 MSD	pentachlorophenol	115%	17-107%
LIS-LF01-SD03 MSD	di-n-butylphthalate	356%	1 -118%

According to USEPA guidelines, organic data are not qualified based on MS/MSD recoveries alone. It is the opinion of the reviewer that the recoveries in these samples are due to sample matrix interferences and the affect on the quality of the data is not known.

K.2 All other MS and MSD analyses met the QC criteria and are considered acceptable.

L. Internal Standards:

L.1 The internal standard areas for sample number LIS-ST07-SD06 did not meet the QC criteria as noted below.

Internal Standard	IS area	QC Limit Range
1,4-dichlorobenzene-d4	773606	934255-3737018
napthalene-d8	1753218	3256634-13026536
acenaphthene-d10	1277930	1471432-5885726

Due to low internal standard response of the above noted samples, all associated quantitation limits and detected results are considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

M. Quantitation and Identification:

M.1 No problems were observed with analyte quantitation and identification in project sample analyses.

N. Conclusion:

N.1 Due to the above noted deficiencies in continuing calibration performance, method blank performance and internal standard performance, select data are considered as estimates and usable for limited purposes only.

N.2 Due to method blank contamination, select data are considered nondetected.

N.3 All other data are considered valid and usable for all purposes.

TABLE A
CALIBRATIONS OUTSIDE %D CRITERIA

Date	Compound	%D	Samples
Continuing Calibration - October 20, 1993	di-n-octylphthalate benzo(k)fluroanthene benzo(a)pyrene	29.2 28.7 28.3	Blank (soil)
Continuing Calibration - October 21, 1993	di-n-octylphthalate benzo(k)fluoroanthene benzo(a)pyrene dibenz(a,h)anthracene benzo(g,h,i)perylene	28.9 25.7 25.9 26.8 26.8	LIS-ST07-SD04 LIS-ST07-SD06

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Cynthia Schlag, ICF Kaiser Engineers
ANALYSIS: Semivolatile Organic Compounds by USEPA Method 8270
MATRIX: Soil and Water
DATE: May 10, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (Anchorage, AK) received four (4) soil samples and six (6) water samples for semivolatile organic compound (SVOC) analyses by USEPA Method 8270 on August 30, 31, and September 10, 1993. The water samples were extracted on September 4, 6, 17, 1993 and analyzed for SVOCs by gas chromatography/mass spectrometry (GC/MS) on September 22, 23, 27, and October 1, 1993. The soil samples were extracted on September 14 and 17, 1993 and analyzed for SVOCs by GC/MS on October 20, 21, and 25, 1993.

The ICF site identification numbers and corresponding Commercial Testing & Engineering Co. sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-AOC3-2GW04	93.4727-01	Water
LIS-LF01-2SD09	93.4728-01	Soil
LIS-LF01-2SD13	93.4728-07	Soil
LIS-W01	93.4728-09	Water
LIS-EB01	93.4476-05	Water
LIS-BKGD-SW01	93.4476-06	Water
LIS-BKGD-S01	93.4477-01	Soil
LIS-BKGD-SD01	93.4477-02	Soil
LIS-AOC3-SW01	93.4477-03	Water
LIS-AOC3-GW01	93.4481-01	Water

The following QC sample designations were included in project documentation: sample number LIS-EB01 was designated as an "equipment blank;" and sample numbers LIS-LF01-2SD09 and LIS-LF01-2SD13 were designated as a "field duplicate pair."

Sample number LIS-LF01-2SD13 was not analyzed by the laboratory due to loss during extraction.

Soil sample results and quantitation limits were reported by the laboratory with an adjustment for moisture content.

Laboratory reports for matrix spike (MS) and matrix spike duplicate (MSD) analyses associated with some project samples were not included with the data package. Therefore, the corresponding ICF sample numbers could not be determined and the laboratory sample numbers were referenced in comments F.3 and K.2 instead.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared according to the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA SW-846 Method 8270, and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 The following sample numbers exceeded the extraction technical holding time criteria:

Sample No.	Date Collected	Date Extracted	Days Exceeded
LIS-AOC3-2GW04	09/09/93	09/17/93	1
LIS-BKGD-S01	08/30/93	09/14/93	1
LIS-BKGD-SD01	08/30/93	09/14/93	1
LIS-LF01-2SD09	09/09/93	09/17/93	3
LIS-W01	09/09/93	09/17/93	10

The quantitation limits and detected results for samples LIS- LF01-2SD09 and LIS-W01 are considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

A.2 All other technical holding time QC criteria were met for the project sample analyses.

B. GC/MS Instrument Performance Check:

B.1 All QC criteria for the decafluorotriphenylphosphine (DFTPP) tunes were met and the results are considered acceptable.

C. Initial Calibration:

C.1 All QC criteria for the initial calibration were met and the results are considered acceptable.

D. Continuing Calibration:

D.1 The percent differences (%Ds) exceeded the $\leq \pm 25\%$ QC validation criteria for several analytes in the continuing calibrations performed on October 1, 16, 22, 23, and 25, 1993. The detected results and quantitation limits for the analytes listed on Table A are considered estimated (J) and usable for limited purposes only (see modified sample data sheets and Table A).

E. Laboratory Blanks:

E.1 The following target analytes were detected in the method blanks listed at concentrations above the Practical Quantitation Limit (PQL):

Date extracted	Analyte	Concentration
09/17/93	di-n-butylphthalate	2.31 mg/Kg
09/14/93	di-n-butylphthalate	0.878 mg/Kg

Due to method blank contamination, di-n-butylphthalate in sample numbers LIS-LF01-2SD09 and LIS-BKGD-S01 are considered non-detected (U) and in sample number LIS-BKGD-SD01 is considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

E.2 No other target analytes were detected in the method blanks at concentrations above the PQL and the results are considered acceptable.

F. Surrogate Recoveries:

F.1 The following percent surrogate recoveries, listed below, for sample number LIS-W01 were outside the method QC limits:

Sample No.	Analyte	Recovery	QC criteria
LIS-W01	nitrobenzene-d5	8%	35-114%
LIS-W01	2-fluorobiphenyl	7%	43-116%
LIS-W01	terphenyl-d14	10%	33-141%

Due to the above listed surrogate recovery problems, the associated target analytes for sample number LIS-W01 are considered rejected (R) and unusable for any purpose (see modified sample data sheets).

F.2 Due to select surrogate recoveries in the water method blank below the 10% QC validation criteria, all associated quantitation limits are considered rejected (R) and unusable for any purpose (see modified sample data sheets). Where target analytes are not detected, false negatives may exist.

F.3 Due to select surrogate recoveries in the soil method blank below the 10% QC validation criteria, all associated quantitation limits are considered rejected (R) and unusable for any purpose (see modified sample data sheets). Where target analytes are not detected, false negatives may exist.

F.4 The following percent surrogate recoveries, listed below, for QC sample numbers LIS-W01 MS, 93.4482-03 MS, 93.4482-04 MSD, LIS-LF01-SD03 MS/MSD, and LIS-LF01-2SD09 MS/MSD were outside the method QC limits:

Sample No.	Analyte	Recovery	QC criteria
LIS-W01 MS	nitrobenzene-d5	122%	35-114%
LIS-W01 MS	2-fluorobiphenyl	119%	43-116%
93.4482-03 MS	2-fluorophenol	19%	21-110%
93.4482-04 MSD	2-fluorophenol	17%	21-110%
LIS-LF01-SD03 MS	2-fluorobiphenyl	119%	43-116%
LIS-LF01-SD03 MSD	2-fluorobiphenyl	118%	43-116%
LIS-LF01-2SD09 MS	phenol-d6	114%	24-113%
LIS-LF01-2SD09 MS	nitrobenzene	151%	23-120%
LIS-LF01-2SD09 MS	2-fluorobiphenyl	190%	30-115%
LIS-LF01-2SD09 MS	2,4,6-tribromophenol	140%	19-122%
LIS-LF01-2SD09 MS	terphenyl-d14	178%	18-137%
LIS-LF01-2SD09 MSD	nitrobenzene-d5	144%	23-120%
LIS-LF01-2SD09 MSD	2-fluorobiphenyl	181%	30-115%
LIS-LF01-2SD09 MSD	2,4,6-tribromophenol	126%	19-122%
LIS-LF01-2SD09 MSD	terphenyl-d14	163%	18-137%

According to USEPA guidelines, organic data are not qualified based on low surrogate recoveries alone. It is the opinion of the reviewer that the quality of the data is not known.

F.5 All other surrogate recoveries met applicable QC criteria and the results are considered acceptable.

G. Field Blanks:

G.1 Sample number LIS-EB01 had 2,4-dimethylphenol reported at a concentration of 0.012 mg/L. Since 2,4-dimethylphenol was not detected in the associated sample, data are qualified based on field blank contamination.

G.2 No other target analytes were detected in the field blanks at concentrations above the PQL and the results are considered acceptable.

H. Laboratory Control Sample Analysis:

H.1 The laboratory control sample (LCS) and the laboratory control sample duplicate (LCSD) extracted on 09/17/93 had RPDs exceeding acceptable QC limits as noted below.

Sample No.	Analyte	RPD	QC Limits
LCS soil	1,4-dichlorobenzene	31%	27%
LCS soil	1,2,4-trichlorobenzene	32%	23%
LCS soil	4-chloro-3-methylphenol	36%	33%
LCS soil	acenapthene	32%	19%
LCS water	2-chlorophenol	88%	40%
LCS water	4-nitrophenol	193%	50%
LCS water	pentachlorophenol	196%	50%

According to USEPA guidelines, no organic data are qualified based on high RPD values alone. It is the opinion of the reviewer that the affect on the quality of the data is not known.

H.2 Laboratory control samples QC criteria were met for all other "blank spike" analyses and the results are considered acceptable.

I. Laboratory Replicate Analysis:

I.1 No laboratory replicate analysis is included with the project documentation.

J. Field Duplicate Analysis:

J.1 No field duplicate analysis is included with the project documentation due to the loss of sample number LIS-LF01-2SD13 during extraction

K. Matrix Spike/Matrix Spike Duplicate Analysis:

K.1 All MS/MSD recoveries for sample number LIS-BKGD-SD01 MSD and 93.4424-03 MSD were below the 10% validation criteria. According to the USEPA guidelines, organic data are not qualified based on poor recoveries alone. It is the opinion of the reviewer that the quality of the data is not affected.

K.2 The MS/MSD recoveries in the following QC samples did not meet applicable QC criteria as noted below:

Sample No.	Compound	Recovery	QC Limits
LIS-W01 MS	pentachlorophenol	12%	14-176%
93.4482-03 MS	acenaphthene	43%	47-145%
93.4482-04 MSD	acenaphthene	47%	47-145%
93.4482-03 MS	1,2,4-trichlorobenzene	38%	44-142%
93.4482-04 MSD	1,2,4-trichlorobenzene	38%	44-142%
LIS-LF01-SD03 MS	4-chloro-3-methylphenol	117%	26-103%
LIS-LF01-SD03 MSD	4-chloro-3-methylphenol	120%	26-103%
LIS-LF01-SD03 MS	2,4-dinitrotoluene	101%	28-89 %
LIS-LF01-SD03 MSD	2,4-dinitrotoluene	100%	28-89 %
LIS-LF01-SD03 MS	di-n-butylphthalate	224%	1 -118%
LIS-LF01-SD03 MSD	di-n-butylphthalate	256%	1 -118%
LIS-LF01-SD03 MS	pentachlorophenol	110%	17-109%
LIS-LF01-SD03 MSD	pentachlorophenol	115%	17-109%
LIS-LF01-SD03 MS	phenol	114%	26-90 %
LIS-LF01-SD03 MSD	phenol	120%	26-90 %
LIS-LF01-SD03 MS	n-nitroso-di-propylamine	128%	1 -118%
LIS-LF01-SD03 MSD	n-nitroso-di-propylamine	130%	1 -118%
LIS-LF01-2SD09 MS	pentachlorophenol	16%	17-109%

Sample No.	Compound	RPD	QC Limits
LIS-LF01-2SD09 MS/D	pentachlorophenol	49%	47%
LIS-W01 MS/D	pentachlorophenol	111%	50%

According to USEPA guidelines, organic data are not qualified based on MS/MSD recoveries and RPDs alone. It is the opinion of the reviewer that the recoveries in these samples are due to sample matrix interferences and the affect on the quality of the data is not known.

K.3 All other MS and MSD analyses met the QC criteria and are considered acceptable.

L. Internal Standards:

L.1 Internal standard areas for all analyses met applicable QC criteria and the results are considered acceptable.

M. Quantitation and Identification:

M.1 No problems were observed with analyte quantitation and identification in project sample analyses.

N. Conclusion:

N.1 Due to the above noted deficiencies in surrogate recoveries, select data are considered rejected and unusable for any purpose.

N.2 Due to the above noted deficiencies in continuing calibration performance, laboratory blank contamination, and an exceeded technical holding times, select data are considered as estimates and usable for limited purposes only.

N.3 Due to the above noted laboratory blank contamination, select data are considered non-detected.

N.4 All other data are considered valid and usable for all purposes.

TABLE A
CALIBRATIONS OUTSIDE %D CRITERIA

Date	Compound	%D	Samples
Continuing Calibration - October 1, 1993	pentachlorophenol	26.6	blank(aq) LIS-AOC3-SW01 LIS-AOC3-GW01
Continuing Calibration - October 16, 1993	di-n-butylphthalate benzo(k)fluoranthene dibenz(a,h)anthracene	31.6 28.6 26.5	blank(soil) LIS-LF01-SD03 MS LIS-LF01-SD03 MSD
Continuing Calibration - October 22, 1993	dibenzofuran di-n-octylphthalate benzo(a)pyrene dibenz(a,h)anthracene	31.7 27.1 27.1 27.7	blank(aq) LIS-AOC3-2GW04
Continuing Calibration - October 23, 1993	benzo(b)fluoranthene benzo(a)pyrene dibenz(a,h)anthracene	27.8 26.7 27.2	blank(soil) LIS-W01 LIS-W01 MS LIS-W01 MSD
Continuing Calibration - October 25, 1993	hexachlorocyclopentadiene pentachlorophenol di-n-octylphthalate benzo(a)pyrene dibenz(a,h)anthracene	28.7 29.1 27.6 27.4 27.9	LIS-LF01-2SD09 LIS-LF01-2SD09 MS LIS-LF01-2SD09 MSD

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Frank Milam, ICF Kaiser Engineers
ANALYSIS: Semivolatiles by USEPA Method 8270
MATRIX: Water
DATE: May 11, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (Anchorage, AK) received one (1) water sample for semivolatile compound analysis by USEPA Method 8270 on September 10, 1993. The sample was extracted on September 17, 1993 and analyzed for semivolatile compounds by gas chromatography/mass spectrometry (GC/MS) on October 23, 1993.

The ICF site identification number and corresponding Commercial Testing & Engineering Co. sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-2SW08	93.4729-1	Water

There were no QC sample designations in the project documentation.

Laboratory reports for matrix spike (MS) and matrix spike duplicate (MSD) analyses associated with some project samples were not included with the data package. Therefore, the corresponding ICF sample numbers could not be determined and the laboratory sample numbers were referenced in comment K.1.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared in accordance with USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA SW-846 Method 8270 and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 Technical holding time QC criteria were met for all project sample analysis.

B. GC Instrument Performance Check:

B.1 All QC criteria were met and the results are considered acceptable.

C. Initial Calibration:

C.1 All QC criteria for the initial calibration were met and the results are considered acceptable.

D. Continuing Calibration:

D.1 The percent differences (%Ds) exceeded the $\leq \pm 25\%$ QC validation criteria for several analytes in the continuing calibrations performed on October 22 and October 23, 1993. The detected results and quantitation limits for the analytes listed on Table A are considered estimated (J) and usable for limited purposes only (see modified sample data sheets and Table A).

E. Laboratory Blanks:

E.1 No target analytes were detected in the method blanks at concentrations above the Practical Quantitation Limit (PQL) and the results are considered acceptable.

F. Surrogate Recoveries:

F.1 All base/neutral fraction surrogate recoveries for sample number LIS-LF01-2SW08 were below the 10% QC validation criteria. Therefore, the quantitation limits for all base/neutral fraction target analytes in sample number LIS-LF01-2SW08 are considered rejected (R) and unusable for any purpose (See modified sample data sheets).

F.2 All other surrogate recoveries met applicable QC criteria and the results are considered acceptable.

G. Field Blanks:

G.1 No field blank analysis is included with the project documentation.

H. Laboratory Control Sample Analysis:

H.1 The laboratory control duplicate sample did not meet acceptable QC criteria as noted below:

Sample No.	Compound	Recovery	QC Limits
Method Spike Dup.	pentachlorophenol	1%	14-176%

Sample No.	Compound	RPD	QC Limits
Method Spike Dup.	2-chlorophenol	88%	40%
Method Spike Dup.	4-nitrophenol	193%	50%
Method Spike Dup.	pentachlorophenol	196%	50%

According to USEPA guidelines, organic data are not qualified based on LCS recoveries alone. It is the opinion of the reviewer that the affect on data quality is not known.

H.2 Laboratory control sample QC criteria were met for all other "blank spike" analyses and the results are considered acceptable.

I. Laboratory Replicate Analysis:

I.1 No laboratory replicate analysis is included with the project documentation.

J. Field Duplicate Analysis:

J.1 No field duplicate analysis is included with project documentation.

K. Matrix Spike/Matrix Spike Duplicate Analysis:

K.1 The MS/MSD recoveries in sample numbers 93.4728-11 MS did not meet the QC criteria as noted below:

Sample No.	Compound	Recovery	QC Limits
93.4728-11 MS	pentachlorophenol	12%	14-176%

Sample No.	Compound	RPD	QC Limits
93.4728-12 MSD	1,4-dichlorobenzene	29%	28%
93.4728-12 MSD	pentachlorophenol	111%	50%

According to USEPA guidelines, organic data are not qualified based on MS/MSD recoveries alone. It is the opinion of the reviewer that the recoveries in these samples are due to sample matrix interferences and the affect on the quality of the data is not known.

K.2 All other MS and MSD analyses met the QC criteria and are considered acceptable.

L. Internal Standards:

L.1 Internal standard areas for all analyses met applicable QC criteria and the results are considered acceptable.

M. Quantitation and Identification:

M.1 No problems were observed with analyte quantitation and identification in project sample analyses.

N. Conclusion:

N.1 Due to the above noted low surrogate recoveries, select data are considered rejected and unusable for any purposes.

N.2 Due to the above noted deficiencies in continuing calibration performance select data are considered as estimates and usable for limited purposes only.

N.3 All other data are considered valid and usable for all purposes.

TABLE A
CALIBRATIONS OUTSIDE %D CRITERIA

Date	Compound	%D	Samples
Continuing Calibration - October 22, 1993	di-n-octylpthalate benzo(a)pyrene dibenz(a,h)anthracene	27.1 27.0 27.7	blank(aq)
Continuing Calibration - October 23, 1993	benzo(b)fluoranthene benzo(a)pyrene dibenz(a,h)anthracene	27.8 26.7 27.1	LIS-LF01-2SW08 93.4728-11 MS 93.4728-11 MSD

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Cynthia E. Schlag, ICF Kaiser Engineers, Inc.
ANALYSIS: Total Metals by USEPA Method 6010
Total Thallium by USEPA Method 7841
MATRIX: Soil
DATE: May 12, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (CT&E) (Anchorage, AK) received three (3) soil samples for total metals and thallium analyses by USEPA Methods 6010 and 7841 on September 1, 1993. The samples were digested on September 10, 1993 and were analyzed for total metals by inductively coupled plasma atomic emission spectroscopy (ICP) and for total thallium by atomic absorption furnace technique (GFAA) on September 10, 13, 23, and 24, 1993.

The ICF site identification numbers and corresponding CT&E laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.
LIS-LF01-SD03	93.4514-02
LIS-LF01-SD08	93.4514-07
LIS-LF01-S05	93.4514-11

The following QC sample designations were included in the project documentation: sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were designated as a "field duplicate pair."

Soil sample results and quantitation limits were reported by the laboratory with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared according to the USEPA draft document "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis," October 1989, USEPA Method 6010, USEPA Method 7841, and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 Technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The correlation coefficient of 0.9016 for thallium for the initial calibration run on September 13, 1993, did not meet the QC criteria of 0.9950. Therefore, the quantitation limits for thallium for sample numbers LIS-LF01-SD03, LIS-LF01-SD08, and LIS-LF01-S05 are considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

B.2 All other initial calibration QC criteria were met for project sample analyses and the results are considered acceptable.

C. Continuing Calibrations:

C.1 All continuing calibration QC criteria were met for project sample analyses and the results are considered acceptable.

D. Laboratory Blank Analyses:

D.1 Although calcium and aluminum were reported in the method blank at concentrations above the Practical Quantitation Limit (PQL), data are not qualified due to the presence of calcium and aluminum since the analyte levels in the associated samples are greater than ten (10) times the concentrations found in the method blank.

D.2 No other target analytes were detected in the laboratory blanks above the PQL and the results are considered acceptable.

E. Field Blanks:

E.1 No field blank analyses are included with the project documentation.

F. Field Duplicate Analysis:

F.1 A QC limit for precision of $\leq$50%, as measured by the Relative Percent Difference (RPD) between sample values, was specified for field duplicate comparability.

Sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were utilized for the field duplicate analyses. The following analytes exceeded the QC limits of $\leq$50% RPD:

Analyte	RPD	QC Limit
Aluminum	55%	50%
Cobalt	100%	50%
Manganese	97%	50%
Potassium	100%	50%

Due to high RPD values, the results for the above noted analytes in sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 are considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

G. Laboratory Replicate Analysis:

G.1 Sample number LIS-LF01-SD03 was utilized for the laboratory replicate analysis. All QC criteria were met and the results are considered acceptable.

H. ICP Interference Check Sample (ICS) Analyses:

H.1 All QC criteria were met for the ICS analyses and the results are considered acceptable.

I. Laboratory Control Sample (LCS) Analyses:

I.1 All QC criteria were met for the LCS analyses and the results are considered acceptable.

