INSTALLATION RESTORATION PROGRAM

FINAL
REVISION 04

SITE INVESTIGATION REPORT
VOLUME 2: APPENDIX B THROUGH APPENDIX E

155th Air Refueling Group
Nebraska Air National Guard
Lincoln Municipal Airport
Lincoln, Nebraska

April 1995

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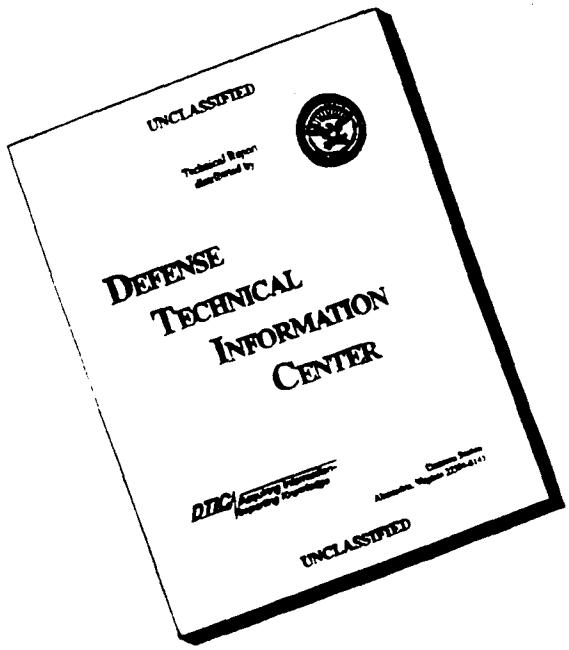

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13. ABSTRACT *(Maximum 200 words)*
Site Investigation Report, Volume 2: Appendix B through E.
A Site Investigation was performed at the 155th Air Refueling Group at Lincoln, NE to evaluate six areas of suspected contamination identified during a Preliminary Assessment. The sites that this investigation were conducted at are: Site 1 - Fuel Farm, POL Storage Area, Site 2 - West End of Old Oak Creek, Site 3 - Former Tank Cleaning/Hazardous Waste Storage Area, Site 4 - Access Road, Dust Control Area, , Site 5 - Army National Guard Oil Storage Area, and Site 6 - Hydraulic Pressure Check Unit Storage Area.

The report recommended no further action for Sites 3 through 6 due to low levels or no contamination being found. The report recommended that the portion of Site 2 that is located downstream of Site 1 should be included in Site 1.

Appendix 2 consist of the following appendix: Well Data and Geolgoic Boring Logs (Appendix B), Survey Data (Appendix C), Quality Control (Appendix D), and Analytical Results (Appendix E).