J. Matrix Spike (MS) Analysis:

J.1 The MS recoveries for the following analytes were outside of the advisory QC limits of 75-125%:

Sample No.	Analyte	% Recovery	Bias
LIS-LF01-SD03 MS	Silver	0	Low
LIS-LF01-SD03 MS	Aluminum	0	Low
LIS-LF01-SD03 MS	Barium	19	Low
LIS-LF01-SD03 MS	Calcium	0	Low
LIS-LF01-SD03 MS	Iron	0	Low
LIS-LF01-SD03 MS	Magnesium	56	Low
LIS-LF01-SD03 MS	Antimony	0	Low

Due to the above noted deviations in MS recoveries, the quantitation limits for silver and antimony in sample numbers LIS-LF01-SD03, LIS-LF01-SD08, and LIS-LF01-S05 are considered rejected (R) and unusable for any purpose (see modified sample data sheets). The nondetected results may be biased low and potentially indicate false negatives.

According to the USEPA validation guidelines, when analyte concentrations exceed four times the spiked concentration, the recovery limits do not apply. Therefore, the above noted deviations in MS recoveries for aluminum, barium, calcium, iron, and magnesium are not expected to adversely affect the quality of the data.

J.2 Due to above noted deviations in MS recoveries, post-digestion spike recovery analyses were performed on September 23 and 24, 1993. The recovery results for all post-digestion spike analyses met applicable QC criteria.

J.3 All other applicable QC criteria were met for the MS analyses and the results are considered acceptable.

K. Quantitation:

K.1 No problems were observed with analyte quantitation in project sample analyses.

L. Conclusion:

L.1 Due to above noted deficiencies in the matrix spike analyses, select data are considered rejected and unusable for any purpose.

L.2 Due to above noted deficiencies in initial calibration and field duplicate analyses, select data are considered estimated and usable for limited purposes only.

L.3 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Cynthia E. Schlag, ICF Kaiser Engineers, Inc.
ANALYSIS: Total and Dissolved Metals by USEPA Method 6010
Total and Dissolved Thallium by USEPA Method 7841
MATRIX: Water and Soil
DATE: May 11, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (CT&E) (Anchorage, AK) received two (2) water samples for total and dissolved metals and thallium analyses by USEPA Methods 6010 and 7841 and two (2) soil samples for total metals and thallium analyses by USEPA Methods 6010 and 7841 on September 1, 1993. The samples were digested on September 8, 1993 and were analyzed for total and dissolved metals by inductively coupled plasma atomic emission spectroscopy (ICP) and for total and dissolved thallium by atomic absorption furnace technique (GFAA) on September 8, 10, 20, and 21, 1993.

The ICF site identification numbers and corresponding CT&E laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-BKGD-S01	93.4477-01	Soil
LIS-BKGD-SD01	93.4477-02	Soil
LIS-AOC3-SW01	93.4477-03	Water
LIS-AOC3-SW01 (F)	93.4477-03	Water
LIS-BKGD-SW01	93.4477-05	Water
LIS-BKGD-SW01 (F)	93.4477-05	Water

Sample numbers LIS-AOC3-SW01 (F) and LIS-BKGD-SW01 (F) were designated as field filtered samples and analyzed for dissolved metals and thallium.

There were no QC sample designations included in project documentation.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared according to the USEPA draft document "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis," October 1989, USEPA Method 6010, USEPA Method 7841, and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 Technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 All initial calibration QC criteria were met for project sample analyses and the results are considered acceptable.

C. Continuing Calibrations:

C.1 A percent recovery of 86% was reported for sodium and 88% for aluminum, which are outside the advisory QC limits of 90-110%. It is the opinion of the reviewer that the above noted deviations do not have an adverse effect on data quality.

C.2 All other continuing calibration QC criteria were met for project sample analyses and the results are considered acceptable.

D. Laboratory Blank Analyses:

D.1 No target analytes were detected in the laboratory and calibration blanks (initial and continuing calibration blanks) above the Practical Quantitation Limit (PQL) and the results are considered acceptable.

E. Field Blanks:

E.1 No field blank analyses are included with the project documentation.

F. Field Duplicate Analysis:

F.1 No field duplicate analyses were included with the project documentation.

G. Laboratory Replicate Analysis:

G.1 Sample number 93.4483-04 was utilized for the laboratory replicate analysis. The following analytes did not meet the QC criteria of $\leq$50% Relative Percent Difference (RPD):

Analyte	RPD
Manganese	84%
Iron	87%

Due to high RPD values for the above noted analytes, manganese in sample numbers LIS-BKGD-S01 and LIS-BKGD-SD01 is considered estimated (J) and usable for limited purposes only (see modified sample data sheets).

Although the iron results exceeded the RPD limits, this analyte is not qualified due to high dilution levels needed to perform the analyses.

G.2 All other QC criteria for the laboratory replicate analysis were met and the results are considered acceptable.

H. ICP Interference Check Sample (ICS) Analyses:

H.1 All QC criteria were met for the ICS analyses and the results are considered acceptable.

I. Laboratory Control Sample (LCS) Analyses:

I.1 All QC criteria were met for the LCS analyses and the results are considered acceptable.

J. Matrix Spike (MS) Analysis:

J.1 The MS recoveries for the following analytes were outside of the advisory QC limits of 75-125%:

Sample No.	Analyte	% Recovery	Bias
93.4483-04 MS	Silver	0	Low
93.4483-04 MS	Aluminum	167	High
93.4483-04 MS	Barium	74	Low
93.4483-04 MS	Iron	228	High
93.4483-04 MS	Magnesium	178	High
93.4483-04 MS	Manganese	482	High
93.4483-04 MS	Antimony	56	Low
93.4483-10 MS	Aluminum	0	Low
93.4483-10 MS	Iron	0	Low
93.4483-10 MS (F)	Iron	143	High
93.4483-10 MS	Zinc	432	High

Due to the above noted deviations in MS recoveries, the following results are considered as estimates (J) and usable for limited purposes only (see modified sample data sheets):

- The nondetected results for silver and antimony in sample numbers LIS-BKGD-S01 and LIS-BKGD-SD01 may potentially indicate false negatives.
- The detected results for manganese in sample numbers LIS-BKGD-S01 and LIS-BKGD-SD01 may be biased high.
- The nondetected results for aluminum in sample numbers LIS-AOC3-SW01 and LIS-BKGD-SW01 may potentially indicate false negatives.

According to the USEPA validation guidelines, the recovery limits do not apply when analyte concentrations exceed four times the spiked concentration. Therefore, it is the opinion of the reviewer that all other noted deviations in MS recoveries are not expected to adversely affect the quality of the data.

J.2 Due to above noted deviations in MS recoveries, post-digestion spike recovery analyses were performed on September 10 and 20, 1993. The recovery results for all post-digestion spike analyses met applicable QC criteria.

J.3 All other applicable QC criteria were met for the MS analyses and the results are considered acceptable.

K. Quantitation:

K.1 No problems were observed with analyte quantitation in project sample analyses.

L. Conclusion:

L.1 Due to above noted deficiencies in laboratory replicate and matrix spike analyses, select data are considered estimated and usable for limited purposes only.

L.2 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Cynthia E. Schlag, ICF Kaiser Engineers, Inc.
ANALYSIS: Total and Dissolved Metals by USEPA Method 6010
Total and Dissoved Thallium by USEPA Method 7841
MATRIX: Water
DATE: May 11, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (CT&E) (Anchorage, AK) received two (2) water samples for total and dissolved metals and thallium analyses by USEPA Methods 6010 and 7841 on September 1, 1993. The samples were digested on September 10 and 11, 1993 and were analyzed for total and dissolved metals by inductively coupled plasma atomic emission spectroscopy (ICP) and for total and dissolved thallium by atomic absorption furnace technique (GFAA) on September 13, 14, and 21, 1993.

The ICF site identification numbers and corresponding CT&E laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.
LIS-EB02	93.4511-01
LIS-EB02 (F)	93.4511-01
LIS-LF01-SW04	93.4511-03
LIS-LF01-SW04 (F)	93.4511-03

Sample numbers LIS-EB02 (F) and LIS-LF01-SW04 (F) were designated as field filtered samples and analyzed for dissolved metals and thallium.

The following QC sample designations were included in project documentation: sample numbers LIS-EB02 and LIS-EB02 (F) were designated as "equipment blanks."

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared according to the USEPA draft document "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis," October 1989, USEPA Method 6010, USEPA Method 7841, and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:

A.1 Technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 All initial calibration QC criteria were met for project sample analyses and the results are considered acceptable.

C. Continuing Calibrations:

C.1 A percent recovery of 88% was reported for sodium, which is outside the advisory QC limits of 90-110%. It is the opinion of the reviewer that the above noted deviation does not have an adverse effect on data quality.

C.2 All other continuing calibration QC criteria were met for project sample analyses and the results are considered acceptable.

D. Laboratory Blank Analyses:

D.1 No target analytes were detected in the laboratory blanks above the Practical Quantitation Limit (PQL) and the results are considered acceptable.

E. Field Blanks:

E.1 Iron and sodium were detected in the equipment blank at concentrations near the PQL. Iron and sodium were detected in the associated sample at concentrations greater than 10X the equipment blank. It is the opinion of the reviewer that this field blank contamination is insignificant compared to the amount detected in the associated sample. Therefore, the quality of the data is not affected.

F. Field Duplicate Analysis:

F.1 No field duplicate analyses were included with the project documentation.

G. Laboratory Replicate Analysis:

G.1 Sample number LIS-LF01-SW04 was utilized for laboratory replicate analysis. All QC criteria for the laboratory replicate analysis were met and the results are considered acceptable.

H. ICP Interference Check Sample (ICS) Analyses:

H.1 All QC criteria were met for the ICS analyses and the results are considered acceptable.

I. Laboratory Control Sample (LCS) Analyses:

I.1 All QC criteria were met for the LCS analyses and the results are considered acceptable.

J. Matrix Spike (MS) Analysis:

J.1 The MS recoveries for the following analytes were outside the advisory QC limits of 75-125%:

Sample No.	Analyte	% Recovery	Bias
LIS-LF01-SW04 MS	Silver	65	Low
LIS-LF01-SW04 (F) MS	Silver	65	Low
LIS-LF01-SW04 (F) MS	Sodium	71	Low
LIS-LF01-SW04 (F) MS	Zinc	133	High

Due to the above noted deviations in MS recoveries, the quantitation limits for silver in sample numbers LIS-EB02, LIS-EB02 (F), LIS-LF01-SW04 and LIS-LF01-SW04 (F) are considered estimated (J) and usable for limited purposes only (see modified sample data sheets). The detected results may be biased low and where nondetected, false negatives may exist.

It is the opinion of the reviewer that the deviations in MS recoveries for sodium and zinc are not expected to adversely affect the quality of the data. The quantitation limits for zinc are not affected by a high bias. The detected result for sodium has an insignificant low bias.

J.2 Due to above noted deviations in MS recoveries, post-digestion spike recovery analyses were performed on September 14, 1993. The recovery results for all post-digestion spike analyses met applicable QC criteria.

J.3 All other applicable QC criteria were met for the MS analyses and the results are considered acceptable.

K. Quantitation:

K.1 It should be noted that zinc was detected in sample number LIS-EB02 (F). It was then analyzed on a different instrument and was not detected. The laboratory communicated a contamination problem in the initial analysis based on the out of control recovery of zinc in the MS.

K.2 No other problems were observed with analyte quantitation in project sample analyses.

L. Conclusion:

L.1 Due to above noted deficiencies in matrix spike analyses, select data are considered estimated and usable for limited purposes only.

L.2 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: Dewline/Cape Lisburne RI/FS (ICF Project No. 41096-412-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Cynthia E. Schlag, ICF Kaiser Engineers, Inc.
ANALYSIS: Total and Dissolved Metals by USEPA Method 6010
Total and Dissolved Thallium by USEPA Method 7841
MATRIX: Water
DATE: May 12, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (CT&E) (Anchorage, AK) received one (1) water sample for total and dissolved metals and thallium analyses by USEPA Methods 6010 and 7841 on August 30, 1993 and one (1) water sample for total metals and thallium analyses by USEPA Methods 6010 and 7841 on September 1, 1993. The samples were digested on September 14, 22, 23, and 24, 1993 and were analyzed for total and dissolved metals by inductively coupled plasma atomic emission spectroscopy (ICP) and for total and dissolved thallium by atomic absorption furnace technique (GFAA) on September 10, 14, 21, 22, 23, and 24, 1993.

The ICF site identification numbers and corresponding CT&E laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.
LIS-AOC3-2GW04	93.4727-01
LIS-AOC3-GW01	93.4481-01
LIS-AOC3-GW01 (F)	93.4481-01

Sample number LIS-AOC3-GW01 (F) was designated as a field filtered sample and analyzed for dissolved metals and thallium.

There were no QC sample designations included in project documentation.

The analytical results with qualifications are presented on modified sample data sheets included in the report appendix. Definitions of data qualifiers are provided in Table 1B. This report was prepared according to the USEPA draft document "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis," October 1989, USEPA Method 6010, USEPA Method 7841, and the Project Sampling and Analysis Plan.

II. VALIDITY and COMMENTS:

A. Technical Holding Times:
A.1 Technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:
B.1 All initial calibration QC criteria were met for project sample analyses and the results are considered acceptable.

C. Continuing Calibrations:
C.1 All continuing calibration QC criteria were met for project sample analyses and the results are considered acceptable.

D. Laboratory Blank Analyses:
D.1 No target analytes were detected in the laboratory blanks above the Practical Quantitation Limit (PQL) and the results are considered acceptable.

E. Field Blanks:
E.1 No field blank analyses were included with the project documentation.

F. Field Duplicate Analysis:
F.1 No field duplicate analyses were included with the project documentation.

G. Laboratory Replicate Analysis:
G.1 All QC criteria for the laboratory replicate analysis were met and the results are considered acceptable.

H. ICP Interference Check Sample (ICS) Analyses:
H.1 All QC criteria were met for the ICS analyses and the results are considered acceptable.

I. Laboratory Control Sample (LCS) Analyses:
I.1 All QC criteria were met for the LCS analyses and the results are considered acceptable.

J. Matrix Spike (MS) Analysis:
J.1 The MS recoveries for the following analytes were outside the advisory QC limits of 75-125%:

Sample No.	Analyte	% Recovery	Bias
93.4504-01 MS	Silver	73	Low
94.4504-01 (F) MS	Silver	73	Low
93.4728-09 MS	Aluminum	13	Low
93.4728-09 MS	Iron	50	Low
93.4728-09 MS	Antimony	73	Low

Due to the above noted deviations in MS recoveries, the quantitation limits for aluminum and iron in sample number LIS-AOC3-2GW04 are considered estimated (J) and usable for limited purposes only (see modified sample data sheets). The quantitation limits may indicate false negatives.

The other noted deviations in MS recoveries for antimony and silver are not excessive. It is the opinion of the reviewer that the deviations are not expected to adversely affect the quality of the data.

J.2 Due to above noted deviations in MS recoveries, post-digestion spike recovery analyses were performed on September 14 and 22, 1993. The recovery results for all post-digestion spike analyses met applicable QC criteria.

J.3 All other applicable QC criteria were met for the MS analyses and the results are considered acceptable.

K. Quantitation:

K.1 No problems were observed with analyte quantitation in project sample analyses.

L. Conclusion:

L.1 Due to above noted deficiencies in matrix spike analyses, select data are considered as estimated and usable for limited purposes only.

L.2 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: Cape Lisburne/DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Commercial Testing & Engineering Co. (Anchorage, AK)
REVIEWER: Keith Strout
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080
MATRIX: Water and Soil
DATE: November 15, 1994

I. INTRODUCTION:

Commercial Testing & Engineering Co. (CT&E) (Anchorage, AK) received 12 soil samples and 1 water sample from the Cape Lisburne site on September 9,1994 (referenced chain of custody record No. 001). All of the samples required analysis for Polychlorinated Biphenyls (PCBs) by USEPA Method 8080. The water sample was analyzed on September 16, 1994, and the soil samples were analyzed on September 26 and 27, 1994.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-SS09-3S15	94.4608-01	Soil
LIS-SS09-3S14	94.4608-02	Soil
LIS-SS09-3S13	94.4608-03	Soil
LIS-SS08-3S12	94.4608-04	Soil
LIS-SS03-3EB01	94.4608-05	Water
LIS-LF01-3SD23	94.4608-06	Soil
LIS-LF01-3S12	94.4608-07	Soil
LIS-LF01-3S13-1	94.4608-08	Soil
LIS-LF01-3S14	94.4608-09	Soil
LIS-LF01-3S15-1	94.4608-10	Soil
LIS-SS03-3S19	94.4608-11	Soil
LIS-SS03-3S23	94.4608-12	Soil
LIS-SS03-3S22-05	94.4608-13	Soil
LIS-SS03-3S15-1SPK	94.4608-14	Soil
LIS-SS03-3S15-1DUPSPK	94.4608-15	Soil

The following QC sample designations were included in the project documentation for this

sample set: sample number LIS-SS03-3EB01 was designated as an equipment blank, sample numbers LIS-SS09-3S13 and LIS-SS09-3S14 were designated as field replicates, and sample numbers LIS-SS03-3S19 and LIS-SS03-3S23 were also designated as field replicates.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Method 8080, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed initial calibrations on August 30, 1994 and September 12, 1994. Percent relative standard deviations (%RSDs) were calculated for each Aroclor using the calibration factors from the initial calibrations. The initial calibration criteria were met for all project samples.

C. Continuing Calibrations:

C.1 The QC criteria for the continuing calibration verification (CCV) standards were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 PCB analytes were not detected in the method blanks at a concentration above the practical quantitation limit (PQL) and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCB analytes were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample number LIS-SS03-3EB01 was designated as an equipment blank.

F.2 PCB analytes were not detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Replicate Analysis:

G.1 A QC limit for precision of ≤50%, as measured by Relative Percent

Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Sample numbers LIS-SS09-3S13 and LIS-SS09-3S14 were utilized for field replicate analysis. The RPD for Aroclor 1254 (52%) detected in the two samples exceeds the QC limit for precision. It is not known what effect this has on the quality of the data.

G.3 Sample numbers LIS-SS03-3S19 and LIS-SS03-3S23 were also utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 The surrogate recovery for one of the two surrogates in sample numbers , LIS-LF01-3S12, LIS-LF01-3S14, LIS-LF01-3S15-1, LIS-LF01-3S15-1SPK, LIS-SS03-3EB01, and the method blank exceeded the established QC limits. Since only one of the two surrogates recoveries are required to be within the QC limits, all of the surrogate QC criteria were met.

H.2 Due to the high concentration of PCBs in sample numbers LIS-SS09-3S15, LIS-SS09-3S14, LIS-SS09-3S13, LIS-SS08-3S12, LIS-SS03-3S19, LIS-SS03,3S23, and LIS-SS03-3S22-0.5, dilutions were required in order to quantitate the PCB analytes within the linear calibration range of the instrument. As a result of these dilutions, the surrogate recoveries in these samples could not be determined. It is the opinion of the reviewer that this will not have an adverse effect on the quality of the data.

H.3 The surrogate recovery QC criteria were met for all other project samples and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 Sample number LIS-SS03-3S19 was designated as the QC sample on the Chain of Custody record. The laboratory used sample number LIS-LF01-3S15-1 as the QC sample for the matrix spike/matrix spike duplicate analyses because of the high level of native Aroclor 1260 in sample number LIS-SS03-3S19.

I.2 All of the matrix spike/matrix spike duplicate QC criteria were met and the results are considered acceptable.

J. System Performance:

J.1 No problems with system performance were observed for the project samples.

K. Quantitation and Identification:

K.1 Quantitation and identification of PCB analytes were confirmed by secondary column analysis.

K.2 Aroclor 1260 was detected in sample numbers LIS-LF01-3S12, LIS-LF01-3S14, LIS-LF01-3S15-1 at a concentration below the PQL. Therefore, the detected results

in these samples have been qualified "J" as estimated and are usable for limited purposes.

K.3 Dilutions were required on sample numbers LIS-SS09-3S15, LIS-SS09-3S14, LIS-SS09-3S13, LIS-SS08-3S12, LIS-SS03-3S19, LIS-SS03,3S23, and LIS-SS03-3S22-0.5 in order to quantitate the PCB analytes within the linear calibration range of the instrument.

K.4 No problems were observed with compound quantitation and identification.

L. Conclusion:

L.1 Due to the high concentration of PCBs, some of the project samples required dilution in order to quantitate the target analytes within the linear calibration range of the instrument.

L.2 Due to the above mentioned dilutions, the surrogate recoveries in these project samples could not be determined.

L.3 Due to the high concentration of native Aroclor 1260 in the designated QC sample number LIS-SS03-3S19, the laboratory used sample number LIS-LF01-3S15-1 as the matrix spike/matrix spike duplicate sample.

L.4 Due to PCB concentrations below the PQL in sample numbers LIS-LF01-3S12, LIS-LF01-3S14, and LIS-LF01-3S15-1, the detected results are qualified "J" and usable for limited purposes.

L.5 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Diesel by EPA Method 8015M
MATRIX: Soil and Water
DATE: July 7, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 7 water and 5 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 561). Three water and 3 soil samples were requested for diesel analysis by the semivolatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for diesel by USEPA Method 8015M (modified) (GC/FID) on September 4 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-BKGD-S02	1555	Soil
LIS-EB01	1561	Water
LIS-BKGD-SW01	1562	Water
LIS-BKGD-SW02	1566	Water
LIS-BKGD-S03	1574	Soil
LIS-BKGD-S04	1576	Soil

The following QC sample designation was included in project documentation: sample number LIS-EB01 was designated as an equipment blank.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8015M, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The quantitation limits reported by the laboratory for the soil and water samples (50 ppm and 1 ppm, respectively) were higher than those specified in the Project Sampling and Analysis Plan (10 ppm and 0.2 ppm, respectively). Since the low point of the initial calibration is 50 ppm, the PQL should be 50 ppm for soils and 1 ppm for waters. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a 7 point initial calibration on GC instrument ICF6 on 9/2/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 28.0% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 28.0% exceeds the recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable. Also note that if the low point of the calibration curve is disregarded, the %RSD of the 5 point curve becomes 12.8%, which is acceptable.

C. Continuing Calibration:

C.1 A TPH continuing calibration was not analyzed within 24 hours of samples LIS-EB01 and LIS-BKGD-SW01. The detected results and PQLs for these samples are therefore qualified "J" as estimated and usable for limited purposes.

C.2 The raw data for the continuing calibration associated with sample LIS-BKGD-SW02 could not be located.

C.3 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Diesel was not detected in the method blanks at concentrations above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Diesel was not detected in the instrument blanks at concentrations above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Diesel was not detected in the equipment blanks at concentrations above the PQL and the results are considered acceptable.

G. Field Replicate Analyses:

G.1 There were no field replicates submitted for analyses with the diesel fraction.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 Sample LIS-BKGD-SD01 was analyzed as the soil matrix spike duplicate for chain of custody 561. The corresponding matrix spike analysis could not be located in the raw data. No water matrix spike/matrix spike duplicate analyses were analyzed with this chain of custody.

I.2 All of the matrix spike duplicate QC recovery criteria were met and the results are considered acceptable.

J. System Performance:

J.1 No problems with system performance were observed for all project samples.

K. Quantitation and Identification:

K.1 Diesel was not detected in any of the project samples or method blanks.

K.2 Due to the large percent RSDs in the initial calibrations, the detected results for diesel in all project samples and blanks are qualified "J" as estimated and usable for limited purposes.

K.3 Because a TPH continuing calibration was not analyzed within 24 hours of samples LIS-EB01 and LIS-BKGD-SW01, the detected results and PQLs associated with these samples are therefore qualified "J" as estimated and usable for limited purposes.

K.4 The raw data for sample LIS-BKGD-SW02 and the associated continuing calibration could not be located, therefore, the results for these samples remain unvalidated.

K.5 No other problems were observed with compound quantitation and identification.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Timothy Vonnahme
ANALYSIS: Diesel by EPA Method 8015M
MATRIX: Soil
DATE: July 8, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 16 soil samples from the Cape Lisburne site on September 1, 1993 (referenced chain of custody record No. 570) for diesel analysis by the semivolatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for diesel by USEPA Method 8015M (modified) (GC/FID) on September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-SD01	1578	Soil
LIS-LF01-SD02	1580	Soil
LIS-LF01-SD03	1582	Soil
LIS-LF01-SD04	1584	Soil
LIS-LF01-SD05	1586	Soil
LIS-LF01-SD06	1588	Soil
LIS-LF01-SD07	1590	Soil
LIS-LF01-SD08	1592	Soil
LIS-LF01-S01	1594	Soil
LIS-LF01-S02	1596	Soil
LIS-LF01-S03	1598	Soil
LIS-LF01-S04	1600	Soil
LIS-LF01-S05	1602	Soil
LIS-LF01-S06	1604	Soil
LIS-LF01-S07	1606	Soil
LIS-LF01-S08	1608	Soil

The following QC sample designations were included in project documentation: sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were designated as field replicates.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The quantitation limits reported by the laboratory for the soil samples (50 ppm) were higher than those specified in the Project Sampling and Analysis Plan (10 ppm). Since the low point of the initial calibration is 50 ppm, the PQL should be 50 ppm for the soil project samples. It is the opinion of the reviewer that the quality of the data was not affected.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8015M, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a 7 point initial calibration on GC instrument ICF6 on 9/2/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 28.0% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 28.0% exceeds the recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable. Also note that if the low point of the calibration curve is disregarded, the %RSD of the 5 point curve becomes 12.8%, which is acceptable.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Diesel was not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Diesel was not detected in the instrument blanks at concentrations above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blank analyses associated with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 Sample LIS-BKGD-SD01, which is not part of this project sample set but is from the Cape Lisburne site was analyzed as the soil matrix spike duplicate for chain of custody 570. The corresponding matrix spike analysis could not be located in the raw data.

I.2 All of the matrix spike duplicate QC recovery criteria were met and the results are considered acceptable.

J. System Performance:

J.1 No problems with system performance were observed for all project samples.

K. Quantitation and Identification:

K.1 Diesel was detected in samples LIS-LF01-SD06 and LIS-LF01-S07 at concentrations of 1200 ppm and 1800 ppm, respectively.

K.2 The laboratory reported diesel in sample LIS-LF01-S06 at a concentration of 100 ppm. It is the opinion of the reviewer that diesel was not present in the sample because the sample chromatogram did not support the diesel pattern, but did show lube oil contamination. Therefore, the reported result was changed to the appropriate PQL on the data summary form by the reviewer.

K.3 Due to the large percent RSDs in the initial calibrations, the detected results for diesel in all project samples and blanks are qualified "J" as estimated and usable for limited purposes.

K.4 The laboratory reported incorrect PQLs for samples LIS-LF01-SD07, LIS-LF01-SD08, LIS-LF01-S01, LIS-LF01-S02, LIS-LF01-S04, LIS-LF01-S06, and LIS-LF01-S08.

The PQLs have been corrected on the data summary forms by the reviewer.

K.5 The sample results and raw data for sample LIS-LF01-S05 could not be located, therefore, the results for this sample remain unvalidated.

K.6 No other problems were observed with compound quantitation and identification.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Diesel by EPA Method 8015M
MATRIX: Water
DATE: June 22, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 8 water samples from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 615) for diesel analysis by the semivolatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for diesel by USEPA Method 8015M (modified) (GC/FID) on September 4, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-EB02	1542	Water
LIS-LF01-SW01	1543	Water
LIS-LF01-SW02	1544	Water
LIS-LF01-SW03	1545	Water
LIS-LF01-SW04	1546	Water
LIS-LF01-SW05	1549	Water
LIS-LF01-SW06	1550	Water
LIS-LF01-SW07	1551	Water

The following QC sample designation was included in project documentation: sample number LIS-EB02 was designated as an equipment blank and sample numbers LIS-LF01-SW06 and LIS-LF01-SW07 were designated as field duplicates.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in

USEPA Method 8015M, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a 7 point initial calibration on GC instrument ICF6 on 9/2/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 28.0% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 28.0% exceeds the recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable. Also note that if the low point of the calibration curve is disregarded, the %RSD of the 5 point curve becomes 12.8%, which is acceptable.

C. Continuing Calibration:

C.1 A continuing calibration standard was not analyzed within 24 hours prior to the project samples associated with this chain of custody. The continuing calibration standard 09F0801 was analyzed on 9/3/93 at 0702, approximately 25 hours before this set of samples. The percent recovery of continuing calibration standard 09F0801 was 128%, exceeding the requirements of 75-125%. The recovery may have been high due to inconsistent integration procedures. Because of these continuing calibration problems, the detected results and PQLs for this project sample set are qualified "J" as estimated and usable for limited purposes.

D. Laboratory Blanks:

D.1 Diesel was not detected in the method blanks at concentrations above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Diesel was not detected in the instrument blanks at concentrations above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample LIS-EB02 was designated as the field equipment blank for this project sample set.

F.2 Target analytes were not detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Duplicate Analyses:

G.1 A QC limit for precision of ≤ 20%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field duplicate comparability.

G.2 Samples LIS-LF01-SW06 and LIS-LF01-SW07 were utilized for field duplicate analysis. The results of the field duplicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 The surrogates in many of the calibration standards and samples were inaccurately integrated. Peak height was therefore utilized by the reviewer to calculate surrogate recoveries. Discrepancies exist between the surrogate recoveries reported by the laboratory and the surrogate recoveries regenerated by the reviewer for the project samples listed below. The reviewer calculated the recoveries using the average surrogate peak heights from the initial calibration standards.

ICF Site No.	Laboratory % Recovery	Validation % Recovery
LIS-LF01-SW01	130	173
LIS-LF01-SW02	120	160
LIS-LF01-SW05	150	165

Surrogate recovery discrepancies are probably due to inconsistent quantitation procedures performed by the laboratory.

H.2 All other surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 Although sample LIS-LF01-SW04 was designated as the QC sample with Chain of Custody 615, this sample was not utilized by the laboratory for matrix spike/matrix spike duplicate analysis.

J. System Performance:

J.1 No problems with system performance were observed for all project samples.

K. Quantitation and Identification:

K.1 Diesel was not detected at concentrations above the PQL in any of the project samples.

K.2 Due to problems with the initial and continuing calibrations, the detected results and PQLs for the project samples are qualified "J" as estimated and usable for limited purposes.

K.3 No other problems were observed with compound quantitation and identification.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Timothy Vonnahme
ANALYSIS: Diesel by EPA Method 8015M
MATRIX: Soil
DATE: June 16, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 6 soil samples from the Cape Lisburne site on September 9, 1993 (referenced chain of custody record No. 594) for diesel analysis by the semivolatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for diesel by USEPA Method 8015M (modified) (GC/FID) on September 13 and September 14, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-SS03-2S08	1908	Soil
LIS-SS03-2S09	1909	Soil
LIS-SS03-2S10	1910	Soil
LIS-SS03-2S11	1911	Soil
LIS-SS03-2S12	1912	Soil
LIS-SS03-2S13	1913	Soil

The quantitation limits reported by the laboratory for the soil samples (50 ppm) were higher than those specified in the Project Sampling and Analysis Plan (10 ppm). It is the opinion of the reviewer that the quality of the data was not affected.

The following QC sample designation was included in project documentation: sample numbers LIS-SS03-2S07 and LIS-SS03-2S13 were designated as field replicates.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8015M, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a 7 point initial calibration on GC instrument ICF5 on August 25, 1993. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 13.0% was calculated by the reviewer using calibration factors determined from the initial 6 point calibration. The %RSD of 13.0% is within the recommended QC criteria of 20.0%.

B.2 The laboratory performed a 3 point initial calibration on GC instrument ICF6 on August 29, 1993. The range of the initial calibration was from 100 ppm to 10,000 ppm. Due to the sensitivity present at the 100 ppm initial calibration standard, the practical quantitation limit (PQL) of 50 ppm does not need to be raised to the low point of this initial calibration (100 ppm). All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 9.04 was calculated using calibration factors determined from the initial calibration, and is within the recommended QC limit of 20.0%. However, since this is only a three point initial calibration curve, the detected results of the associated samples are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibration:

C.1 The two continuing calibrations analyzed on GC instrument ICF6 were outside the acceptable QC criteria due to incorrect integration performed by the laboratory. All detected sample results and PQLs associated with these continuing calibrations are qualified "J" as estimated and usable for limited purposes.

C.2 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Diesel was not detected in the soil method blank at a concentration above the PQL and the results are considered acceptable.

EE. Instrument Blanks:

E.1 Diesel was not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blank analyses associated with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Sample numbers LIS-SS03-2S07 and LIS-SS02-2S13 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike/matrix spike duplicate analyses were reported with this project sample set.

J. System Performance:

J.1 No problems with system performance were observed for all project samples.

K. Quantitation and Identification:

K.1 Diesel was detected in sample LIS-SS03-2S09 at a concentration of 380 ppm.

K.2 The two continuing calibrations analyzed on GC instrument ICF6 were outside the acceptable QC criteria. All detected sample results and PQLs associated with these continuing calibrations are qualified "J" as estimated and usable for limited purposes.

K.3 Due to the large percent RSDs in the initial calibrations, the detected results for diesel in all project samples and blanks are qualified "J" as estimated and usable for limited purposes.

K.4 No matrix spike and matrix spike duplicate analyses were reported with this project sample set.

K.5 No other problems were observed with compound quantitation and identification.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Timothy Vonnahme
ANALYSIS: Diesel by EPA Method 8015M
MATRIX: Soil
DATE: June 16, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 13 soil samples and one water sample from the Cape Lisburne site on September 9, 1993 (referenced chain of custody record No. 593). Thirteen of the diesel samples were requested for diesel analysis by the semivolatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for diesel by USEPA Method 8015M (modified) (GC/FID) on September 13 and September 14, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-ST07-2S12	1929	Soil
LIS-ST07-2S13	1930	Soil
LIS-ST07-S414	1931	Soil
LIS-ST07-2S15	1932	Soil
LIS-ST07-2S16	1933	Soil
LIS-ST07-2S17	1934	Soil
LIS-ST07-2S18	1935	Soil
LIS-ST07-2S19	1936	Soil
LIS-ST07-2S20	1937	Soil
LIS-ST07-2SD07	1938	Soil
LIS-ST07-2SD08	1939	Soil
LIS-SS08-2S08	1940	Soil
LIS-SS08-2S09	1941	Soil

The quantitation limits reported by the laboratory for the soil samples (50 ppm) were higher than those specified in the Project Sampling and Analysis Plan (10 ppm). It is the opinion of the reviewer that the quality of the data was not affected.

The following QC sample designation was included in project documentation: sample numbers LIS-ST07-2S12 and LIS-ST07-2S17 were designated as field replicates.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8015M, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a 7 point initial calibration on GC instrument ICF5 on August 25, 1993. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 31.2% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 31.2% exceeds the recommended QC criteria of 20.0%. Therefore, the detected results for diesel in all project samples are qualified "J" as estimated and usable for limited purposes.

B.2 The laboratory performed a 3 point initial calibration on GC instrument ICF6 on August 29, 1993. The range of the initial calibration was from 100 ppm to 10,000 ppm. Due to the sensitivity present at the 100 ppm initial calibration standard, the practical quantitation limit (PQL) of 50 ppm does not need to be raised to the low point of this initial calibration (100 ppm). All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 9.04 was calculated using calibration factors determined from the initial calibration, and is within the recommended QC limit of 20.0%. However, since this is only a three point initial calibration curve, all detected results are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibration:

C.1 The two continuing calibrations analyzed on GC instrument ICF6 were outside the acceptable QC criteria due to incorrect integration performed by the

laboratory. All detected sample results and PQLs associated with these continuing calibrations are qualified "J" as estimated and usable for limited purposes.

C.2 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Diesel was not detected in the soil method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Diesel was not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blank analyses associated with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Sample numbers LIS-ST07-2S12 and LIS-ST07-2S17 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike/matrix spike duplicate analyses were reported with this project sample set.

J. System Performance:

J.1 No problems with system performance were observed for all project samples.

K. Quantitation and Identification:

K.1 Diesel was detected in sample LIS-ST07-2S20 at a concentration of 490 ppm, and sample LIS-ST07-2S19 at a concentration of 1100 ppm.

K.2 The laboratory reported diesel in sample LAY-SS08-2S08 at a concentration of 2000 ppm. It is the opinion of the reviewer that diesel was not present in the sample because the sample chromatogram did not support the diesel pattern, therefore, the reported result was changed to the appropriate PQL on the data summary form by the reviewer.

K.3 The two continuing calibrations analyzed on GC instrument ICF6 were

outside the acceptable QC criteria. All detected sample results and PQLs associated with these continuing calibrations are qualified "J" as estimated and usable for limited purposes.

K.4 Due to the large percent RSDs in the initial calibrations, the detected results for diesel in all project samples and blanks are qualified "J" as estimated and usable for limited purposes.

K.5 No matrix spike and matrix spike duplicate analyses were reported with this project sample set.

K.6 No other problems were observed with compound quantitation and identification.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Diesel by EPA Method 8015M
MATRIX: Soil
DATE: June 24, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 11 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 565) for diesel analysis by the semivolatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for diesel by USEPA Method 8015M (modified) (GC/FID) between September 2 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-SS03-S02	1394	Soil
LIS-SS03-S03	1395	Soil
LIS-SS03-S04	1396	Soil
LIS-SS03-S05	1397	Soil
LIS-SS03-S06	1398	Soil
LIS-SS08-S01	1399	Soil
LIS-SS08-S02	1400	Soil
LIS-SS08-S03	1401	Soil
LIS-SS08-S04	1402	Soil
LIS-SS08-S05	1403	Soil
LIS-SS08-S07	1404	Soil

The following QC sample designation was included in project documentation: sample numbers LIS-SS08-S03 and LIS-SS08-S07 were designated as field replicates.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This

report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8015M, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The quantitation limits reported by the laboratory for the soil samples (50 ppm) were higher than those specified in the Project Sampling and Analysis Plan (10 ppm). Since the low point of the initial calibration is 50 ppm, the PQL should be 50 ppm. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a 7 point initial calibration on GC instrument ICF6 on 9/2/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 28.0% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 28.0% exceeds the recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable. Also note that if the low point of the calibration curve is disregarded, the %RSD of the 5 point curve becomes 12.8%, which is acceptable.

B.2 The laboratory analyzed a 5 point initial calibration on GC instrument ICF5 on 8/28/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 37.1% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 37.1% exceeds the recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable. Also note that if the low point of the calibration curve is disregarded, the %RSD of

the 4 point curve becomes 8.4%, which is acceptable.

C. Continuing Calibration:

C.1 Continuing calibration 098F0501 exceeded the acceptable QC criteria due to poor integration techniques. All detected sample results and PQLs associated with this calibration are qualified "J" as estimated and useable for limited purposes.

C.2 All QC criteria with the other continuing calibrations associated with this project sample set were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Diesel was not detected in the method blanks at concentrations above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Diesel was not detected in the instrument blanks at concentrations above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analysis with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Samples LIS-SS03-S03 and LIS-SS03-S07 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 Discrepancies exist between the surrogate recoveries reported by the laboratory and the surrogate recoveries regenerated by the reviewer for the project samples listed below.

ICF Site No.	Laboratory % Recovery	Validation % Recovery
LIS-SS08-S02	112	0
LIS-SS08-S03	109	0
LIS-SS08-S07	87	0

The surrogates in the TPH chromatograms of these samples were completely obscured by oil interferences, and are therefore impossible to calculate. Surrogate recovery discrepancies are probably due to transcription errors.

H.2 All other surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike/matrix spike duplicate analyses were reported with this project sample set.

J. System Performance:

J.1 No problems with system performance were observed for all project samples.

K. Quantitation and Identification:

K.1 A unknown oil was detected and reported in samples LIS-SS08-S01, LIS-SS08-S02, LIS-SS08-S03, LIS-SS08-S04, LIS-SS08-S05, and LIS-SS08-S07. The reported sample concentrations were estimated by using linear regression calculations using the diesel initial calibrations. Because the detected material is not diesel, the values reported on the summary data report forms are qualified "J" as estimated and usable for limited purposes.

K.2 Discrepancies exist between the results reported by the laboratory and those regenerated by the reviewer for the project samples listed below. The values reported by the reviewer are calculated based linear regression from the diesel initial calibrations and are corrected for percent moisture.

ICF Site No.	Laboratory Results (ug/g)	Validation Results (ug/g)
LIS-SS08-S01	230 oil	750 J
LIS-SS08-S02	6500 oil	19500 J
LIS-SS08-S03	21000 oil	51000 J
LIS-SS08-S04	100 oil	50 J
LIS-SS08-S05	420 oil	330 J
LIS-SS08-S07	45000 oil	49000 J

It should be noted that the TPH present in these samples is not diesel but an unknown oil, therefore all the results are qualified "J" estimated and usable for limited purposes.

K.3 Due to problems with the initial calibrations, the detected results for the project samples are qualified "J" as estimated and usable for limited purposes.

K.4 Due to problems with the continuing calibration 098F0501, the detected results and PQLs of the samples associated with this continuing calibration are qualified "J" as estimated and useable for limited purposes.

K.5 No other problems were observed with compound quantitation and identification.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Diesel by EPA Method 8015M
MATRIX: Soil and Water
DATE: June 29, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 1 water and 14 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 563) for diesel analysis by the semivolatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for diesel by USEPA Method 8015M (modified) (GC/FID) between September 2 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-SS03-S01	1379	Soil
LIS-AOC3-SW01	1380	Water
LIS-BKGD-SD01	1381	Soil
LIS-BKGD-S01	1382	Soil
LIS-SS09-S01	1383	Soil
LIS-SS09-S03	1384	Soil
LIS-SS09-S04	1385	Soil
LIS-SS09-S05	1386	Soil
LIS-SS09-S06	1387	Soil
LIS-SS09-S07	1388	Soil
LIS-SS09-S08	1389	Soil
LIS-SS09-S09	1390	Soil
LIS-SS09-S10	1391	Soil
LIS-SS09-S11	1392	Soil
LIS-SS09-S12	1393	Soil

The following QC sample designations were included in project documentation: sample

numbers LIS-SS09-S08 and LIS-SS09-S12 were designated as field replicates and sample LIS-SS09-S05 was designated as the matrix spike/matrix spike duplicate.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8015M, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The quantitation limits reported by the laboratory for the soil and water samples (50 ppm and 1 ppm, respectively) were higher than those specified in the Project Sampling and Analysis Plan (10 ppm and 0.05 ppm, respectively). Since the low point of the initial calibration is 50 ppm, the PQL should be 50 ppm for soils and 1 ppm for waters. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a 7 point initial calibration on GC instrument ICF6 on 9/2/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 28.0% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 28.0% exceeds the recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable. Also note that if the low point of the calibration curve is disregarded, the %RSD of the 5 point curve becomes 12.8%, which is acceptable.

B.2 The laboratory analyzed a 5 point initial calibration on GC instrument ICF5 on 8/28/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 37.1% was calculated using calibration factors determined from the initial 5 point calibration. The %RSD of 37.1% exceeds the

recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable. Also note that if the low point of the calibration curve is disregarded, the %RSD of the 4 point curve becomes 8.4%, which is acceptable.

C. Continuing Calibration:

C.1 Continuing calibration 098F0201 exceeded the acceptable QC criteria due to poor integration techniques. All detected sample results and PQLs associated with this calibration are qualified "J" as estimated and usable for limited purposes.

C.2 All QC criteria with the other continuing calibrations associated with this project sample set were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Diesel was not detected in the method blanks at concentrations above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Diesel was not detected in the instrument blanks at concentrations above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analysis with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Samples LIS-SS09-S08 and LIS-SS09-S12 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 Discrepancies exist between the surrogate recoveries reported by the laboratory and the surrogate recoveries regenerated by the reviewer for the project samples listed below.

ICF Site No.	Laboratory % Recovery	Validation % Recovery
LIS-SS09-S03	105	0
LIS-SS09-S08	106	0
LIS-SS09-S09	115	0
LIS-SS09-S12	118	0
LIS-AOC3-SW01	120	217

The surrogates in the TPH chromatograms of 4 of the above samples were completely obscured by oil interferences, and are therefore impossible to calculate. Surrogate recovery discrepancies may be due to transcription errors.

H.2 All other surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 Sample LIS-SS09-S05 was analyzed as the soil matrix spike/matrix spike duplicate (MS/MSD) for chain of custody 563. Distilled water was spiked, analyzed, and reported by the laboratory for the water matrix spike/matrix spike duplicate analyses for chain of custody 563.

I.2 All of the matrix spike/matrix spike duplicate QC criteria were met and the results are considered acceptable.

J. System Performance:

J.1 No problems with system performance were observed for all project samples.

K. Quantitation and Identification:

K.1 A unknown oil was detected and reported in samples LIS-SS09-S01, LIS-SS09-S03, LIS-SS09-S08, LIS-SS09-S09, and LIS-SS09-S12. The reported sample concentrations were estimated by using linear regression calculations using the diesel initial calibrations. Because the detected material is not diesel, the values reported on the summary data report forms are qualified "J" as estimated and usable for limited purposes.