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FINAL

SITE INVESTIGATION REPORT
REVISION 04

VOLUME 2: APPENDIX B THROUGH APPENDIX E

155TH AIR REFUELING GROUP

NEBRASKA AIR NATIONAL GUARD

LINCOLN MUNICIPAL AIRPORT

LINCOLN, NEBRASKA

Prepared for

NATIONAL GUARD BUREAU
ANDREWS AIR FORCE BASE, MARYLAND

April 1995

Prepared by

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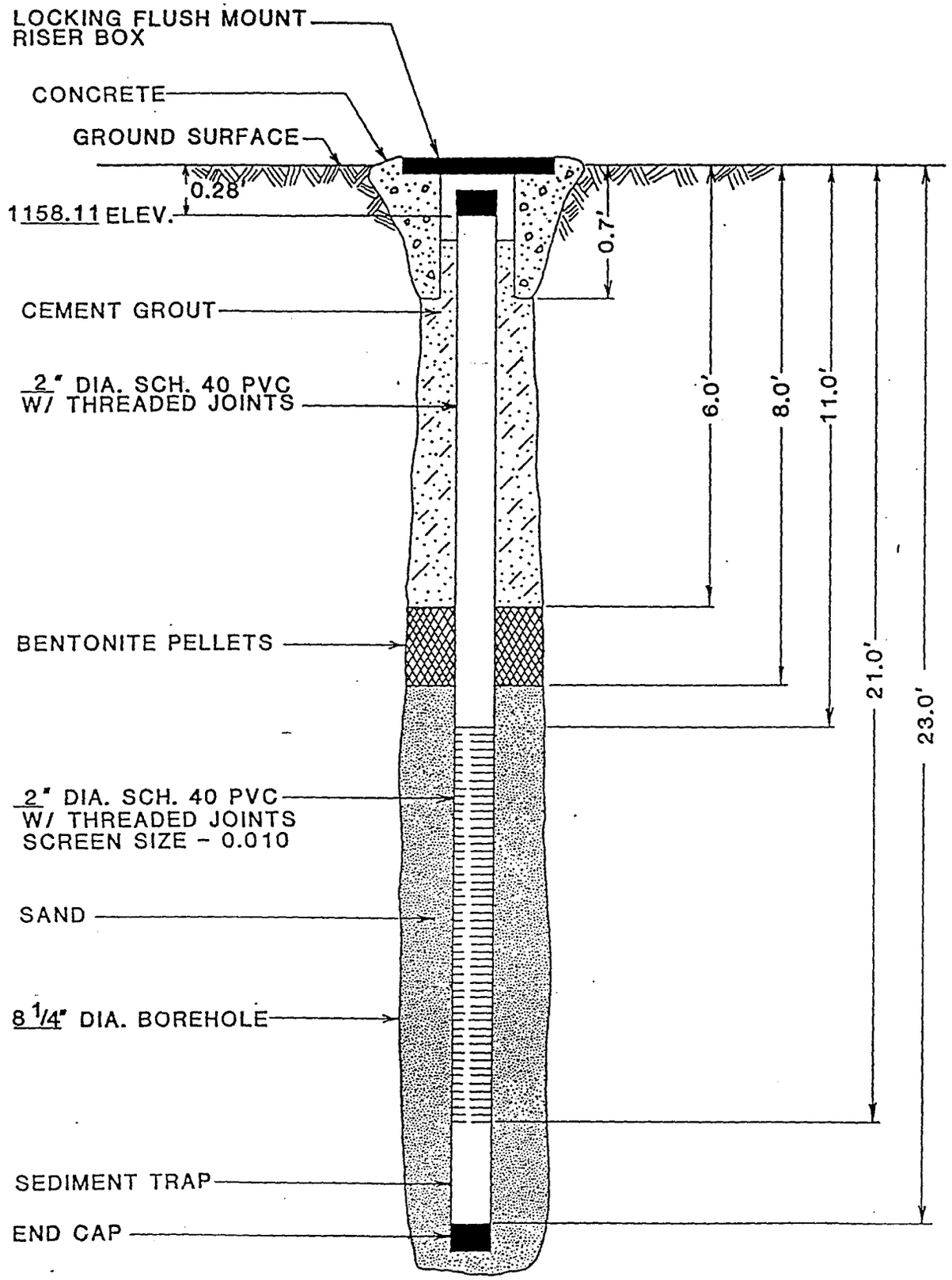
APPENDIX B