K.2 Discrepancies exist between the results reported by the laboratory and those regenerated by the reviewer for the project samples listed below. The values reported by the reviewer are calculated based on linear regression from the diesel initial calibrations and are corrected for percent moisture.

ICF Site No.	Laboratory Results (ug/g)	Validation Results (ug/g)
LIS-SS09-S01	4500 oil	760 NJ
LIS-SS09-S03	4500 oil	13000 NJ
LIS-SS09-S08	12000 oil	30000 NJ
LIS-SS09-S09	2700 oil	4900 NJ
LIS-SS09-S12	13000 oil	25000 NJ

It should be noted that the TPH present in these samples is not diesel but an unknown oil, therefore all the results are qualified "J" estimated and usable for limited purposes.

K.3 Due to problems with the initial calibrations, the detected results for the project samples are qualified "J" as estimated and usable for limited purposes.

K.4 The reviewer adjusted the PQL of the water sample from < 0.2 ppm to < 1 ppm to reflect the concentration of the low point of the diesel initial calibration

curve (50 ppm).

K.5 No other problems were observed with compound quantitation and identification.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Diesel by EPA Method 8015M
MATRIX: Water and Soil
DATE: June 23, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 5 water and 6 soil samples from the Cape Lisburne site on September 13, 1993 (referenced chain of custody record No. 596). Five waters and 4 soils were requested for diesel analysis by the semivolatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for diesel by USEPA Method 8015M (modified) (GC/FID) on September 13 and September 14, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-2SW08	1915	Water
LIS-LF01-2SW09	1917	Water
LIS-LF01-2SW10	1918	Water
LIS-LF01-2SD11	1920	Soil
LIS-LF01-2S11	1923	Soil
LIS-2EB04	1924	Water
LIS-W01	1925	Water
LIS-W02	1926	Soil
LIS-LF01-2SD10	1927	Soil

The following QC sample designations were included in project documentation: sample numbers LIS-LF01-2SW09 and LIS-LF01-2SW10 were designated as field duplicates and sample LIS-2EB04 was designated as the equipment blank.

The analytical results with qualifications are presented on modified sample data sheets

submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8015M, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The quantitation limits reported by the laboratory for the water samples (2000 ppb) were higher than those specified in the Project Sampling and Analysis Plan (500 ppb). The PQLs for the water samples were changed by the reviewer to 1000 ppm, which corresponds to the lowest usable initial calibration point.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a 7 point initial calibration on GC instrument ICF6 on 9/2/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 28.0% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 28.0% exceeds the recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable. Also note that if the low point of the calibration curve is disregarded, the %RSD of the 5 point curve becomes 12.8%, which is acceptable.

B.2 The laboratory analyzed a 5 point initial calibration on GC instrument ICF5 on 8/28/93. The attempted range of the initial calibration was from 10 ppm to 10,000 ppm. Due to low sensitivity and interference, the 10 ppm calibration standard was deleted from the calibration. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 37.1% was calculated using calibration factors determined from the initial 6 point calibration. The %RSD of 37.1% exceeds the recommended QC criteria of 20.0% Since the initial calibration exceeds the recommended QC criteria of 20.0%, the detected results for diesel in the project samples associated with this initial calibration are qualified "J" as estimated and usable for limited purposes. Note that if height instead of area responses are used to calculate calibration factors, the initial calibration %RSD criteria are acceptable.

Also note that if the low point of the calibration curve is disregarded, the %RSD of the 4 point curve becomes 8.4%, which is acceptable.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Diesel was not detected in the method blanks at concentrations above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Diesel was not detected in the instrument blanks at concentrations above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample LIS-2EB04 was designated as the field equipment blank for this project sample set.

F.2 Target analytes were not detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Duplicate Analyses:

G.1 A QC limit for precision of $\leq$ 20%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field duplicate comparability.

G.2 Samples LIS-LF01-2SW09 and LIS-LF01-2SW10 were utilized for field duplicate analysis. The results of the field duplicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 The surrogates in many of the calibration standards and samples were inaccurately integrated. Peak height was therefore utilized by the reviewer, where necessary, to calculate surrogate recoveries. Discrepancies exist between the surrogate recoveries reported by the laboratory and the surrogate recoveries regenerated by the reviewer for the project samples listed below. The reviewer calculated the recoveries using the average surrogate areas or peak heights from the initial calibration standards.

ICF Site No.	Laboratory % Recovery	Validation % Recovery
LIS-W01	120	156
LIS-LF01-2SD10	69	29

Surrogate recovery discrepancies are probably due to inconsistent quantitation procedures performed by the laboratory.

H.2 All other surrogate recoveries met applicable QC criteria and the results are

considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 Sample LIS-LF01-2SW08 was analyzed as the water matrix spike (MS) for chain of custody 596. The corresponding matrix spike duplicate (MSD) samples was not analyzed.

I.2 The matrix spike percent recovery QC criteria was met and the results are considered acceptable.

I.3 Since the matrix spike duplicate sample was not analyzed, a Relative Percent Deviation (RPD) of duplicate analyses was not obtained.

J. System Performance:

J.1 Surrogate peak tailing was observed on the analyses performed on GC instrument ICF5 on September 13 and 14, indicating possible column performance problems. It is the opinion of the reviewer that the diesel results reported for the samples analyzed on this instrument during this period of time were not affected by this problem.

J.2 No other problems with system performance were observed.

K. Quantitation and Identification:

K.1 Diesel was detected in sample LIS-LF01-2SD10 at a concentration of 500 ppm.

K.2 Due to problems with the initial calibrations, the detected results for the project samples are qualified "J" as estimated and usable for limited purposes.

K.3 The reviewer adjusted the PQL of the water samples from < 2000 ppb to < 1000 ppb to reflect the concentration of the low point of the diesel initial calibration curve (50 ppm).

K.4 The PQLs reported by the laboratory for samples LIS-LF01-2S11 and LIS-LF01-2SD10 were incorrect, probably because of transcription errors. The reviewer modified the diesel PQLs for these samples on the summary data report forms.

K.5 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: Gasoline by USEPA Method 8015M
MATRIX: Water and Soil
DATE: July 8, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 5 soil and 7 water samples from the Cape Lisburne site on September 1, 1993 (referenced chain of custody record No. 561). Five of the soil samples and four of the water samples required gasoline analysis by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for gasoline by USEPA Method 8015M (modified) (GC/FID) on September 5 through September 8, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-TB-01	1552	Water
LIS-EB-01	1558	Water
LIS-BKGD-SW01	1564	Water
LIS-BKGD-SW02	1568	Water
LIS-BKGD-SD01	1557	Soil
LIS-BKGD-S01	1554	Soil
LIS-BKGD-S02	1555	Soil
LIS-BKGD-S03	1574	Soil
LIS-BKGD-S04	1576	Soil

The following QC sample designations were included in project documentation: sample number LIS-TB-01 was designated as a travel blank, and sample number LIS-EB-01 was designated as an equipment blank.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Method 8015M, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a four point initial calibration on system 1-2 on August 19, 1993. The range of the initial calibration was from 50 ppb to 5000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 31.8 was calculated using calibration factors determined from the initial calibration. The 31.8% RSD exceeds the recommended 20.0% RSD, therefore, the detected results for gasoline in all of the samples analyzed on system 1-2 are qualified "J" as estimated and are usable for limited purposes.

B.2 The laboratory analyzed a four point initial calibration on system 3-4 on August 24, 1993. The range of the initial calibration was from 100 ppb to 5000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 27.4 was calculated using calibration factors determined from the initial calibration. The 27.4% RSD exceeds the recommended 20.0% RSD, therefore, the detected results for gasoline in all of the samples analyzed on system 3-4 are qualified "J" as estimated and are usable for limited purposes.

C. Continuing Calibrations:

C.1 The laboratory did not perform any continuing calibrations for the gasoline fraction. The laboratory indicated that since the same injection was used to analyze for gasoline and the BTEX compounds, the continuing calibration response on the FID for the BTEX compounds and the surrogate were used to determine linearity for the gasoline fraction. It is the opinion of the reviewer that the laboratory should have run continuing calibrations for the gasoline fraction, however, the response for the BTEX compounds and the surrogate compound can be used to determine if the

instrument has maintained linearity for the gasoline fraction. Because the laboratory did not perform any continuing calibrations specifically for the gasoline fraction, the detected results and the practical quantitation limits (PQLs) are qualified "J" as estimated and are usable for limited purposes.

C.2 All QC criteria for the BTEX continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Gasoline was not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Gasoline was not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample number LIS-TB-01 was designated as a travel blank and sample number LIS-EB-01 was designated as an equipment blank.

F.2 Gasoline was not detected in the travel blank at a concentration above the PQL and the results are considered acceptable.

F.3 Gasoline was not detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Replicate Analysis:

G.1 There were no field replicate samples submitted with this project sample set.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 The laboratory did not perform any matrix spike/matrix spike duplicate analyses for the gasoline fraction.

J. System Performance:

J.1 No problems with system performance were observed for the project samples.

K. Quantitation and Identification:

K.1 The low point in the gasoline initial calibration performed on system 3-4 on August 24, 1993 was 100 ppb. Therefore, the PQL for gasoline in all of the soil samples and blanks analyzed on system 3-4 has been raised from 1 ppm to 2 ppm, and adjusted for moisture content.

K.2 No other problems were observed with compound quantitation and

identification.

L. Conclusion:

L.1 Gasoline was not detected at a concentration above the PQL in any of the project samples.

L.2 Due to the lack of continuing calibrations, the PQL for all project samples and blanks are qualified "J" as estimated and usable for limited purposes.

L.3 The PQL for gasoline in all samples and blanks analyzed on system 3-4 has been changed to coincide with the low point in the initial calibration performed on August 24, 1993.

L.4 The PQL in sample number LIS-BKGD-S04 was not adjusted for moisture content by the laboratory. The PQL has been adjusted and changed on the data summary form by the reviewer.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: Gasoline by USEPA Method 8015M
MATRIX: Soil
DATE: June 24, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 16 soil samples from the Cape Lisburne site on September 1, 1993 (referenced chain of custody record No. 570) for gasoline analysis by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for gasoline by USEPA Method 8015M (modified) (GC/FID) on September 5, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-SD01	1578	Soil
LIS-LF01-SD02	1580	Soil
LIS-LF01-SD03	1582	Soil
LIS-LF01-SD04	1584	Soil
LIS-LF01-SD05	1586	Soil
LIS-LF01-SD06	1588	Soil
LIS-LF01-SD07	1590	Soil
LIS-LF01-SD08	1592	Soil
LIS-LF01-S01	1594	Soil
LIS-LF01-S02	1596	Soil
LIS-LF01-S03	1598	Soil
LIS-LF01-S04	1600	Soil
LIS-LF01-S05	1602	Soil

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-S06	1604	Soil
LIS-LF01-S07	1606	Soil
LIS-LF01-S08	1608	Soil

The following QC sample designations were included in project documentation: sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were designated as field replicates.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Method 8015M, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a four point initial calibration on system 3-4 on August 24, 1993. The range of the initial calibration was from 100 ppb to 5000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 27.4 was calculated using calibration factors determined from the initial calibration. The 27.4% RSD exceeds the recommended 20.0% RSD, therefore, the detected results for gasoline in all of the project samples are qualified "J" as estimated and are usable for limited purposes.

C. Continuing Calibrations:

C.1 The laboratory did not perform any continuing calibrations for the gasoline fraction. The laboratory indicated that since the same injection was used to analyze for gasoline and the BTEX compounds, the continuing calibration response on the FID for the BTEX compounds and the surrogate were used to determine linearity for the gasoline fraction. It is the opinion of the reviewer that the laboratory should have run continuing calibrations for the gasoline fraction, however, the response for the BTEX compounds and the surrogate compound can be used to determine if the

instrument has maintained linearity for the gasoline fraction. Because the laboratory did not perform any continuing calibrations specifically for the gasoline fraction, the detected results and the practical quantitation limits (PQLs) are qualified "J" as estimated and are usable for limited purposes.

C.2 All QC criteria for the BTEX continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Gasoline was not detected in the method blanks at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Gasoline was not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blank analyses associated with this project sample set.

G. Field Replicate Analysis:

G.1 A QC limit for precision of $\leq$ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Samples LIS-LF01-SD03 and LIS-LF01-SD08 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 The laboratory calculated and reported the surrogate recoveries using the PID detector. The surrogate recoveries should have been calculated and reported using the FID detector because the gasoline is quantitated using the FID detector. The surrogate recoveries for sample numbers LIS-LF01-SD06 and LIS-LF01-SD07 are 38% and 49%, respectively, (as determined using the FID detector) which does not meet the QC criteria. Therefore, the PQLs in these two samples are qualified "J" as estimated and are usable for limited purposes.

H.2 All other surrogate recoveries met the applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 The laboratory did not perform any matrix spike/matrix spike duplicate analyses for the gasoline fraction.

J. System Performance:

J.1 The laboratory did not perform any instrument blanks between some of the samples which contained high levels of hydrocarbons. It is the opinion of the reviewer that this resulted in carryover causing interference with the quantitation of some of the samples. Therefore, the detected results for gasoline in some of the project samples have been changed to a higher PQL value to compensate for the

carryover.

J.2 No other problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 The laboratory reported a detected result for gasoline in samples LIS-LF01-SD04, LIS-LF01-SD05, LIS-LF01-S06, and LIS-LF01-S08 and indicated that the detected results may be due to carryover. It is the opinion of the reviewer that the detected peaks in these samples are due to carryover of higher molecular weight hydrocarbons from previous samples. Therefore, the detected results for gasoline in these samples have been changed to a higher PQL value to compensate for the carryover.

K.2 The low point in the gasoline initial calibration performed on August 24, 1993 was 100 ppb. Therefore, the PQL for gasoline in all of the samples and blanks has been raised from 1 ppm to 2 ppm and adjusted for moisture content.

K.3 A discrepancy exists between the detected result reported by the laboratory (29 ppm) and the result regenerated by the reviewer (56 ppm) for sample number LIS-LF01-S07. The laboratory indicated that discrepancies exist due to inconsistent quantitation procedures. The detected result for this sample has been changed on the data summary form by the reviewer.

K.4 No other problems were observed with compound quantitation and identification.

L. Conclusion:

L.1 Due to the large percent RSD in the initial calibration and the lack of continuing calibrations for the gasoline fraction, the detected results and the PQL for gasoline in all project samples and blanks are qualified "J" as estimated and usable for limited purposes.

L.2 Due to carryover from previous samples, the detected results in some of the project samples have been changed to a higher PQL value to compensate for the carryover.

L.3 Due to a discrepancy between the reported detected result and the amount of gasoline calculated by the reviewer in sample number LIS-LF01-S07, the detected result has been changed on the data summary form by the reviewer.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: Gasoline by USEPA Method 8015M
MATRIX: Soil
DATE: July 1, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 1 soil sample from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 572) for gasoline analysis by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The sample was analyzed for gasoline by USEPA Method 8015M (modified) (GC/FID) on September 5, 1993.

The ICF site identification number and corresponding FBI laboratory sample identification number is listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-S09	1610	Soil

The analytical result for the soil sample was reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Method 8015M, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan.

According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a four point initial calibration on system 3-4 on August 24, 1993. The range of the initial calibration was from 100 ppb to 5000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 27.4 was calculated using calibration factors determined from the initial calibration. The 27.4% RSD exceeds the recommended 20.0% RSD, therefore, the detected results for gasoline in all of the project samples are qualified "J" as estimated and are usable for limited purposes.

C. Continuing Calibrations:

C.1 The laboratory did not perform any continuing calibrations for the gasoline fraction. The laboratory indicated that since the same injection was used to analyze for gasoline and the BTEX compounds, the continuing calibration response on the FID for the BTEX compounds and the surrogate were used to determine linearity for the gasoline fraction. It is the opinion of the reviewer that the laboratory should have run continuing calibrations for the gasoline fraction, however, the response for the BTEX compounds and the surrogate compound can be used to determine if the instrument has maintained linearity for the gasoline fraction. Because the laboratory did not perform any continuing calibrations specifically for the gasoline fraction, the detected results and the practical quantitation limits (PQLs) are qualified "J" as estimated and are usable for limited purposes.

C.2 All QC criteria for the BTEX continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Gasoline was not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Gasoline was not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blank analyses associated with this project sample set.

G. Field Replicate Analysis:

G.1 There were no field replicate samples associated with this project sample set.

H. Surrogate Recoveries:

H.1 The laboratory calculated and reported the surrogate recoveries using the PID detector. The surrogate recoveries should have been calculated and reported using the FID detector because the gasoline is quantitated using the FID detector.

H.2 The surrogate recoveries were calculated by the reviewer using the FID detector and all of the surrogate recoveries met the applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 The laboratory did not perform any matrix spike/matrix spike duplicate analyses for the gasoline fraction.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 The low point in the gasoline initial calibration performed on August 24, 1993 was 100 ppb. Therefore, the PQL for gasoline in the sample and blanks has been raised from 1 ppm to 2 ppm and adjusted for moisture content.

K.2 No other problems were observed with compound quantitation and identification.

L. Conclusion:

L.1 Gasoline was not detected in the project sample or the blanks at a concentration above the PQL.

L.2 Due to the lack of continuing calibrations for the gasoline fraction, the PQL for gasoline in the project sample and blanks is qualified "J" as estimated and usable for limited purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: Gasoline by USEPA Method 8015M
MATRIX: Water
DATE: June 30, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 9 water samples from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 614). All of the samples required gasoline analysis by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for gasoline by USEPA Method 8015M (modified) (GC/FID) on September 5 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-EB-02	1510	Water
LIS-TB-02	1514	Water
LIS-LF01-SW01	1516	Water
LIS-LF01-SW02	1518	Water
LIS-LF01-SW03	1522	Water
LIS-LF01-SW04	1524	Water
LIS-LF01-SW05	1534	Water
LIS-LF01-SW06	1536	Water
LIS-LF01-SW07	1540	Water

The following QC sample designations were included in project documentation: sample numbers LIS-LF01-SW06 and LIS-LF01-SW06 were designated as field duplicates, sample number LIS-EB02 was designated as an equipment blank, and sample number LIS-TB02 was

designated as a trip blank.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Method 8015M, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a four point initial calibration on system 1-2 on August 19, 1993. The range of the initial calibration was from 50 ppb to 5000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 31.8 was calculated using calibration factors determined from the initial calibration. The 31.8% RSD exceeds the recommended 20.0% RSD, therefore, the detected results for gasoline in all of the samples are qualified "J" as estimated and are usable for limited purposes.

C. Continuing Calibrations:

C.1 The laboratory did not perform any continuing calibrations for the gasoline fraction. The laboratory indicated that since the same injection was used to analyze for gasoline and the BTEX compounds, the continuing calibration response on the FID for the BTEX compounds and the surrogate were used to determine linearity for the gasoline fraction. It is the opinion of the reviewer that the laboratory should have run continuing calibrations for the gasoline fraction, however, the response for the BTEX compounds and the surrogate compound can be used to determine if the instrument has maintained linearity for the gasoline fraction. Because the laboratory did not perform any continuing calibrations specifically for the gasoline fraction, the detected results and the practical quantitation limits (PQLs) are qualified "J" as estimated and are usable for limited purposes.

C.2 All QC criteria for the BTEX continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 The laboratory did not perform a method blank during this analytical sequence.

E. Instrument Blanks:

E.1 Gasoline was not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample number LIS-EB-02 was designated as an equipment blank and sample number LIS-TB-02 was designated as a trip blank.

F.2 Gasoline was not detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

F.3 Gasoline was not detected in the trip blank at a concentration above the PQL and the results are considered acceptable.

G. Field Duplicate Analysis:

G.1 A QC limit for precision of ≤ 20%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field duplicate comparability.

G.2 Sample numbers LIS-LF01-SW06 and LIS-LF01-SW07 were utilized for field duplicate analysis. The results of the field duplicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 All of the surrogate QC recovery criteria were met for all project samples and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 The laboratory did not perform any matrix spike/matrix spike duplicate analyses for the gasoline fraction.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 No problems were observed with compound quantitation and identification.

L. Conclusion:

L.1 Gasoline was not detected in any of the project samples or blanks at a concentration above the PQL.

L.2 Due to the lack of continuing calibrations, the PQL for all of the project samples is qualified "J" as estimated and usable for limited purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: Gasoline by USEPA Method 8015M
MATRIX: Soil
DATE: July 1, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 7 soil samples from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 577). All of the samples required gasoline analysis by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for gasoline by USEPA Method 8015M (modified) (GC/FID) on September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-ST07-S05	1612	Soil
LIS-ST07-S06	1614	Soil
LIS-ST07-S07	1616	Soil
LIS-ST07-S08	1618	Soil
LIS-ST07-S09	1620	Soil
LIS-ST07-S10	1622	Soil
LIS-ST07-S11	1624	Soil

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This

report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Method 8015M, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a four point initial calibration on system 1-2 on August 19, 1993. The range of the initial calibration was from 50 ppb to 5000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 31.8 was calculated using calibration factors determined from the initial calibration. The 31.8% RSD exceeds the recommended 20.0% RSD, therefore, the detected results for gasoline in all of the samples are qualified "J" as estimated and are usable for limited purposes.

C. Continuing Calibrations:

C.1 The laboratory did not perform any continuing calibrations for the gasoline fraction. The laboratory indicated that since the same injection was used to analyze for gasoline and the BTEX compounds, the continuing calibration response on the FID for the BTEX compounds and the surrogate were used to determine linearity for the gasoline fraction. It is the opinion of the reviewer that the laboratory should have run continuing calibrations for the gasoline fraction, however, the response for the BTEX compounds and the surrogate compound can be used to determine if the instrument has maintained linearity for the gasoline fraction. Because the laboratory did not perform any continuing calibrations specifically for the gasoline fraction, the detected results and the practical quantitation limits (PQLs) are qualified "J" as estimated and are usable for limited purposes.

C.2 All QC criteria for the BTEX continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 The laboratory did not perform a method blank during this analytical sequence.

E. Instrument Blanks:

E.1 Gasoline was not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks associated with this project sample set.

G. Field Replicate Analysis:

G.1 There were no field replicate samples associated with this project sample set.

H. Surrogate Recoveries:

H.1 The laboratory calculated and reported the surrogate recoveries using the PID detector. The surrogate recoveries should have been calculated and reported using the FID detector because the gasoline is quantitated using the FID detector. The surrogate recoveries in all of the project samples were calculated by the reviewer using the FID detector. The surrogate recovery for sample number LIS-ST07-S10 (161%) and the surrogate recovery for sample number LIS-ST07-S11 (255%) exceeded the QC criteria of 50%-150%. It is the opinion of the reviewer that this is due to interference from the gasoline in the samples and should not have an effect on the quality of the data.

H.2 All of the surrogate QC recovery criteria were met for all other project samples and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 The laboratory did not perform any matrix spike/matrix spike duplicate analyses for the gasoline fraction.

J. System Performance:

J.1 The laboratory did not run instrument blanks between some of the project samples which contained high concentrations of gasoline which resulted in carryover to subsequent analyses. Therefore, the PQL in sample number LIS-ST07-S05 has been changed on the data summary form by the reviewer to compensate for the carryover.

J.2 No other problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 Discrepancies exist between the detected results reported by the laboratory and the results regenerated by the reviewer for several of the project samples. Listed below are the sample numbers were discrepancies exist. The results are listed parts per million (ppm).

ICF Site No.	Laboratory Results	Validation Results
LIS-ST07-S09	16	11
LIS-ST07-S10	160	111
LIS-ST07-S11	64	48

The laboratory indicated that discrepancies are probably due to inconsistent quantitation procedures. The laboratory was unable to reproduce some of the reported detected results for gasoline which indicates that inconsistent quantitation procedures may have been used.

K.2 The laboratory did not run an instrument blank between sample numbers LIS-ST07-S10 and LIS-ST07-S11 which may have resulted in carryover to the latter sample. Therefore, the detected result for gasoline in sample number LIS-ST07-S11 may be biased high due to carryover from the previous sample and is qualified "J" as estimated and usable for limited purposes.

K.3 No other problems were observed with compound quantitation and identification.

L. Conclusion:

L.1 Due to a large %RSD in the initial calibration and the lack of continuing calibrations for gasoline, all detected results and the PQL for all project samples are qualified "J" as estimated and usable for limited purposes.

L.2 Due to carryover from a previous analysis, the PQL for sample number LIS-ST07-S05 has been raised by the reviewer.

L.3 Due to interference from carryover, the detected result for gasoline in sample number LIS-ST07-S11 reported by the laboratory is higher than the actual amount present in the sample. Therefore, the detected result for this sample is qualified "J" as estimated and usable for limited purposes.

L.4 Discrepancies exist between the detected results reported by the laboratory and the results regenerated by the reviewer for some of the project samples. The results have been changed by the reviewer on the data summary forms.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: Gasoline by USEPA Method 8015M
MATRIX: Water and Soil
DATE: July 5, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 10 soil and 5 water samples from the Cape Lisburne site on September 1, 1993 (referenced chain of custody record No. 573). All of the samples required gasoline analysis by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for gasoline by USEPA Method 8015M (modified) (GC/FID) on September 5 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-TB-03	1626	Water
LIS-EB-03	1628	Water
LIS-ST07-SW01	1632	Water
LIS-ST07-SW02	1636	Water
LIS-ST07-SW03	1640	Water
LIS-ST07-SD01	1644	Soil
LIS-ST07-SD02	1646	Soil
LIS-ST07-SD03	1648	Soil
LIS-ST07-SD04	1650	Soil
LIS-ST07-SD05	1652	Soil
LIS-ST07-SD06	1654	Soil
LIS-ST07-S01	1656	Soil
LIS-ST07-S02	1658	Soil

ICF Site No.	Lab Sample No.	Matrix
LIS-ST07-S03	1660	Soil
LIS-ST07-S04	1662	Soil

The laboratory did not submit any results for sample number LIS-ST07-SW02. The chain-of custody record contains the comment "free product in sample" next to this sample number.

The following QC sample designations were included in project documentation: sample numbers LIS-ST07-SD01 and LIS-ST07-SD06 are designated as field replicates, sample numbers LIS-ST07-SW01 and LIS-ST07-SW03 are designated as field duplicates, sample number LIS-TB-03 was designated as a travel blank, and sample number LIS-EB-03 was designated as an equipment blank.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Method 8015M, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a four point initial calibration on system 1-2 on August 19, 1993. The range of the initial calibration was from 50 ppb to 5000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 31.8 was calculated using calibration factors determined from the initial calibration. The 31.8% RSD exceeds the recommended 20.0% RSD, therefore, the detected results for gasoline in all of the samples analyzed on system 1-2 are qualified "J" as estimated and are usable for limited purposes.

B.2 The laboratory analyzed a four point initial calibration on system 3-4 on August 24, 1993. The range of the initial calibration was from 100 ppb to 5000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 27.4 was

calculated using calibration factors determined from the initial calibration. The 27.4% RSD exceeds the recommended 20.0% RSD, therefore, the detected results for gasoline in all of the samples analyzed on system 3-4 are qualified "J" as estimated and are usable for limited purposes.

C. Continuing Calibrations:

C.1 The laboratory did not perform any continuing calibrations for the gasoline fraction. The laboratory indicated that since the same injection was used to analyze for gasoline and the BTEX compounds, the continuing calibration response on the FID for the BTEX compounds and the surrogate were used to determine linearity for the gasoline fraction. It is the opinion of the reviewer that the laboratory should have run continuing calibrations for the gasoline fraction, however, the response for the BTEX compounds and the surrogate compound can be used to determine if the instrument has maintained linearity for the gasoline fraction. Because the laboratory did not perform any continuing calibrations specifically for the gasoline fraction, the detected results and the practical quantitation limits (PQLs) are qualified "J" as estimated and are usable for limited purposes.

C.2 All QC criteria for the BTEX continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Gasoline was not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Gasoline was not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample number LIS-TB-03 was designated as a travel blank and sample number LIS-EB-03 was designated as an equipment blank.

F.2 Gasoline was not detected in the travel blank at a concentration above the PQL and the results are considered acceptable.

F.3 Gasoline was not detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Duplicate Analysis:

G.1 A QC limit for precision of $\leq$ 20%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field duplicate comparability.

G.2 Sample numbers LIS-ST07-SW01 and LIS-ST07-SW03 were utilized for field duplicate analysis. The results of the field duplicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Field Replicate Analysis:

H.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

H.2 Sample numbers LIS-ST07-SD01 and LIS-ST07-SD06 were utilized for field replicate analysis. The laboratory reported detected results of 38 ppm for sample number LIS-ST07-SD01 and 20 ppm for sample number LIS-ST07-SD06, resulting in an RPD of 62% which exceeds the QC criteria. It is the opinion of the reviewer that the results do not meet the QC criteria because of carryover from previous analyses.

I. Surrogate Recoveries:

I.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

J. Matrix Spike/Matrix Spike Duplicate Analyses:

J.1 The laboratory did not perform any matrix spike/matrix spike duplicate analyses for the gasoline fraction.

K. System Performance:

K.1 The laboratory did not run instrument blanks between some of the project samples which contained high concentrations of gasoline which resulted in carryover to subsequent analyses. Therefore, the detected results in sample numbers LIS-ST07-SD01, LIS-ST07-S02, LIS-ST07-S04, LIS-ST07-S03, LIS-ST07-SD01, and LIS-ST07-SD02 are qualified "J" as estimated and usable for limited purposes, and the PQL in sample numbers LIS-ST07-SD03 and LIS-ST07-SD04 have been adjusted on the data summary forms by the reviewer to compensate for the carryover.

K.2 No other problems with system performance were observed for the project samples.

L. Quantitation and Identification:

L.1 The low point in the gasoline initial calibration performed on system 3-4 on August 24, 1993 was 100 ppb. Therefore, the PQL for gasoline in all of the samples and blanks analyzed on system 3-4 has been raised from 1 ppm to 2 ppm, and adjusted for moisture content.

L.2 Discrepancies exist between the detected results reported by the laboratory and the results regenerated by the reviewer for several of the project samples. Listed below are the sample numbers were discrepancies exist. The results are listed in parts per million (ppm).

ICF Site No.	Laboratory Results	Validation Results
LIS-ST07-SD05	32	20
LIS-ST07-S01	56	43
LIS-ST07-S02	18	13
LIS-ST07-S04	32	25
LIS-ST07-SD06	20	14

LIS-ST07-S03	36	25
LIS-ST07-SD01	38	138
LIS-ST07-SD02	78	150

The laboratory indicated that discrepancies are probably due to inconsistent quantitation procedures. The laboratory was unable to reproduce some of the reported detected results for gasoline which indicates that inconsistent quantitation procedures may have been used.

L.3 No other problems were observed with compound quantitation and identification.

M. Conclusion:

M.1 Due to the large percent RSDs in the initial calibrations and the lack of continuing calibrations, the detected results and the PQL for all project samples and blanks are qualified "J" as estimated and usable for limited purposes.

M.2 Due to carryover from previous analyses, the detected results in sample numbers LIS-ST07-SD01, LIS-ST07-S02, LIS-ST07-S04, LIS-ST07-S03, LIS-ST07-SD01, and LIS-ST07-SD02 are qualified "J" as estimated, and the PQL in sample numbers LIS-ST07-SD03 and LIS-ST07-SD04 have been adjusted to compensate for the carryover.

M.3 Due to discrepancies between the detected results reported by the laboratory and the results regenerated by the reviewer for some of the project samples, the detected results have been changed on the data summary forms by the reviewer.

M.4 The PQL for gasoline in all samples and blanks analyzed on system 3-4 has been changed to coincide with the low point in the initial calibration performed on August 24, 1993.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: HVOCs by USEPA Method 8010 and BTEX compounds by USEPA Method 8020
MATRIX: Water and Soil
DATE: July 8, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 5 soil samples and 7 water samples from the Cape Lisburne site on September 1, 1993 (referenced chain of custody record No. 561). Five of the soil samples and four of the water samples required analysis for the halogenated volatile organic compounds (HVOCs) and for the BTEX compounds by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed on September 5 through September 8, 1993 for HVOCs by USEPA Method 8010, and BTEX compounds by USEPA Method 8020.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-TB-01	1552	Water
LIS-EB-01	1558	Water
LIS-BKGD-SW01	1564	Water
LIS-BKGD-SW02	1568	Water
LIS-BKGD-SD01	1557	Soil
LIS-BKGD-S01	1554	Soil
LIS-BKGD-S02	1555	Soil
LIS-BKGD-S03	1574	Soil
LIS-BKGD-S04	1576	Soil

The following QC sample designations were included in project documentation: sample number LIS-TB-01 was designated as a travel blank, and sample number LIS-EB-01 was designated as an equipment blank.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Methods 8010 and 8020, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for HVOCs for project soil samples were higher than those specified in the Project Sampling and Analysis Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a five point initial calibration on system 1-2 on August 19, 1993. The range of the initial calibration was from 1 ppb to 1000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. Percent relative standard deviations (%RSDs) were calculated for all compounds using the calibration factors from the initial calibration using the FID detector. The % RSDs for the following compounds exceeded the recommended QC criteria of 20.0%.

Compound	% RSD
benzene	28.3 %
o-xylene	26.5 %

Due to the large percent RSDs, the detected results for these compounds in all project samples analyzed on system 1-2 when quantitated using the FID detector are qualified "J" as estimated and are usable for limited purposes.

B.2 The laboratory analyzed a four point initial calibration on system 3-4 on August 29, 1993. The range of the initial calibration was from 1 ppb to 1000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. Percent relative standard deviations (%RSDs) were calculated for all compounds using the calibration factors from the initial calibration using the FID detector. The % RSDs for the following compounds exceeded the recommended QC criteria of 20.0%.

Compound	% RSD
toluene	26 %
ethylbenzene	53 %
m & p-xylene	41 %
o-xylene	28 %

Due to the large percent RSDs, the detected results for these compounds in all project samples analyzed on system 3-4 when quantitated using the FID detector are qualified "J" as estimated and are usable for limited purposes.

B.3 The laboratory was unable to demonstrate linearity throughout the quantitation range using the ECD detector because the detector was saturated at low concentrations. It is the opinion of the reviewer that the ECD detector can be used only to confirm the presence of the halogenated compounds. Quantitation of the halogenated compounds should have been done on the PID or FID detector when possible, and only if compound detection was confirmed on the ECD. Therefore, the detected results and the practical quantitation limits (PQLs) for the halogenated compounds are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibrations:

C.1 The continuing calibrations were performed at a concentration of 500 ppb. At this concentration, the ECD response for all of the halogenated compounds is saturated. Therefore, the ECD detector should only be used to confirm the presence of the halogenated compounds.

C.2 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 No target analytes were detected in the method blanks at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 No target analytes were detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample number LIS-TB-01 was designated as a travel blank and sample number LIS-EB-01 was designated as an equipment blank.

F.2 Low levels of the BTEX target analytes were detected in the travel blank using the FID detector. The results using the PID detector do not confirm the presence of these compounds at a concentration above the PQL. Therefore, the detected results of the BTEX compounds in the travel blank are qualified "N" and the results are usable for limited purposes.

F.3 No target analytes were detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Replicate Analysis:

G.1 There were no field replicate samples associated with this project sample set.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 Sample LIS-ST07-S06 was used as the QC sample for the soil matrix spike/matrix spike duplicate analyses. This sample was not submitted on chain of custody record No. 573 but is from the Cape Lisburne site. The results of the soil matrix spike/matrix spike duplicate analyses met the applicable QC criteria and are considered acceptable.

I.2 Purified water was used as the QC sample for the water matrix spike/matrix spike duplicate analyses. The results of the water matrix spike/matrix spike duplicate analyses met the applicable QC criteria and are considered acceptable.

J. System Performance:

J.1 It is the opinion of the reviewer that the ECD detector cannot be used for the quantitation of the halogenated compounds because the detector displayed saturation at low concentrations. The ECD detector can be used for halogenated compound identification confirmation.

J.2 No other problems with system performance were observed for the project samples.

K. Quantitation and Identification:

K.1 Compound identification was confirmed using a second column and an alternate detector.

K.2 The laboratory reported detected results for some of the BTEX compounds at low levels in sample numbers LIS-TB-01, LIS-BKGD-SW01, and LIS-BKGD-SW02. The detected results were reported using the FID detector. There was no response for these analytes using the PID detector, therefore, the detected results for these compounds are qualified "N" and are usable for limited purposes.

K.3 No other problems were observed with compound quantitation and identification.

L. Conclusion:

L.1 Due to large percent RSDs in the initial calibration, select data in some samples are qualified "J" as estimated and usable for limited purposes.

L.2 Due to the lack of confirmation evidence on the PID detector, the detected results for the BTEX compounds in sample numbers LIS-TB-01, LIS-BKGD-SW02, and LIS-BKGD-SW02 are qualified "N" and are usable for limited purposes.

L.3 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: HVOCs by USEPA Method 8010 and BTEX compounds by USEPA Method 8020
MATRIX: Soil
DATE: June 24, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 16 soil samples from the Cape Lisburne site on September 1, 1993 (referenced chain of custody record No. 570). All of the samples required analysis for the halogenated volatile organic compounds (HVOCs) and for the BTEX compounds by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed on September 5, 1993 for HVOCs by USEPA Method 8010, and the BTEX compounds by USEPA Method 8020.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-SD01	1578	Soil
LIS-LF01-SD02	1580	Soil
LIS-LF01-SD03	1582	Soil
LIS-LF01-SD04	1584	Soil
LIS-LF01-SD05	1586	Soil
LIS-LF01-SD06	1588	Soil
LIS-LF01-SD07	1590	Soil
LIS-LF01-SD08	1592	Soil
LIS-LF01-S01	1594	Soil
LIS-LF01-S02	1596	Soil
LIS-LF01-S03	1598	Soil
LIS-LF01-S04	1600	Soil
LIS-LF01-S05	1602	Soil

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-S06	1604	Soil
LIS-LF01-S07	1606	Soil
LIS-LF01-S08	1608	Soil

The following QC sample designations were included in project documentation: sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were designated as field replicates.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Methods 8010 and 8020, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for HVOCs for project soil samples were higher than those specified in the Project Sampling and Analysis Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a four point initial calibration on system 3-4 on August 29, 1993. The range of the initial calibration was from 1 ppb to 1000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. Percent relative standard deviations (%RSDs) were calculated for all compounds using the calibration factors from the initial calibration using the FID detector. The % RSDs for the following compounds exceeded the recommended QC criteria of 20.0%.

Compound	% RSD
toluene	26 %
ethylbenzene	53 %
m & p-xylene	41 %
o-xylene	28 %

Due to the large percent RSDs, the detected results for these compounds when quantitated using the FID detector are qualified "J" as estimated and are usable for

limited purposes.

B.2 The laboratory was unable to demonstrate linearity throughout the quantitation range using the ECD detector because the detector was saturated at low concentrations. It is the opinion of the reviewer that the ECD detector can be used only to confirm the presence of the halogenated compounds. Quantitation of the halogenated compounds should have been done on the PID or FID detector when possible, and only if compound detection was confirmed on the ECD. Therefore, the detected results and the practical quantitation limits (PQLs) for the halogenated compounds are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibrations:

C.1 The continuing calibrations were performed at a concentration of 500 ppb. At this concentration, the ECD response for all of the halogenated compounds is saturated. Therefore, the ECD detector should only be used to confirm the presence of the halogenated compounds.

C.2 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 No target analytes were detected in the method blanks at a concentration above the PQLs and the results are considered acceptable.

E. Instrument Blanks:

E.1 No target analytes were detected in the instrument blanks at a concentration above the PQLs and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks included in this project sample set.

G. Field Replicate Analysis:

G.1 A QC limit for precision of $\leq$ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Samples LIS-LF01-SD03 and LIS-LF01-SD08 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 Sample number LIS-BKGD-SD01, which is not part of this project sample set but is from the Cape Lisburne site, was used for the matrix spike/matrix spike duplicate analyses.

I.2 All of the matrix spike/matrix spike duplicate QC criteria were met and the results are considered acceptable.

J. System Performance:

J.1 The laboratory did not perform any instrument blanks between some of the samples which contained high levels of BTEX compounds and gasoline. It is the opinion of the reviewer that this resulted in carryover and created interference in some of the samples which probably did not contain BTEX compounds. Therefore, the PQLs for some of the BTEX compounds in some of the project samples have been adjusted to compensate for the carryover.

J.2 No other problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 Discrepancies exist between the detected amounts reported by the laboratory and the amounts calculated by the reviewer for some of the compounds in sample numbers LIS-LF01-S05 and LIS-LF01-S07. The laboratory has indicated that discrepancies are the result of inconsistent quantitation procedures. The detected results for these samples have been changed on the data summary forms by the reviewer.

K.2 Compound identification was confirmed using a second column and an alternate detector.

L. Conclusion:

L.1 Due to carryover in some of the project samples, the PQL of some of the target analytes have been adjusted to compensate for the interference caused by the carryover.

L.2 Due to discrepancies in the detected results reported by the laboratory and the results regenerated by the reviewer for some of the project samples, the detected results in some of the samples have been changed on the data summary forms by the reviewer.

L.3 Due to large percent RSDs in the initial calibration, select data in some samples are qualified "J" as estimated and usable for limited purposes.

L.4 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: HVOCs by USEPA Method 8010 and BTEX compounds by USEPA Method 8020
MATRIX: Soil
DATE: July 1, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 1 soil sample from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 572). The sample required analysis for the halogenated volatile organic compounds (HVOCs) and for the BTEX compounds by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The sample was analyzed on September 5, 1993 for HVOCs by USEPA Method 8010, and the BTEX compounds by USEPA Method 8020.

The ICF site identification number and corresponding FBI laboratory sample identification number are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-S09	1610	Soil

The analytical results for the soil sample were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Methods 8010 and 8020, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for HVOCs for project soil samples were higher than those specified in the Project Sampling and Analysis

Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a four point initial calibration on system 3-4 on August 29, 1993. The range of the initial calibration was from 1 ppb to 1000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. Percent relative standard deviations (%RSDs) were calculated for all compounds using the calibration factors from the initial calibration using the FID detector. The % RSDs for the following compounds exceeded the recommended QC criteria of 20.0%.

Compound	% RSD
toluene	26 %
ethylbenzene	53 %
m & p-xylene	41 %
o-xylene	28 %

Due to the large percent RSDs, the detected results for these compounds when quantitated using the FID detector are qualified "J" as estimated and are usable for limited purposes.

B.2 The laboratory was unable to demonstrate linearity throughout the quantitation range using the ECD detector because the detector was saturated at low concentrations. It is the opinion of the reviewer that the ECD detector can be used only to confirm the presence of the halogenated compounds. Quantitation of the halogenated compounds should have been done on the PID or FID detector when possible, and only if compound detection was confirmed on the ECD. Therefore, the detected results and the practical quantitation limits (PQLs) for the halogenated compounds are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibrations:

C.1 The continuing calibrations were performed at a concentration of 500 ppb. At this concentration, the ECD response for all of the halogenated compounds is saturated. Therefore, the ECD detector should only be used to confirm the presence of the halogenated compounds.

C.2 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 No target analytes were detected in the method blank at a concentration above the PQLs and the results are considered acceptable.

E. Instrument Blanks:

E.1 No target analytes were detected in the instrument blanks at a concentration above the PQLs and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks included in this project sample set.

G. Field Replicate Analysis:

G.1 There were no field replicate samples associated with this project sample set.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 Sample number LIS-BKGD-SD01, which is not part of this project sample set but is from the Cape Lisburne site, was used for the matrix spike/matrix spike duplicate analyses.

I.2 All of the matrix spike/matrix spike duplicate QC criteria were met and the results are considered acceptable.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 The project sample (LIS-LF01-S09) was analyzed at a dilution of 1:10 because of the high level of target analytes in the sample. The PQLs on the data summary form have been adjusted to reflect the 1:10 dilution.

K.2 Compound identification was confirmed using a second column and an alternate detector.

L. Conclusion:

L.1 Due to problems with the ECD detector, the detected results and the PQLs for the HVOCs are qualified "J" as estimated and are usable for limited purposes.

L.2 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: HVOCs by USEPA Method 8010 and BTEX compounds by USEPA Method 8020
MATRIX: Water
DATE: June 30, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 9 water samples from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 614). All of the samples required analysis for the halogenated volatile organic compounds (HVOCs) and for the BTEX compounds by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The laboratory analyzed the samples for HVOCs by USEPA Method 8010 and the BTEX compounds by USEPA Method 8020 on September 5 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-EB-02	1510	Water
LIS-TB-02	1514	Water
LIS-LF01-SW01	1516	Water
LIS-LF01-SW02	1518	Water
LIS-LF01-SW03	1522	Water
LIS-LF01-SW04	1524	Water
LIS-LF01-SW05	1534	Water
LIS-LF01-SW06	1536	Water
LIS-LF01-SW07	1540	Water

The following QC sample designations were included in project documentation: sample numbers LIS-LF01-SW06 and LIS-LF01-SW07 were designated as field duplicates, sample

number LIS-EB-02 was designated as an equipment blank, and sample number LIS-TB-02 was designated as a trip blank.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Methods 8010 and 8020, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a five point initial calibration on system 1-2 on August 19, 1993. The range of the initial calibration was from 1 ppb to 1000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. Percent relative standard deviations (%RSDs) were calculated for all compounds using the calibration factors from the initial calibration using the FID detector. The % RSDs for the following compounds exceeded the recommended QC criteria of 20.0%.