WELL DATA AND GEOLOGIC BORING LOGS

APPENDIX B1
WELL COMPLETION DIAGRAMS



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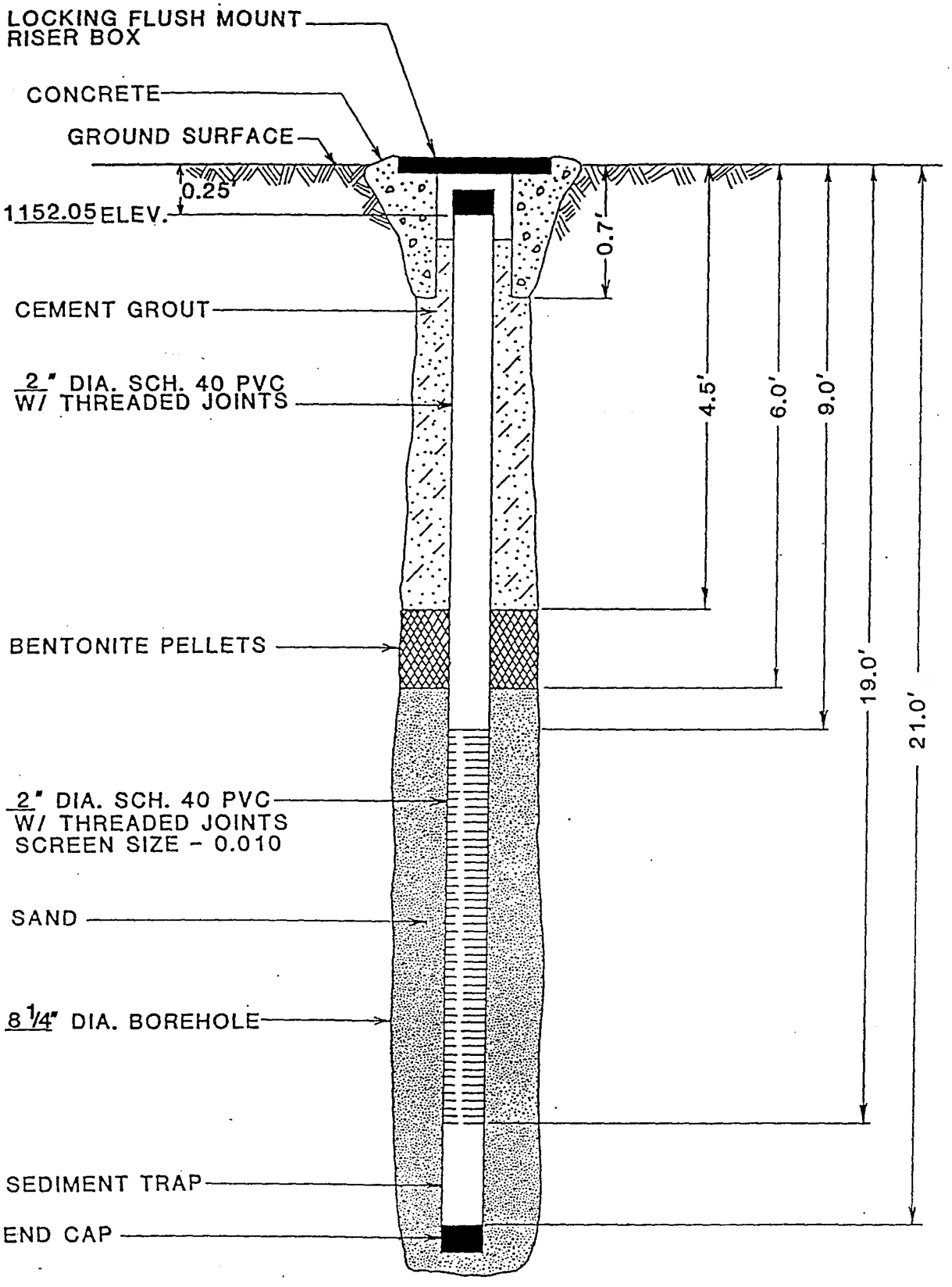