Compound	% RSD
benzene	28.3 %
o-xylene	26.5 %

Due to the large percent RSDs, the detected results for these compounds in all project samples are qualified "J" as estimated and are usable for limited purposes.

B.2 The laboratory was unable to demonstrate linearity throughout the quantitation range using the ECD detector because the detector was saturated at low concentrations. It is the opinion of the reviewer that the ECD detector can be used only to confirm the presence of the halogenated compounds. Quantitation of the halogenated compounds should have been done on the PID or FID detector when possible, and only if compound detection was confirmed on the ECD. Therefore, the detected results and the practical quantitation limits (PQLs) for the halogenated compounds are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibrations:

C.1 The continuing calibrations were performed at a concentration of 500 ppb. At this concentration, the ECD response for all of the halogenated compounds is saturated. Therefore, the ECD detector should only be used to confirm the presence of the halogenated compounds.

C.2 All other QC criteria for the continuing calibrations were met and the results

are considered acceptable.

D. Laboratory Blanks:

D.1 The laboratory did not perform a method blank during this analytical sequence.

E. Instrument Blanks:

E.1 No target analytes were detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample number LIS-EB-02 was designated as an equipment blank. No target analytes were detected in the equipment blank at concentrations above the PQLs and the results are considered acceptable.

F.2 Sample number LIS-TB-02 was designated as the trip blank. The were no target analytes detected in the trip blank at concentrations above the PQLs and the results are considered acceptable.

G. Field Duplicate Analysis:

G.1 A QC limit for precision of ≤ 20%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field duplicate comparability.

G.2 Sample numbers LIS-LF01-SW06 and LIS-LF01-SW07 were utilized for field duplicate analysis. The results of the field duplicate analyses for target analytes 1,1,1-trichloroethane and toluene exceeded the QC criteria. It is not known what effect, if any, this will have on the quality of the data.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 Sample number LIS-LF01-SW04 was designated as the MS/MSD sample on the chain of custody record. The laboratory did not use this sample as the MS/MSD sample. The laboratory used blank water for the matrix spike/matrix spike duplicate analyses.

I.2 All of the matrix spike/matrix spike duplicate QC criteria were met and the results are considered acceptable.

J. System Performance:

J.1 It is the opinion of the reviewer that the ECD detector cannot be used for the quantitation of the halogenated compounds because the detector displayed saturation at low concentrations. The ECD detector can be used for halogenated compound identification confirmation.

J.2 No other problems with system performance were observed for the project samples.

K. Quantitation and Identification:

K.1 Compound identification was confirmed using a second column and an alternate detector.

K.2 No problems were observed for compound quantitation and identification.

L. Conclusion:

L.1 Due to large percent RSDs in the initial calibration, select data in some samples are qualified "J" as estimated and usable for limited purposes.

L.2 Due to problems with the ECD detector, the detected results and the practical quantitation limits for the HVOCs are qualified "J" as estimated and usable for limited purposes.

L.3 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: HVOCs by USEPA Method 8010 and BTEX compounds by USEPA Method 8020
MATRIX: Soil
DATE: July 5, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 7 soil samples from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 577). All of the samples required analysis for the halogenated volatile organic compounds (HVOCs) and for the BTEX compounds by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The laboratory analyzed the samples for HVOCs by USEPA Method 8010 and the BTEX compounds by USEPA Method 8020 on September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-ST07-S05	1612	Soil
LIS-ST07-S06	1614	Soil
LIS-ST07-S07	1616	Soil
LIS-ST07-S08	1618	Soil
LIS-ST07-S09	1620	Soil
LIS-ST07-S10	1622	Soil
LIS-ST07-S11	1624	Soil

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This

report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Methods 8010 and 8020, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for project soil samples were higher than those specified in the Project Sampling and Analysis Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a five point initial calibration on system 1-2 on August 19, 1993. The range of the initial calibration was from 1 ppb to 1000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. Percent relative standard deviations (%RSDs) were calculated for all compounds using the calibration factors from the initial calibration using the FID detector. The % RSDs for the following compounds exceeded the recommended QC criteria of 20.0%.

Compound	% RSD
benzene	28.3 %
o-xylene	26.5 %

Due to the large percent RSDs, the detected results for these compounds in all project samples, when quantitated using the FID, are qualified "J" as estimated and are usable for limited purposes.

B.2 The laboratory was unable to demonstrate linearity throughout the quantitation range using the ECD detector because the detector was saturated at low concentrations. It is the opinion of the reviewer that the ECD detector can be used only to confirm the presence of the halogenated compounds. Quantitation of the halogenated compounds should have been done on the PID or FID detector when possible, and only if compound detection was confirmed on the ECD. Therefore, the detected results and the practical quantitation limits (PQLs) for the halogenated compounds are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibrations:

C.1 The continuing calibrations were performed at a concentration of 500 ppb. At this concentration, the ECD response for all of the halogenated compounds is saturated. Therefore, the ECD detector should only be used to confirm the presence

of the halogenated compounds.

C.2 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 The laboratory did not perform a method blank during this analytical sequence.

E. Instrument Blanks:

E.1 No target analytes were detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks associated with this project sample set.

G. Field Replicate Analysis:

G.1 There were no field replicate samples associated with this project sample set.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate Analyses:

I.1 Sample number LIS-ST07-S06 was the sample used for the matrix spike/matrix spike duplicate analyses.

I.2 All of the matrix spike/matrix spike duplicate QC criteria were met and the results are considered acceptable.

J. System Performance:

J.1 It is the opinion of the reviewer that the ECD detector cannot be used for the quantitation of the halogenated compounds because the detector displayed saturation at low concentrations. The ECD detector can be used for halogenated compound identification confirmation.

J.2 The laboratory did not run instrument blanks between some of the project samples which contained high concentrations of hydrocarbons which resulted in carryover to subsequent analyses. Therefore, the PQLs for some of the BTEX compounds in sample numbers LIS-ST07-S05, and LIS-ST07-S08 have been changed on the data summary form by the reviewer to compensate for the carryover.

J.3 No other problems with system performance were observed for the project samples.

K. Quantitation and Identification:

K.1 Compound identification was confirmed using a second column and an alternate detector.

K.2 The laboratory reported a detected result for tetrachloroethene in sample number LIS-ST07-S09, and for trichloroethene and tetrachloroethene in sample number LIS-ST07-S10. It is the opinion of the reviewer that the ECD detector does not provide evidence that these analytes are present in these samples at concentrations above the PQLs. Therefore, the detected results for these compounds in the above two samples have been changed on the data summary forms by the reviewer.

K.3 The laboratory did not run an instrument blank between sample numbers LIS-ST07-S10 and LIS-ST07-S11 which may have resulted in carryover to the latter sample. Therefore, the detected results for the BTEX compounds in sample number LIS-ST07-S11 may be biased high due to carryover from the previous sample and are qualified "J" as estimated and usable for limited purposes.

K.4 Due to the high level of hydrocarbon, sample number LIS-ST07-S10 was analyzed at a 1:10 dilution.

K.5 No other problems were observed for compound quantitation and identification.

L. Conclusion:

L.1 Due to large percent RSDs in the initial calibration, select data in some samples are qualified "J" as estimated and usable for limited purposes.

L.2 Due to problems with the ECD detector, the detected results and the practical quantitation limits for the HVOCs are qualified "J" as estimated and usable for limited purposes.

L.3 Due to carryover from a previous analysis, the PQLs for some of the BTEX compounds in sample numbers LIS-ST07-S05 and LIS-ST07-S08 have been raised by the reviewer.

L.4 Due to interference from carryover, the detected results for the BTEX compounds in sample number LIS-ST07-S11 reported by the laboratory are higher than the actual amount present in the sample. Therefore, the detected results for some of the BTEX compounds in this sample are qualified "J" as estimated and usable for limited purposes.

L.5 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Keith Strout
ANALYSIS: HVOCs by USEPA Method 8010 and BTEX compounds by USEPA Method 8020
MATRIX: Water and Soil
DATE: July 7, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (FBI) (Seattle, WA) received 10 soil samples and 5 water samples from the Cape Lisburne site on September 2, 1993 (referenced chain of custody record No. 573). All of the samples required analysis for the halogenated volatile organic compounds (HVOCs) and for the BTEX compounds by the volatile organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed on September 5 and September 6, 1993 for HVOCs by USEPA Method 8010, and BTEX compounds by USEPA Method 8020.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-TB-03	1626	Water
LIS-EB-03	1628	Water
LIS-ST07-SW01	1632	Water
LIS-ST07-SW02	1636	Water
LIS-ST07-SW03	1640	Water
LIS-ST07-SD01	1644	Soil
LIS-ST07-SD02	1646	Soil
LIS-ST07-SD03	1648	Soil
LIS-ST07-SD04	1650	Soil
LIS-ST07-SD05	1652	Soil
LIS-ST07-SD06	1654	Soil
LIS-ST07-S01	1656	Soil
LIS-ST07-S02	1658	Soil

ICF Site No.	Lab Sample No.	Matrix
LIS-ST07-S03	1660	Soil
LIS-ST07-S04	1662	Soil

The laboratory did not submit any results for sample number LIS-ST07-SW02. The chain-of custody record contains the comment "free product in sample" next to this sample number.

The following QC sample designations were included in project documentation: sample numbers LIS-ST07-SD01 and LIS-ST07-SD06 are designated as field replicates, sample numbers LIS-ST07-SW01 and LIS-ST07-SW03 are designated as field duplicates, sample number LIS-TB-03 was designated as a travel blank, and sample number LIS-EB-03 was designated as an equipment blank.

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared using the guidelines in the USEPA draft document "National Functional Guidelines for Organic Data Review" (December 1990), USEPA Methods 8010 and 8020, and the Project Sampling and Analysis Plan.

It should be noted that all quantitation limits reported by the laboratory for HVOCs for project soil samples were higher than those specified in the Project Sampling and Analysis Plan. According to the laboratory, all soil samples were extracted in methanol before analysis, as required by the State of Alaska guidelines. It is the opinion of the reviewer that the quality of the data was not affected.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory analyzed a five point initial calibration on system 1-2 on August 19, 1993. The range of the initial calibration was from 1 ppb to 1000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. Percent relative standard deviations (%RSDs) were calculated for all compounds using the calibration factors from the initial calibration using the FID detector. The % RSDs for the following compounds exceeded the recommended QC criteria of 20.0%.

Compound	% RSD
benzene	28.3 %
o-xylene	26.5 %

Due to the large percent RSDs, the detected results for these compounds in all

project samples analyzed on system 1-2 when quantitated using the FID detector are qualified "J" as estimated and are usable for limited purposes.

B.2 The laboratory analyzed a four point initial calibration on system 3-4 on August 29, 1993. The range of the initial calibration was from 1 ppb to 1000 ppb. All samples were quantitated using a linear regression curve calculated from the initial calibration. Percent relative standard deviations (%RSDs) were calculated for all compounds using the calibration factors from the initial calibration using the FID detector. The % RSDs for the following compounds exceeded the recommended QC criteria of 20.0%.

Compound	% RSD
toluene	26 %
ethylbenzene	53 %
m & p-xylene	41 %
o-xylene	28 %

Due to the large percent RSDs, the detected results for these compounds in all project samples analyzed on system 3-4 when quantitated using the FID detector are qualified "J" as estimated and are usable for limited purposes.

B.3 The laboratory was unable to demonstrate linearity throughout the quantitation range using the ECD detector because the detector was saturated at low concentrations. It is the opinion of the reviewer that the ECD detector can be used only to confirm the presence of the halogenated compounds. Quantitation of the halogenated compounds should have been done on the PID or FID detector when possible, and only if compound detection was confirmed on the ECD. Therefore, the detected results and the practical quantitation limits (PQLs) for the halogenated compounds are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibrations:

C.1 The continuing calibrations were performed at a concentration of 500 ppb. At this concentration, the ECD response for all of the halogenated compounds is saturated. Therefore, the ECD detector should only be used to confirm the presence of the halogenated compounds.

C.2 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 No target analytes were detected in the method blanks at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 No target analytes were detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample number LIS-TB-03 was designated as a travel blank and sample number LIS-EB-03 was designated as an equipment blank.

F.2 No target analytes were detected in the travel blank at a concentration above the PQL and the results are considered acceptable.

F.3 No target analytes were detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Duplicate Analysis:

G.1 A QC limit for precision of ≤ 20%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field duplicate comparability.

G.2 Sample numbers LIS-ST07-SW01 and LIS-ST07-SW03 were utilized for field duplicate analysis. The results of the field duplicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Field Replicate Analysis:

H.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

H.2 Sample numbers LIS-ST07-SD01 and LIS-ST07-SD06 were utilized for field replicate analysis. The results of the field replicate analyses for carbon tetrachloride, benzene, trichloroethene, toluene, tetrachloroethene, and ethylbenzene, as reported by the laboratory, do not meet QC criteria. It is the opinion of the reviewer that the results do not meet the QC criteria because of carryover from previous analyses.

I. Surrogate Recoveries:

I.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

J. Matrix Spike/Matrix Spike Duplicate Analyses:

J.1 Sample LIS-ST07-S06 was used as the QC sample for the soil matrix spike/matrix spike duplicate analyses. This sample was not submitted on chain of custody record No. 573 but is from the Cape Lisburne site. The results of the soil matrix spike/matrix spike duplicate analyses met the applicable QC criteria and are considered acceptable.

J.2 Purified water was used as the QC sample for the water matrix spike/matrix spike duplicate analyses. The results of the water matrix spike/matrix spike duplicate analyses met the applicable QC criteria and are considered acceptable.

K. System Performance:

K.1 The laboratory did not run instrument blanks between some of the project samples which contained high concentrations of hydrocarbons which resulted in

carryover to subsequent analyses. Therefore, the PQLs for some of the target analytes in sample numbers LIS-ST07-SD02, LIS-ST07-SD03, LIS-ST07-SD04, LIS-ST07-S01, LIS-ST07-S02, LIS-ST07-S04, and LIS-ST07-S03 have been adjusted on the data summary forms by the reviewer to compensate for the carryover.

K.2 It is the opinion of the reviewer that the ECD detector cannot be used for the quantitation of the halogenated compounds because the detector displayed saturation at low concentrations. The ECD detector can be used for halogenated compound identification confirmation.

K.3 No other problems with system performance were observed for the project samples.

L. Quantitation and Identification:

L.1 A discrepancy exists between the detected result reported by the laboratory (2 ppm) and the result regenerated by the reviewer (3.8 ppm) for xylene in sample LIS-ST07-SD01. The detected result has been changed by the reviewer on the data summary form.

The laboratory indicated that discrepancies are probably due to inconsistent quantitation procedures. The laboratory was unable to reproduce some of the reported detected results which indicates that inconsistent quantitation procedures may have been used.

L.2 Compound identification was confirmed using a second column and an alternate detector.

L.3 No other problems were observed with compound quantitation and identification.

M. Conclusion:

M.1 Due to large percent RSDs in the initial calibration, select data in some samples are qualified "J" as estimated and usable for limited purposes.

M.2 Due to carryover from previous analyses, the PQLs for some of the target analytes in sample numbers LIS-ST07-SD02, LIS-ST07-SD03, LIS-ST07-SD04, LIS-ST07-S01, LIS-ST07-S02, LIS-ST07-S04, and LIS-ST07-S03 have been raised by the reviewer.

M.3 Due to a discrepancy in the amount of xylene reported by the laboratory and the amount recalculated by the reviewer in sample number LIS-ST07-SD01, the detected result for this compound has been changed on the data summary form by the reviewer.

M.4 All other data are considered valid and usable for all purposes.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Pesticides by USEPA Method 8080
MATRIX: Water and Soil
DATE: July 13, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 7 water and 5 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 563). Six water and 3 soils were requested for pesticide analysis by the pesticide organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for pesticides by USEPA Method 8080 on September 4 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-BKGD-S02	1555	Soil
LIS-EB01	1561	Water
LIS-BKGD-SW01	1562	Water
LIS-BKGD-SW02	1566	Water
LIS-AOC3-SW01	1570	Water
LIS-AOC3-SW02	1571	Water
LIS-AOC3-SW03	1572	Water
LIS-BKGD-S03	1574	Soil
LIS-BKGD-S04	1576	Soil

The following QC sample designation was included in project documentation: sample number LIS-EB01 was designated as an equipment blank.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This

report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 1, 1993. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. The %RSDs for the following target analyte exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
Endrin/DDD	64.6

All detected results for these analytes in the samples are qualified "J" as estimated and usable for limited purposes.

B.2 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 3, 1993, for confirmation purposes. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. Peak heights instead of peak areas were used to measure analyte response. The %RSDs for the following target analytes exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
a-BHC	48.9
g-BHC	51.7
b-BHC	31.3
Heptachlor	56.8
d-BHC	35.0
Aldrin	23.3
Heptachlor Epoxide	132
Endosulfan I	21.9
Endosulfan II	22.9
DDD	21.1
Endosulfan Sulfate	39.9
Endrin Ketone	22.9

All detected results for these analytes in the samples are qualified "J" as estimated and usable for limited purposes.

B.3 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

C. Continuing Calibration:

C.1 No continuing calibrations were analyzed prior to analysis of the waters for pesticides. Due to the absence of pesticide continuing calibrations, the practical quantitation limits (PQLs) for all associated water method blanks and samples are qualified "J" as estimated and usable for limited purposes.

C.2 The continuing calibration analyzed prior to the soil samples LIS-BKGD-S02, LIS-BKGD-S03, and LIS-BKGD-S04 failed percent recovery requirements for many of the target pesticides. Due to problems with the continuing calibration, the practical quantitation limits (PQLs) for all associated soil method blanks and samples are qualified "J" as estimated and usable for limited purposes.

D. Laboratory Blanks:

D.1 Target analytes were not detected in the method blank at concentrations above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Target analytes were not detected in the instrument blank at concentrations above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 PCBs were not detected in the equipment blank at concentrations above the PQL and the results are considered acceptable.

G. Field Duplicate Analyses:

G.1 There were no field duplicates submitted for analyses with the pesticide fraction.

H. Surrogate Recoveries:

H.1 The surrogate recovery for sample LIS-AOC3-SW03 was 153%, exceeding method QC requirements. The detected results and PQLs for this sample are therefore qualified "J" as estimated and usable for limited purposes.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike and matrix spike duplicate analyses were performed for the pesticide fraction.

J. System Performance:

J.1 The laboratory set up the GC analytical run time on the primary GC column to elute all pesticide analytes within 9 minutes, causing co-elution of numerous pesticides and making identification difficult. A slower temperature program and/or slower carrier gas flow rate would increase resolution for many of the pesticide

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Timothy Vonnahme
ANALYSIS: Pesticides by USEPA Method 8080
MATRIX: Soil
DATE: July 11, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 16 soil samples from the Cape Lisburne site on September 1, 1993 (referenced chain of custody record No. 570). One soil sample was requested for pesticide analysis by the pesticide organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The sample was analyzed for pesticides by USEPA Method 8080 on September 6, 1993.

The ICF site identification number and corresponding FBI laboratory sample identification number is listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-S02	1596	Soil

The analytical results for the soil sample were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 1, 1993. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. The %RSDs for the following target analyte exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
Endrin/DDD	64.6

All detected results for these analytes in the samples are qualified "J" as estimated and usable for limited purposes.

B.2 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 3, 1993, for confirmation purposes. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. Peak heights instead of peak areas were used to measure analyte response. The %RSDs for the following target analytes exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
a-BHC	48.9
g-BHC	51.7
b-BHC	31.3
Heptachlor	56.8
d-BHC	35.0
Aldrin	23.3
Heptachlor Epoxide	132
Endosulfan I	21.9
Endosulfan II	22.9
DDD	21.1
Endosulfan Sulfate	39.9
Endrin Ketone	22.9

All detected results and PQLs for these analytes in the samples are qualified "J" as estimated and usable for limited purposes.

B.3 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

C. Continuing Calibration:

C.1 No continuing calibrations were analyzed during the sequence with the exception of the column degradation solution containing Endrin and DDT. The

stability of the instrument, GC column, and detector were monitored using the Endrin and DDT column degradation solution and the Aroclor 1254 continuing calibration solution. These two solutions were used to check area consistency and surrogate area stability. It is the opinion of the reviewer, that since no pesticide continuing calibration solutions were analyzed, this is the only criteria that can be used to monitor system performance.

Due to the absence of pesticide continuing calibrations, the practical quantitation limits (PQLs) for the method blank and sample are qualified "J" as estimated and usable for limited purposes.

D. Laboratory Blanks:

D.1 The laboratory did not report the pesticide results for the method blank associated with this sample set. Reviewing the method blank raw data, the validator reported that target analytes were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Target analytes were not detected in the instrument blank at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blank analyses associated with this project sample set.

G. Field Replicate Analyses:

G.1 There were no field replicate samples submitted for analyses for the pesticide fraction.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike and matrix spike duplicate analyses were performed for the pesticide fraction.

J. System Performance:

J.1 The laboratory set up the GC analytical run time on the primary GC column to elute all pesticide analytes within 9 minutes, causing co-elution of numerous pesticides and making identification difficult. A slower temperature program and/or slower carrier gas flow rate would increase resolution for many of the pesticide analytes.

J.2 The Endrin and 4,4'-DDT breakdown met QC criteria and the results are considered acceptable.

J.3 No other problems with system performance were observed for all other project sample analyses.

K. Quantitation and Identification:

K.1 Due to the absence of pesticide continuing calibrations, all PQLs for the project method blank and the sample are qualified "J" as estimated and usable for limited purposes.

K.2 Due to sensitivity problems with methoxychlor in the initial calibration, the PQL was raised by the reviewer to 0.5 ppm for the soil sample.

K.3 The laboratory did not report the pesticide results for the method blank associated with this sample set. The reviewer, by looking at the raw data from the method blank reported that no target analytes were not detected at a concentration above the PQL and the results are considered acceptable.