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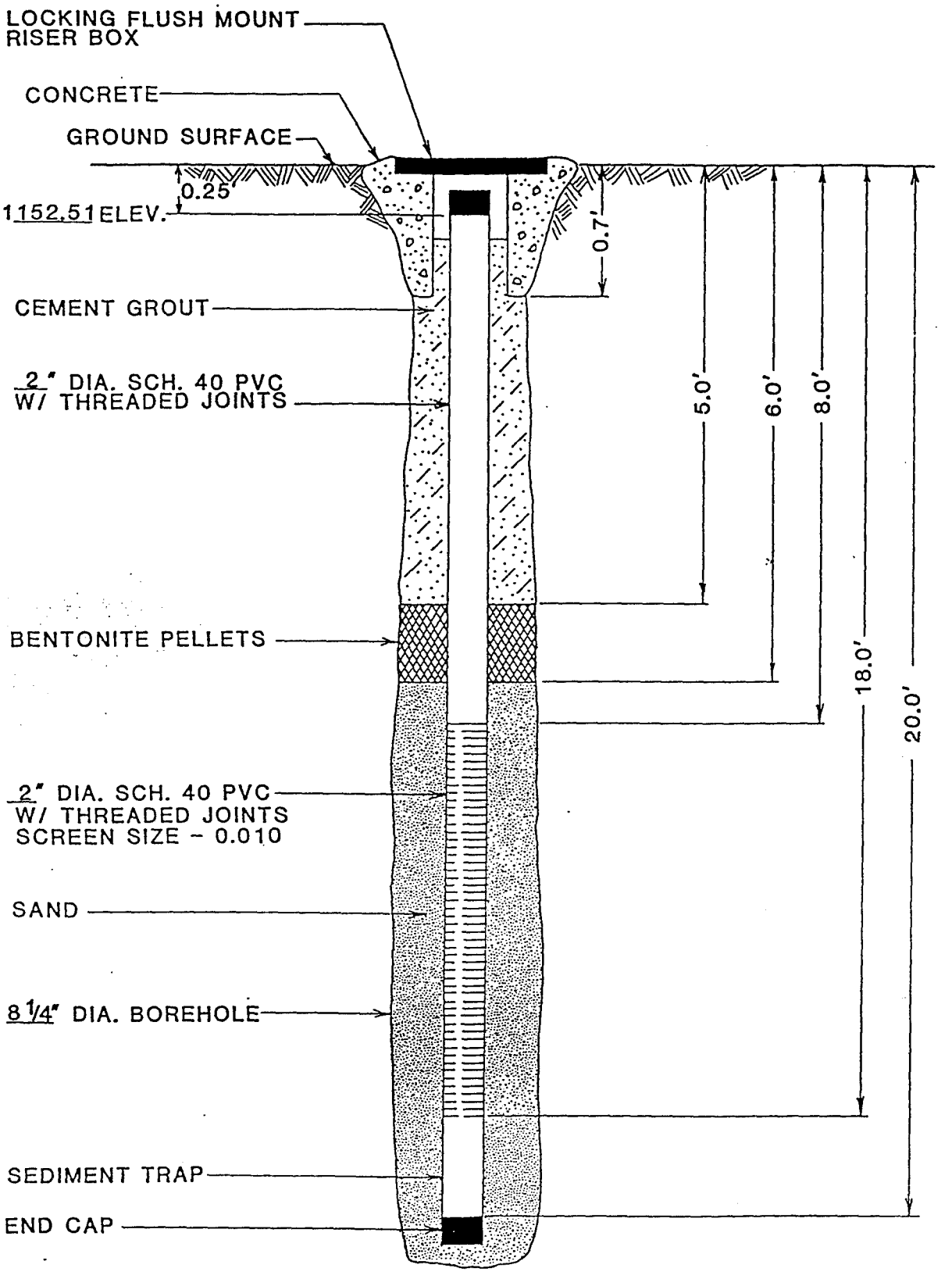

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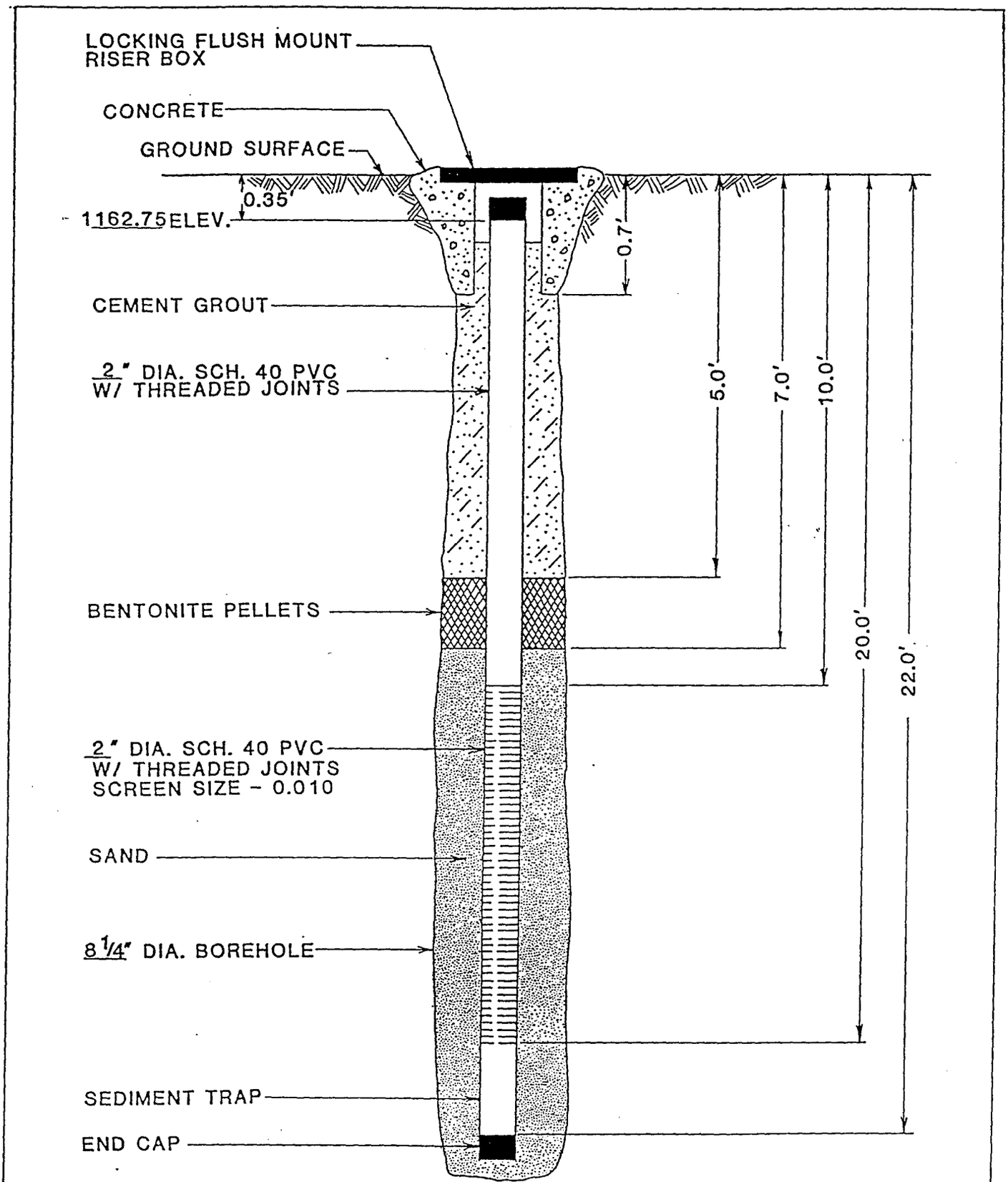

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NO. 6-MW1

Date Completed: 6-21-89

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APPENDIX B2

GROUND WATER SAMPLING FORMS

Date 6-27-89

Sample Number LANGB-1-MW0204-GW1 Project Name LANGB

Project Number DE072 Engnr./Geol. JEW/JAS

Time Sample was Taken: 0700 (A.M./P.M.)