K.4 No other problems with compound quantitation and identification were observed.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Pesticides by USEPA Method 8080
MATRIX: Water
DATE: June 23, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 8 water samples from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 615) for pesticide analysis by the pesticide organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for pesticides by USEPA Method 8080 on September 4, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-EB02	1542	Water
LIS-LF01-SW04	1546	Water

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The following QC sample designations were included in project documentation: sample number LIS-EB02 was designated as an equipment blank.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 1, 1993. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. The %RSDs for the following target analyte exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
Endosulfan II	64.6

All detected results for this analyte in the samples are qualified "J" as estimated and usable for limited purposes.

B.2 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

C. Continuing Calibration:

C.1 No continuing calibrations were analyzed during the analytical sequence associated with these samples. A pesticide continuing calibration standard, file 0970101, was analyzed in the previous analytical sequence, approximately 37 hours prior to this sample set. All pesticides in this standard met the calibration factor percent deviation (%D) requirements.

Due to the absence of pesticide continuing calibrations, the PQLs for all method blanks and samples are qualified "J" as estimated and usable for limited purposes.

D. Laboratory Blanks:

D.1 There were no laboratory blanks submitted for analyses with the pesticide fraction.

E. Instrument Blanks:

E.1 Target analytes were not detected in the instrument blank at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample LIS-EB02 was designated as the field equipment blank for this project sample set.

F.2 Target analytes were not detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Duplicate Analyses:

G.1 There were no field duplicates submitted for analyses with the pesticide

fraction.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike and matrix spike duplicate analyses were performed for the pesticide fraction.

J. System Performance:

J.1 The laboratory set up the GC analytical run time on the primary GC column to elute all pesticide analytes within 9 minutes, causing co-elution of numerous pesticides and making identification difficult. A slower temperature program and/or slower carrier gas flow rate would increase resolution for many of the pesticide analytes.

J.2 An Endrin and 4,4'-DDT pesticide degradation standard was not analyzed with this sample sequence. Therefore, column performance could not be determined.

J.3 No other problems with system performance were observed for all other project sample analyses.

K. Quantitation and Identification:

K.1 Due to the absence of pesticide continuing calibrations, all PQLs for the project method blank and samples are qualified "J" as estimated and usable for limited purposes.

K.2 No other problems with compound quantitation and identification were observed.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Pesticides by USEPA Method 8080
MATRIX: Water
DATE: June 28, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 11 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 565) for pesticide analysis by the pesticide organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The sample was analyzed for pesticides by USEPA Method 8080 on September 3 and September 5, 1993.

The ICF site identification number and corresponding FBI laboratory sample identification number is listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-SS03-S06	1398	Soil

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 1, 1993. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. The %RSDs for the following target analyte exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
Endrin/DDD	64.6

All detected results for these analytes in the samples are qualified "J" as estimated and usable for limited purposes.

B.2 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 3, 1993, for confirmation purposes. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. Peak heights instead of peak areas were used to measure analyte response. The %RSDs for the following target analytes exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
a-BHC	48.9
g-BHC	51.7
b-BHC	31.3
Heptachlor	56.8
d-BHC	35.0
Aldrin	23.3
Heptachlor Epoxide	132
Endosulfan I	21.9
Endosulfan II	22.9
DDD	21.1
Endosulfan Sulfate	39.9
Endrin Ketone	22.9

All detected results and PQLs for these analytes in the samples are qualified "J" as estimated and usable for limited purposes.

B.3 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibration 097R0101, used for the primary pesticide analysis on GC instrument ICF6, were met and the results are considered

acceptable.

D. Laboratory Blanks:

D.1 Target analytes were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Target analytes were not detected in the instrument blank at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analyses with the pesticide fraction.

G. Field Duplicate Analyses:

G.1 There were no field duplicates submitted for analyses with the pesticide fraction.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No soil matrix spike and matrix spike duplicate analyses were performed for the pesticide fraction.

J. System Performance:

J.1 The laboratory set up the GC analytical run time on the primary GC column to elute all pesticide analytes within 9 minutes, causing co-elution of numerous pesticides and making identification difficult. A slower temperature program and/or slower carrier gas flow rate would increase resolution for many of the pesticide analytes.

J.2 The initial and continuing calibrations performed on GC instrument ICF6 on September 1st and 2nd (method FST) indicated that the instrument performance, with the exception of Endrin/DDD, was acceptable.

J.3 An initial calibration was performed on GC instrument ICF6 (method PST-CONF) on September 3rd for the pesticide confirmation analysis. Because many of the analyte %RSDs exceeded the QC requirements, the instrument performance was unacceptable. Since the confirmation analysis is needed for unique identification and quantitation, accurate pesticide quantitation of these samples is questionable.

J.4 No other problems with system performance were observed for all other project sample analyses.

K. Quantitation and Identification:

K.1 Due to problems with the initial calibrations, the detected results for the target pesticides listed in paragraphs B1 and B.2 are qualified "J" estimated and usable for limited purposes.

K.2 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

K.3 The laboratory reported either Dieldrin or 4,4'-DDE at a concentration 0.02 in sample LIS-SS03-S06. These analytes co-eluted in both the primary and confirmation analyses, so unique identification was impossible. Co-elution of these and other analytes occurred because of the rapid GC temperature programs used. The reviewer recalculated the results for this co-eluting pair of analytes and obtained values of 0.08 ppm on the primary analysis and 0.004 ppm on the confirmation analysis. Because of the above listed identification and quantitation problems, the reported results for Dieldrin or 4,4'-DDE are qualified "R" rejected and unusable for any purposes.

K.4 The laboratory reported PQLs of < 0.01 ppm for the early eluting pesticide analytes and < 5 ppm for the later eluting analytes. Because of interferences in the sample, the PQLs of all the pesticide analytes, except for Methoxychlor, were adjusted to 0.05 ppm.

K.5 It appeared that several pesticide target analytes may be present in the sample. However, because the laboratory used such rapid GC temperature programs, it is the opinion of the reviewer that the resulting analyte co-elution made it impossible to confirm their presence based on retention times.

K.6 No other problems with compound quantitation and identification were observed.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Pesticides by USEPA Method 8080
MATRIX: Water and Soil
DATE: July 5, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 1 water and 14 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 563). One water and 3 soils were requested for pesticide analysis by the pesticide organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for pesticides by USEPA Method 8080 on September 3 and September 5, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-AOC3-SW01	1380	Water
LIS-BKKGD-SD01	1381	Soil
LIS-BKGD-S01	1382	Soil
LIS-SS09-S06	1387	Soil

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 1, 1993. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. The %RSDs for the following target analyte exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
Endrin/DDD	64.6

All detected results for these analytes in the samples are qualified "J" as estimated and usable for limited purposes.

B.2 The laboratory performed a five point initial calibration on GC instrument ICF6 on September 3, 1993, for confirmation purposes. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. Peak heights instead of peak areas were used to measure analyte response. The %RSDs for the following target analytes exceeded the recommended QC criteria of 20.0%.

Compound	%RSD
a-BHC	48.9
g-BHC	51.7
b-BHC	31.3
Heptachlor	56.8
d-BHC	35.0
Aldrin	23.3
Heptachlor Epoxide	132
Endosulfan I	21.9
Endosulfan II	22.9
DDD	21.1
Endosulfan Sulfate	39.9
Endrin Ketone	22.9

All detected results for these analytes in the samples are qualified "J" as estimated and usable for limited purposes.

B.3 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibration 097R0101, used for the primary pesticide analysis on GC instrument ICF6, were met and the results are considered acceptable.

C.2 All QC criteria for the continuing calibration 003R1501, used for the confirmation pesticide analysis on GC instrument ICF6, were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 Target analytes were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Target analytes were not detected in the instrument blank at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analyses with the pesticide fraction.

G. Field Duplicate Analyses:

G.1 There were no field duplicates submitted for analyses with the pesticide fraction.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No soil matrix spike and matrix spike duplicate analyses were performed for the pesticide fraction. Distilled water was spiked and analyzed by the laboratory for the water matrix spike analysis for chain of custody 563, however, the laboratory did not report the results on the data summary report forms. A matrix spike duplicate sample was not analyzed.

I.2 The reviewer recalculated the percent recoveries of the matrix spike sample. The recovery of Heptachlor Epoxide failed matrix spike recovery criteria. The recoveries of the remaining pesticide matrix spike compounds were met and the results are considered acceptable.

J. System Performance:

J.1 The laboratory set up the GC analytical run time on the primary GC column to elute all pesticide analytes within 9 minutes, causing co-elution of numerous pesticides and making identification difficult. A slower temperature program and/or slower carrier gas flow rate would increase resolution for many of the pesticide analytes.

J.2 The initial and continuing calibrations performed on GC instrument ICF6 on September 1st and 2nd (method FST) indicated that the instrument performance, with the exception of Endrin/DDD, was acceptable.

J.3 An initial calibration was performed on GC instrument ICF6 (method PST-CONF) on September 3rd for the pesticide confirmation analysis. Because many of the analyte %RSDs exceeded the QC requirements, the instrument performance was unacceptable. Since the confirmation analysis is needed for unique identification and quantitation, accurate pesticide quantitation of these samples is questionable.

J.4 No other problems with system performance were observed for all other project sample analyses.

K. Quantitation and Identification:

K.1 Due to problems with the initial calibrations, the detected results for the target pesticides listed in B.1 and B.2 are qualified "J" estimated and usable for limited purposes.

K.2 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

K.3 The laboratory reported either Dieldrin or 4,4'-DDE at a concentration 0.07 ppm in sample LIS-BKGD-S01. The laboratory also reported Endosulfan I, Endrin aldehyde, and Endosulfan sulfate in low concentrations in sample LIS-SS09-S06. These analytes co-eluted in both the primary and confirmation analyses, so unique identification was impossible. Co-elution of these and other analytes occurred because of the rapid GC temperature programs used. Because of the above listed identification problems, the reported results for the pesticides in these samples are qualified "R" rejected and unusable for any purposes.

K.4 The laboratory reported PQLs of < 0.01 ppm for the early eluting pesticide analytes and < 5 ppm for the later eluting analytes in sample LIS-BKGD-S01. Because of interferences in the sample, the PQLs of all the pesticide analytes, except for Methoxychlor, were adjusted to 0.05 ppm.

K.5 It appeared that several pesticide target analytes may be present in the sample. However, because the laboratory used such rapid GC temperature programs, it is the opinion of the reviewer that the resulting analyte co-elution made it impossible to confirm their presence based on retention times.

K.6 No other problems with compound quantitation and identification were observed.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Timothy Vonnahme
ANALYSIS: Pesticides by USEPA Method 8080
MATRIX: Water
DATE: June 16, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 13 soil samples and one water sample from the Cape Lisburne site on September 9, 1993 (referenced chain of custody record No. 593). The one water sample was requested for pesticide analysis by the pesticide organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The sample was analyzed for pesticides by USEPA Method 8080 on September 14, 1993.

The ICF site identification number and corresponding FBI laboratory sample identification number is listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-AOC3-2GW04	1928	Water

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF5 on August 21, 1993. The range of the initial calibration was from 0.01 ppm to 1.0 ppm. The percent relative standard deviations (%RSDs) were calculated for all compounds using calibration factors determined from the initial calibration using the ECD detector. The %RSD for the following target analyte exceeded the recommended QC criteria of 20.0%

Compound	%RSD
beta-BHC	22%

All detected results for beta-BHC in the samples are qualified "J" as estimated and usable for limited purposes.

B.2 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

C. Continuing Calibration:

C.1 No continuing calibrations were analyzed during the sequence with the exception of the column degradation solution containing Endrin and DDT. The stability of the instrument, GC column, and detector were monitored using the Endrin and DDT column degradation solution and the Aroclor 1254 continuing calibration solution. These two solutions were used to check area consistency and surrogate area stability. It is the opinion of the reviewer, that since no pesticide continuing calibration solutions were analyzed, this is the only criteria that can be used to monitor system performance.

Due to the absence of pesticide continuing calibrations, the practical quantitation limits (PQLs) for all method blanks and samples are qualified "J" as estimated and usable for limited purposes.

D. Laboratory Blanks:

D.1 The laboratory did not report the pesticide results for the method blank associated with this sample set. The reviewer modified the data summary form to included the pesticide results for the method blank. Target analytes were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 Target analytes were not detected in the instrument blank at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blank analyses associated with this project sample set.

G. Field Replicate Analyses:

G.1 There were no field replicate samples submitted for analyses for the pesticide fraction.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike and matrix spike duplicate analyses were performed for the pesticide fraction.

J. System Performance:

J.1 The laboratory set up the GC analytical run time on the primary GC column to elute all pesticide analytes within 9 minutes, causing co-elution of numerous pesticides and making identification difficult. A slower temperature program and/or slower carrier gas flow rate would increase resolution for many of the pesticide analytes.

J.2 The Endrin and 4,4'-DDT breakdown met QC criteria and the results are considered acceptable.

J.3 No other problems with system performance were observed for all other project sample analyses.

K. Quantitation and Identification:

K.1 Due to the absence of pesticide continuing calibrations, all PQLs for the project method blank and samples are qualified "J" as estimated and usable for limited purposes.

K.2 Due to sensitivity problems with methoxychlor in the initial calibration, the PQL was raised by the reviewer to 10 ppb for the water samples.

K.3 The laboratory did not report the pesticide results for the method blank associated with this sample set. The reviewer modified the data summary form to included the pesticide results for the method blank. Target analytes were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

K.4 No other problems with compound quantitation and identification were observed.

analytes.

J.2 The initial and continuing calibrations performed on GC instrument ICF6 on September 1st and 2nd (method FST) indicated that the instrument performance, with the exception of Endrin/DDD, was acceptable.

J.3 An initial calibration was performed on GC instrument ICF6 (method PST-CONF) on September 3rd for the pesticide confirmation analysis. Because many of the analyte %RSDs exceeded the QC requirements, the instrument performance was unacceptable. Since the confirmation analysis is needed for unique identification and quantitation, accurate pesticide quantitation of these samples is questionable.

J.4 No other problems with system performance were observed for all other project sample analyses.

K. Quantitation and Identification:

K.1 Due to problems with the initial calibrations, the detected results for the target pesticides listed in B.1 and B.2 are qualified "J" estimated and usable for limited purposes.

K.2 Methoxychlor was spiked in at concentrations too low to be detected by the ECD detector until the 0.5 ppm initial calibration standard. All detected results for this analyte are qualified "R" as rejected and unusable, and the PQL is adjusted accordingly.

K.3 The pesticide raw data for samples LIS-BKGD-SW02 and LIS-AOC3-GW02 could not be located, therefore, the results for these samples remain unvalidated.

K.4 No pesticides were detected or reported for any of the project samples associated with this chain of custody.

K.5 No other problems with compound quantitation and identification were observed.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080.
MATRIX: Soil and Water
DATE: July 12, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 7 water and 5 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 561). Six water and 3 soil samples were requested for PCB analysis by the PCB organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for PCBs by USEPA Method 8080 (GC/ECD) between September 4 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-BKGD-S02	1555	Soil
LIS-EB01	1561	Water
LIS-BKGD-SW01	1562	Water
LIS-BKGD-SW02	1566	Water
LIS-AOC3-SW01	1570	Water
LIS-AOC3-SW02	1571	Water
LIS-AOC3-SW03	1572	Water
LIS-BKGD-S03	1574	Soil
LIS-BKGD-S04	1576	Soil

The following QC sample designation was included in project documentation: sample number LIS-EB01 was designated as an equipment blank.

The analytical results with qualifications are presented on modified sample data sheets

submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on August 21, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 27.9% was calculated using calibration factors determined from the initial calibration. The %RSD of 27.9% exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes. If the low point of the calibration curve is disregarded, the %RSD of the 4 point curve becomes 12.7%, which is acceptable.

C. Continuing Calibration:

C.1 A PCB continuing calibration was not analyzed within 24 hours of samples LIS-EB01 and LIS-BKGD-SW01. The detected results and PQLs for these samples are therefore qualified "J" as estimated and usable for limited purposes.

C.2 The raw data for the continuing calibration associated with samples LIS-BKGD-SW02, LIS-AOC3-GW01, LIS-AOC3-GW02, and LIS-AOC3-GW03 could not be located. The detected results and PQLs for these samples are therefore qualified "J" as estimated and usable for limited purposes.

C.3 All other QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 PCBs were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCBs were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 PCBs were not detected in the equipment blanks at a concentrations above

the PQL and the results are considered acceptable.

G. Field Replicate Analyses:

G.1 There were no field replicates submitted for analyses with the PCB fraction.

H. Surrogate Recoveries:

H.1 Discrepancies exist between the surrogate recoveries reported by the laboratory and the surrogate recoveries calculated by the reviewer, for the project samples listed below. The reviewer calculated the recovery of the samples using the average surrogate area from the initial calibration standards.

ICF Site No.	Laboratory Results	Validator Results
LIS-EB01	130%	159%
LIS-BKGD-SW01	140%	163%

The discrepancies are probably due to inconsistent quantitation procedures performed by the laboratory.

H.2 The surrogate recoveries for samples LIS-AOC3-GW01 and LIS-AOC3-GW03 were 168% and 195%, respectively. The detected results and PQLs for these samples are therefore qualified "J" as estimated and usable for limited purposes.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 Sample LIS-BKGD-SD01 was analyzed as the soil matrix spike duplicate for chain of custody 561. The corresponding matrix spike analysis could not be located in the raw data. No water matrix spike/matrix spike duplicate analyses were analyzed with this chain of custody.

I.2 All of the matrix spike duplicate QC recovery criteria were met and the results are considered acceptable.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 PCBs were not detected in any of the project samples or method blanks.

K.2 Due to the large percent RSD in the initial calibration, the detected results for PCBs in all project samples and blanks are qualified "J" as estimated and usable for limited purposes.

K.3 Because a PCB continuing calibration was not analyzed within 24 hours of samples LIS-EB01 and LIS-BKGD-SW01, the detected results and PQLs associated with these samples are therefore qualified "J" as estimated and usable for limited purposes.

K.4 The raw data for sample LIS-BKGD-SW02, LIS-AOC3-GW02, and the associated continuing calibration could not be located, therefore, the results for these samples remain unvalidated.

K.5 The laboratory did report PCB results for samples LIS-AOC3-GW01, LIS-AOC3-GW02, and LIS-AOC3-GW03. The reviewer modified the data summary report forms to include the data for samples LIS-AOC3-GW01 and LIS-AOC3-GW03.

K.6 Discrepancies exist between the surrogate recoveries reported by the laboratory and the surrogate recoveries calculated by the reviewer, for the project samples LIS-EB01 and LIS-BKGD-SW01. The surrogate recoveries for samples LIS-AOC3-GW01 and LIS-AOC3-GW03 were 168% and 195%, respectively. The detected results and PQLs for these samples are therefore qualified "J" as estimated and usable for limited purposes.

K.7 The laboratory reported PCB PQLs for the water samples of <10 ppb. The reviewer changed the PQLs on the data summary report forms to <2 ppb to allow correspondence to the low point of the initial calibration curve.

K.8 The percent moisture was not incorporated into the PQLs reported for samples LIS-BKGD-S03 and LIS-BKGD-S04. The reviewer changed the PQLs on the data summary report forms to allow for percent moisture.

K.9 No other problems were observed with compound quantitation and identification.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Timothy Vonnahme
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080.
MATRIX: Soil
DATE: July 11, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 16 soil samples from the Cape Lisburne site on September 1, 1993 (referenced chain of custody record No. 570) for PCB analysis by the PCB organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for PCBs by USEPA Method 8080 (GC/ECD) on September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-LF01-SD01	1578	Soil
LIS-LF01-SD02	1580	Soil
LIS-LF01-SD03	1582	Soil
LIS-LF01-SD04	1584	Soil
LIS-LF01-SD05	1586	Soil
LIS-LF01-SD06	1588	Soil
LIS-LF01-SD07	1590	Soil
LIS-LF01-SD08	1592	Soil
LIS-LF01-S01	1594	Soil
LIS-LF01-S02	1596	Soil
LIS-LF01-S03	1598	Soil
LIS-LF01-S04	1600	Soil
LIS-LF01-S05	1602	Soil
LIS-LF01-S06	1604	Soil
LIS-LF01-S07	1606	Soil
LIS-LF01-S08	1608	Soil

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on August 21, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 30.3% was calculated using calibration factors determined from the initial calibration. The %RSD of 30.3 exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 PCBs were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCBs were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analysis with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of $\leq$ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Sample numbers LIS-LF01-SD03 and LIS-LF01-SD08 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC

criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 The surrogate recoveries for samples LIS-LF01-SD07 and LIS-LF01-S06 were outside the applicable QC criteria. Therefore, all detected PCB results or PQLs are qualified "J" as estimated and usable for limited purposes.

H.2 All other surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 Sample LIS-BKGD-SD01, which is not part of this project sample set but is from the Cape Lisburne, site was analyzed as the soil matrix spike duplicate for chain of custody 570. The corresponding matrix spike analysis could not be located in the raw data.

I.2 All of the matrix spike duplicate QC recovery criteria were met and the results are considered acceptable.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 PCBs were not detected at concentrations above the PQL of the PCBs in all the samples.

K.2 The laboratory reported incorrect PQLs for samples LIS-LF01-SD01, LIS-LF01-SD03, LIS-LF01-SD04, LIS-LF01-SD05, LIS-LF01-SD06, and LIS-LF01-SD07. The PQLs have been corrected on the data summary forms by the reviewer.

K.3 The sample results and raw data for sample LIS-LF01-S05 could not be located, therefore, the results for this sample remain unvalidated.

K.4 No other problems with compound quantitation and identification were observed for this project sample set.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080.
MATRIX: Water
DATE: June 21, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 8 water samples from the Cape Lisburne site on August 31, 1993 (referenced chain of custody record No. 615) for PCB analysis by the PCB organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for PCBs by USEPA Method 8080 (GC/ECD) on September 4, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-EB02	1542	Water
LIS-LF01-SW01	1543	Water
LIS-LF01-SW02	1544	Water
LIS-LF01-SW03	1545	Water
LIS-LF01-SW04	1546	Water
LIS-LF01-SW05	1549	Water
LIS-LF01-SW06	1550	Water
LIS-LF01-SW07	1551	Water

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The following QC sample designation was included in project documentation: sample number LIS-EB02 was designated as an equipment blank and sample numbers LIS-LF01-SW06 and LIS-LF01-SW07 were designated as field duplicates.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on August 21, 1994. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 30.3% was calculated using calibration factors determined from the initial calibration. The %RSD of 30.3 exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibration:

C.1 A PCB continuing calibration standard was not analyzed within 24 hours prior to the project sample set. Therefore, the detected results and PQLs for all project samples and method blanks are qualified "J" as estimated and usable for limited purposes.

D. Laboratory Blanks:

D.1 PCBs were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCBs were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 Sample LIS-EB02 was designated as the field equipment blank for this project sample set.

F.2 Target analytes were not detected in the equipment blank at a concentration above the PQL and the results are considered acceptable.

G. Field Duplicate Analyses:

G.1 A QC limit for precision of $\leq$ 20%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field duplicate comparability.

G.2 Samples LIS-LF01-SW06 and LIS-LF01-SW07 were utilized for field duplicate analysis. The results of the field duplicate analyses, as reported by the laboratory, met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 A discrepancy exists between the surrogate recoveries reported by the laboratory and the surrogate recoveries calculated by the reviewer, for the project sample listed below. The reviewer calculated the recovery of the sample using the average surrogate area from the initial calibration standards.

ICF Site No.	Laboratory Results	Validator Results
LIS-LF01-SW05	150%	185%

The discrepancy is probably due to inconsistent quantitation procedures performed by the laboratory.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike/matrix spike duplicate samples were submitted with the PCB fraction.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 PCBs were not detected at a concentration above the PQL in the method blanks and the samples.

K.2 The laboratory reported a PQL of 10 ug/L for the water samples. The PQLs were corrected to 2 ug/L on the data summary forms by the reviewer.

K.3 No other problems with compound quantitation and identification were observed for this project sample set.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080.
MATRIX: Soil
DATE: June 28, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 11 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 565) for PCB analysis by the PCB organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for PCBs by USEPA Method 8080 (GC/ECD) between September 2 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-SS03-S02	1394	Soil
LIS-SS03-S03	1395	Soil
LIS-SS03-S04	1396	Soil
LIS-SS03-S05	1397	Soil
LIS-SS03-S06	1398	Soil
LIS-SS08-S01	1399	Soil
LIS-SS08-S02	1400	Soil
LIS-SS08-S03	1401	Soil
LIS-SS08-S04	1402	Soil
LIS-SS08-S05	1403	Soil
LIS-SS08-S07	1404	Soil

The following QC sample designation was included in project documentation: sample numbers LIS-SS08-S03 and LIS-SS08-S07 were designated as field replicates.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF5 on August 21, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 35.7% was calculated using calibration factors determined from the initial calibration. The %RSD of 35.7% exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes. If the low point of the calibration curve is disregarded, the %RSD of the 4 point curve becomes 17.1%, which is acceptable.

B.2 The laboratory performed a five point initial calibration on GC instrument ICF6 on August 21, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 27.9% was calculated using calibration factors determined from the initial calibration. The %RSD of 27.9% exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes. If the low point of the calibration curve is disregarded, the %RSD of the 4 point curve becomes 12.7%, which is acceptable.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibrations associated with GC instrument ICF6 were met and the results are considered acceptable.

C.2 A PCB continuing calibration standard on GC instrument ICF5 was not analyzed within 24 hours prior to the project samples associated with this chain of custody. Therefore, the detected results and PQLs for the associated project samples and method blanks are qualified "J" as estimated and usable for limited purposes. LIS-SS08-S07 is the only sample associated with this chain of custody analyzed on GC instrument ICF5.

D. Laboratory Blanks:

D.1 PCBs were not detected in the method blank at a concentration above the

PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCBs were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analysis with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field replicate comparability.

G.2 Samples LIS-SS08-S03 and LIS-SS08-S07 were utilized for field replicate analysis. The laboratory reported Aroclor 1260 at 6 ppm in sample LIS-SS08-S03 and 1 ppm in sample LIS-SS08-S07. The reviewer recalculated the results and obtained values of 80 ppm and 8 ppm for samples LIS-SS08-S03 and LIS-SS08-S07, respectively. Discrepancies in the results reported by the laboratory and those calculated by the reviewer are discussed in Section K. The QC limit for precision was exceeded for this replicate pair. Differences between replicate precision may be due to problems with sampling, sample preparation, or sample analysis.

H. Surrogate Recoveries:

H.1 Discrepancies exist between the surrogate recoveries reported by the laboratory and the surrogate recoveries calculated by the reviewer, for the project samples listed below. The reviewer calculated the recovery of the samples using the average surrogate area from the initial calibration standards.

ICF Site No.	Laboratory Results	Validator Results
LIS-SS03-S02	114%	157%
LIS-SS03-S05	111%	154%

The discrepancies are probably due to inconsistent quantitation procedures performed by the laboratory.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike/matrix spike duplicate samples were submitted with the PCB fraction.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 Due to problems with the initial calibrations, the detected results for the project samples are qualified "J" as estimated and usable for limited purposes.

K.2 Aroclor 1260 was reported by the laboratory in 10 of the 11 samples associated with this chain of custody. Because Aroclor 1260 was not used in the

PCB initial or continuing calibration standards, the presence of Aroclor 1260 in the sample cannot be confirmed. The observed GC chromatographic pattern does not appear to be Aroclor 1254, the PCB used for calibration, but does appear to be consistent with that of a PCB. In addition, since the GC pattern is similar for all the samples with positive hits, it is the opinion of the reviewer that the same material is present in these samples. Because of the above listed identification problems, all samples with values reported for Aroclor 1260 are qualified "N" tentatively identified.

K.3 A linear regression curve, calculated from the Aroclor 1254 initial calibration standards, was used to calculate values for Aroclor 1260. The ECD response for these PCBs may differ, therefore, the results reported in the sample data summary forms are qualified "J" estimated and usable for limited purposes.

K.4 Discrepancies exist between the results reported by the laboratory and those calculated by the reviewer for the project samples listed below. The reviewer calculated the results using the most recent Aroclor 1254 initial calibration. The results are corrected for percent moisture and are in ug/g (ppm).

ICF Site No.	Laboratory Results (Aroclor 1260)	Validator Results (Aroclor 1260)
LIS-SS03-S04	10	20 JN
LIS-SS03-S06	0.9	2 JN
LIS-SS08-S01	0.1	9 JN
LIS-SS08-S02	500 (OUTSIDE CAL RANGE)	300 JN
LIS-SS08-S03	6	130 JN
LIS-SS08-S07	1	8 JN

The discrepancies are probably due to inconsistent quantitation procedures performed by the laboratory. The above results are qualified "N" tentatively identified and "J" estimated by the reviewer. The data summary report forms were modified to reflect these changes.

K.5 The chromatographs of the PCB analyses of samples LIS-SS03-S03, LIS-SS03-S06, LIS-SS08-S01, LIS-SS08-S02, LIS-SS08-S03, and LIS-SS08-S07 were off scale, making accurate identification and quantitation of these samples impossible. The results for these samples are therefore qualified "J" estimated and usable for limited purposes. Since saturation is a possibility, the results recalculated by the reviewer should be considered to be the minimum PCB concentrations present in the above listed samples.

K.6 No other problems with compound quantitation and identification were observed for this project sample set.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080.
MATRIX: Soil and Water
DATE: July 1, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 1 water and 14 soil samples from the Cape Lisburne site on August 30, 1993 (referenced chain of custody record No. 563) for PCB analysis by the PCB organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for PCBs by USEPA Method 8080 (GC/ECD) between September 2 and September 6, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-SS03-S01	1379	Soil
LIS-AOC3-SW01	1380	Water
LIS-BKGD-SD01	1381	Soil
LIS-BKGD-S01	1382	Soil
LIS-SS09-S01	1383	Soil
LIS-SS09-S03	1384	Soil
LIS-SS09-S04	1385	Soil
LIS-SS09-S05	1386	Soil
LIS-SS09-S06	1387	Soil
LIS-SS09-S07	1388	Soil
LIS-SS09-S08	1389	Soil
LIS-SS09-S09	1390	Soil
LIS-SS09-S10	1391	Soil
LIS-SS09-S11	1392	Soil
LIS-SS09-S12	1393	Soil

The following QC sample designation was included in project documentation: sample numbers LIS-SS09-S08 and LIS-SS09-S12 were designated as field replicates and sample LIS-SS09-S05 was designated as the matrix spike/matrix spike duplicate.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The analytical results for the soil samples were reported with an adjustment for moisture content.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF5 on August 21, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 35.7% was calculated using calibration factors determined from the initial calibration. The %RSD of 35.7% exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes. If the low point of the calibration curve (0.1 ppm) is disregarded, the %RSD of the 4 point curve becomes 17.1%, which is acceptable.

B.2 The laboratory performed a five point initial calibration on GC instrument ICF6 on August 21, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 27.9% was calculated using calibration factors determined from the initial calibration. The %RSD of 27.9% exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes. If the low point of the calibration curve is disregarded, the %RSD of the 4 point curve becomes 12.7%, which is acceptable.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibrations associated with GC instrument ICF6 were met and the results are considered acceptable.

C.2 Continuing calibration standard 098R2101, analyzed on GC instrument ICF5 on September 3, 1993, failed continuing calibration recovery criteria. Therefore, the

detected results and PQLs for the associated project samples and method blanks are qualified "J" as estimated and usable for limited purposes. LIS-AOC3-SW01 is the only sample associated with this chain of custody analyzed on GC instrument ICF5.

D. Laboratory Blanks:

D.1 PCBs were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCBs were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analysis with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of ≤ 50%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field replicate comparability.

G.2 Samples LIS-SS09-S08 and LIS-SS09-S12 were utilized for field replicate analysis. The results of the field replicate analyses met all applicable QC criteria and the results are considered acceptable.

H. Surrogate Recoveries:

H.1 Because the surrogates in the following samples were obscured by interferences, surrrogate recoveries could not be determined.

ICF Site No.
LIS-SS09-S01
LIS-SS09-S03
LIS-SS09-S08
LIS-SS09-S09
LIS-SS09-S10
LIS-SS09-S12
LIS-BKGD-S01

I. Matrix Spike/Matrix Spike Duplicate:

I.1 Sample LIS-SS09-S05 was analyzed as the soil matrix spike/matrix spike duplicate (MS/MSD) for chain of custody 563. Distilled water was spiked, analyzed, and reported by the laboratory for the water matrix spike/matrix spike duplicate analyses for chain of custody 563.

I.2 All of the matrix spike/matrix spike duplicate QC criteria were met and the results are considered acceptable.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 Due to problems with the initial calibrations, the detected results for the project samples are qualified "J" as estimated and usable for limited purposes.

K.2 Aroclor 1260 was reported by the laboratory in 10 of the 11 samples associated with this chain of custody. Because Aroclor 1260 was not used in the PCB initial or continuing calibration standards analyzed in instrument ICF6, the presence of Aroclor 1260 in the sample cannot be confirmed. The observed GC chromatographic pattern does not appear to be Aroclor 1254, the PCB used for calibration, but does appear to be consistent with that of a PCB. In addition, since the GC pattern is similar for all the samples with positive hits, it is the opinion of the reviewer that the same material is present in these samples. Because of the above listed identification problems, all samples with values reported for Aroclor 1260 are qualified "N" as tentatively identified.

K.3 A linear regression curve, calculated from the Aroclor 1254 initial calibration standards, was used to calculate values for Aroclor 1260. The ECD response for these PCBs may differ, therefore, the results reported in the sample data summary forms are qualified "J" estimated and usable for limited purposes.

K.4 Discrepancies exist between the results reported by the laboratory and those calculated by the reviewer for the project samples listed below. The values reported by the reviewer are calculated based on linear regression from the PCB initial calibrations. The results are corrected for percent moisture and are in ug/g (ppm).

ICF Site No.	Laboratory Results (Aroclor 1260)	Validator Results (Aroclor 1260)
LIS-SS09-S01	< 0.1	340 JN
LIS-SS09-S03	180	14 JN
LIS-SS09-S05	0.1	< 0.5
LIS-SS09-S05 DUP	0.1	< 0.5
LIS-SS09-S06	0.2	1.4 JN
LIS-SS09-S08	180	380 JN
LIS-SS09-S09	260 (OUTSIDE CAL RANGE)	350 JN
LIS-SS09-S10	11	22 JN
LIS-SS09-S12	500 (OUTSIDE CAL RANGE)	550 JN
LIS-BKGD-S01	7.8	20 JN

The discrepancies are probably due to inconsistent quantitation procedures performed by the laboratory. The data summary report forms were modified to reflect these changes.

K.5 Dilutions and reanalyses were performed on samples LIS-SS09-S01, LIS-SS09-S03, LIS-SS09-S08, LIS-SS09-S09, LIS-SS09-S10, and LIS-SS09-S12. The diluted results were reported in the data summary report forms. Despite the dilutions, the chromatographs of these samples were off scale and may have been saturated. Since the chromatographs were not scaled properly accurate identification and quantitation of these samples is impossible. The results for these samples are therefore qualified "J" estimated and usable for limited purposes. Since saturation is a possibility, the results recalculated by the reviewer should be considered to be the minimum PCB

concentrations present in the above listed samples.

K.6 The raw dilution data for sample LIS-SS09-S03 could not be located by the reviewer. Therefore, the results for this sample are based on the undiluted analysis, in which the initial calibration range is exceeded. The results for this sample are therefore qualified "J" as estimated and usable for limited purposes.

K.7 No other problems with compound quantitation and identification were observed for this project sample set.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080.
MATRIX: Soil
DATE: June 21, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 6 soil samples from the Cape Lisburne site on September 13, 1993 (referenced chain of custody record No. 594) for PCB analysis by the PCB organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for PCBs by USEPA Method 8080 (GC/ECD) on September 13 and September 14, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-SS03-2S07	1908	Soil
LIS-SS03-2S08	1909	Soil
LIS-SS03-2S09	1910	Soil
LIS-SS03-2S10	1911	Soil
LIS-SS03-2S11	1912	Soil
LIS-SS03-2S13	1913	Soil

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The following QC sample designation was included in project documentation: sample numbers LIS-SS03-2S07 and LIS-SS03-2S13 were designated as field replicates.

The analytical results for the soil samples were reported with an adjustment for moisture content.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC Instrument ICF5 on August 21, 1993. All samples were quantitated using a linear regression curve calculated from the initial calibration. The range of the initial calibration was from 0.1 ppm to 10 ppm. A percent relative standard deviation (%RSD) of 37.2% was calculated using calibration factors determined from the initial calibration. The %RSD of 37.2 exceeds the recommended method criteria of 20.0%, therefore, the detected results for PCBs in the project samples are qualified "J" as estimated and usable for limited purposes.

B.2 The laboratory performed a five point initial calibration on GC instrument ICF6 on August 21, 1994. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 30.3% was calculated using calibration factors determined from the initial calibration. The %RSD of 30.3 exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 PCBs were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCBs were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analysis with this project sample set.

G. Field Replicate Analyses:

G.1 A QC limit for precision of $\leq$ 50%, as measured by Relative Percent Difference (RPD) between soil sample values, was specified for field replicate comparability.

G.2 Samples LIS-SS03-2S07 and LIS-SS03-2S13 were utilized for field replicate analysis. The detected PCB values for samples LIS-SS03-2S07 and LIS-SS03-2S13,

corrected for percent moisture, were 0.45 ppm and 5.0 ppm, respectively, with an RPD of 167%. Note that the percent dry weight for samples LIS-SS03-2S07 and LIS-SS03-2S13 was 94% and 43%, respectively. Because the differences between replicate samples exceed the QC limit for precision, the detected results are qualified "J" as estimated and usable for limited purposes.

H. Surrogate Recoveries:

H.1 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike/matrix spike duplicate samples were submitted with the PCB fraction.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 The laboratory reported positive results for Aroclor 1260 in samples LIS-SS03-2S07 and LIS-SS03-2S13. Since Aroclor 1260 was not analyzed as an initial or continuing calibration standard, this identification could not be confirmed. Also, the calibration factors used to calculate the PCB concentrations in these samples were referenced against Aroclor 1254, the PCB used in the initial calibration standards. Although it is the opinion of the reviewer that some type of Aroclor is present in these samples, accurate identification and quantitation cannot be guaranteed. Therefore, because of these identification and quantitation problems, the detected results for these samples are qualified "J" as estimated and usable for limited purposes.

K.2 The laboratory reported a positive result for Aroclor 1260 in sample LIS-SS03-2S08. After recalculation, the reviewer observed that the actual PCB value was below the PQL. The PCB result for this sample was therefore changed on the appropriate project sample data summary form.

K.3 The laboratory used Aroclor 1254 to establish the initial calibration curve. However, Aroclor 1248 was used in the continuing calibration standards to monitor system performance. Since the chromatographic pattern of Aroclor 1248 and Aroclor 1254 are very similar, it is the opinion of the reviewer that the quality of the data is not affected.

K.4 No other problems with compound quantitation and identification were observed for this project sample set.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Timothy Vonnahme
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080.
MATRIX: Water and Soil
DATE: June 16, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 13 soil samples and one water sample from the Cape Lisburne site on September 9, 1993 (referenced chain of custody record No. 593). Three of the samples were requested for PCB analysis by the PCB organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The samples were analyzed for PCBs by USEPA Method 8080 (GC/ECD) on September 13 and September 14, 1993.

The ICF site identification numbers and corresponding FBI laboratory sample identification numbers are listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-AOC3-2GW04	1928	Water
LIS-SS08-2S08	1940	Soil
LIS-SS08-2S09	1941	Soil

The analytical results for the soil samples were reported with an adjustment for moisture content.

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on August 21, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 30.3% was calculated using calibration factors determined from the initial calibration. The %RSD of 30.3 exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes.

B.2 The laboratory performed a four point initial calibration using Aroclor 1248 on GC instrument ICF5 on September 9, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 35.7% was calculated using calibration factors determined from the initial calibration. The %RSD of 37.5 exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 PCBs were not detected in the method blanks at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCBs were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 There were no field blanks submitted for analysis with this project sample set.

G. Field Replicate Analyses:

G.1 There were no field replicate analyses associated with the PCB fraction.

H. Surrogate Recoveries:

H.3 All surrogate recoveries met applicable QC criteria and the results are considered acceptable.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike/matrix spike duplicate analyses were reported with this sample set.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 PCBs were not detected at a concentration above the PQL of the PCBs in the three samples.

K.2 Due to interference present in sample LIS-SS08-2S08, the reviewer raised the PQL of the PCBs to 0.5 ppm.

K.3 No other problems with compound quantitation and identification were observed for this project sample set.

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DATA VALIDATION REPORT

PROGRAM: CAPE LISBURNE / DEW Line RI/FS (ICF Project No. 41096-512-02)
LABORATORY: Friedman & Bruya, Inc. (Seattle, WA)
REVIEWER: Clyde Hedin
ANALYSIS: Polychlorinated Biphenyls (PCBs) by USEPA Method 8080.
MATRIX: Water
DATE: June 20, 1994

I. INTRODUCTION:

Friedman & Bruya, Inc. (Seattle, WA) received 5 water and 6 soil samples from the Cape Lisburne site on September 13, 1993 (referenced chain of custody record No. 596). One water sample was requested for PCB analysis by the PCB organics extraction method described in Section 8 of the Project Sampling and Analysis Plan. The sample was analyzed for PCBs by USEPA Method 8080 (GC/ECD) on September 14, 1993.

The ICF site identification number and corresponding FBI laboratory sample identification number is listed below.

ICF Site No.	Lab Sample No.	Matrix
LIS-2EB04	1924	Water

The analytical results with qualifications are presented on modified sample data sheets submitted by the laboratory. Definitions of the data qualifiers are listed in Table 1B. This report was prepared in accordance with the USEPA draft document " National Functional Guidelines for Organic Data Review", December 1990, and the analytical guidelines in USEPA Method 8080, and the Project Sampling and Analysis Plan.

The following QC sample designation was included in project documentation: sample number LIS-2EB04 was designated as an equipment blank.

II. VALIDITY & COMMENTS:

A. Technical Holding Times:

A.1 The technical holding time QC criteria were met for all project sample analyses.

B. Initial Calibration:

B.1 The laboratory performed a five point initial calibration on GC instrument ICF6 on August 21, 1993. The range of the initial calibration was from 0.1 ppm to 10 ppm. All samples were quantitated using a linear regression curve calculated from the initial calibration. A percent relative standard deviation (%RSD) of 30.3% was calculated using calibration factors determined from the initial calibration. The %RSD of 30.3 exceeds the recommended method criteria of 20.0%, therefore, the detected results are qualified "J" as estimated and usable for limited purposes. If the low point of the initial calibration is disregarded, the %RSD of the 4 point curve becomes 13%, which is acceptable. Therefore, any sample results detected above 10 ppb in waters are considered valid for purposes of usability.

C. Continuing Calibration:

C.1 All QC criteria for the continuing calibrations were met and the results are considered acceptable.

D. Laboratory Blanks:

D.1 PCBs were not detected in the method blank at a concentration above the PQL and the results are considered acceptable.

E. Instrument Blanks:

E.1 PCBs were not detected in the instrument blanks at a concentration above the PQL and the results are considered acceptable.

F. Field Blanks:

F.1 PCBs were not detected in the field blank at a concentration above the PQL and the results are considered acceptable.

G. Field Replicate Analyses:

G.1 A QC limit for precision of $\leq$ 20%, as measured by Relative Percent Difference (RPD) between water sample values, was specified for field replicate comparability.

G.2 There were no field replicates submitted for analysis with this project sample set.

H. Surrogate Recoveries:

H.1 Discrepancies exist between the surrogate recoveries reported by the laboratory and the surrogate recoveries regenerated by the reviewer for the project sample listed below.

ICF Site No.	Laboratory % Recovery	Validation % Recovery
LIS-2EB04	80	188

The corrected surrogate recovery was entered onto the sample results summary form. It is the opinion of the reviewer that because PCBs were not detected in the sample, the quality of the data is not affected.

I. Matrix Spike/Matrix Spike Duplicate:

I.1 No matrix spike/matrix spike duplicate samples were submitted with the PCB fraction.

J. System Performance:

J.1 No problems with system performance were observed for the project sample analyses.

K. Quantitation and Identification:

K.1 The laboratory used Aroclor 1254 to establish the initial calibration curve. However, Aroclor 1248 was used in the continuing calibration standards to monitor system performance. Because no PCBs were detected in the sample, and since the chromatographic pattern of Aroclor 1248 and Aroclor 1254 are very similar, it is the opinion of the reviewer that the quality of the data is not affected.

K.2 PCBs were not detected at concentrations above the PQL in the method blank and the sample.

K.3 All data are considered valid and usable for all purposes.