Weather: Mostly sunny, warm, 80's-90's °F

Type of Sample: (GRAB) COMPOSITE DEPTH INTERVAL (Circle one)

Calculations:

Total well depth 16 (ft)
Static water level 7.80 (ft) .65 gal/ft
Water column 8.2 (ft) x ~~0.165~~ = 5.3
gallons static water (2" casing)

5.3 gallons ÷ ~~.192~~ .25 4 gal/bailer ~~(1-1/4" X 36" bailer)~~ x 3
casing volume = 57 number full bails required

Amount bailed 25 bails

Condition of Water Before Bailing
Odor
Visibility
Other

Condition of Sample
Odor
Visibility
Other

Remarks

Bail #	EC (umhos/cm)	pH	Temp (°C)
1	385	7.10	17.0
20	458	7.30	14.5

Dry at 25 bails

Purged 6-21-89, sampled 6-22-89

Date 6-22-89

Sample Number LANGB-1-MW0206-GW1 Project Name LANGB

Project Number DE072 Engnr./Geol. JAS/JEW

Time Sample was Taken: 1415 (A.M./(P.M.))

Weather: Mostly Sunny, warm, 80's - 90's °F

Type of Sample: (GRAB) COMPOSITE DEPTH INTERVAL (Circle one)

Calculations:

Total well depth 12.5 (ft) JAH 10-27-89

Static water level 6.67 (ft)

Water column 5.83 (ft) x 0.~~165~~ 65 = 3.8

gallons static water (2" casing)

3.8 gallons ÷ .~~192~~ 128 gal/bailer (1-1/4" X 36" bailer) x 3

casing volume = 41 number full bails required

Amount bailed _____

Condition of Water Before Bailing

Odor _____

Visibility _____

Other _____

Condition of Sample

Odor _____

Visibility _____

Other _____

Remarks

bail #	pH	EC (umhos/cm)	T(°C)	Remarks
1	7.70	980	14.0	brown, sl. murky, no odor
25	7.80	790	13.0	brown, murky
35	7.65	750	13.5	brown, sl. murky

Dry at 35 bails

Purged & sampled 6-22-89

Date 6-22-89

Sample Number LANGB-1-MW0209-GW1 Project Name LANGB

Project Number DE072 Engnr./Geol. JAS/JEW

Time Sample was Taken: 1330 (A.M./P.M.)

Weather: Mostly sunny, warm (80's-90's °F)

Type of Sample: (GRAB) COMPOSITE DEPTH INTERVAL (Circle one)

Calculations:

Total well depth 18.2' (ft)
Static water level 8.61 (ft) 0.65
Water column 9.6 (ft) x 0.~~65~~ = 6.2
gallons static water (~~2"~~ casing)

6.2 gallons ÷ ~~.192~~ 0.37 gal/bailer (~~1 1/4" X 36" bailer~~ 4' Teflon) x 3
casing volume = 51 number full bails required

Amount bailed 18 bails

Condition of Water Before Bailing
Odor
Visibility
Other

Condition of Sample
Odor
Visibility
Other

Remarks

#bails	T(°c)	pH	EC (umhos/cm)	Remarks
1	13.0	7.35	1420	black, murky, sl. fuel odor, sl. sheen
15	14.0	7.55	1450	SAA, fuel odor
18	14.5	7.45	1420	SAA

Dry at 18 bails

Well purged & sampled 6-22-89

Date 6-22-89

Sample Number LANGB-1-MW0210-GW/ Project Name LANGB

Project Number DE072 Engnr./Geol. JAS/SEW

Time Sample was Taken: 1300 (A.M.) (P.M.)

Weather: Mostly Sunny, warm, 80's - 90's °F

Type of Sample: (GRAB) COMPOSITE DEPTH INTERVAL (Circle one)

Calculations:

Total well depth 16.2 (ft)
Static water level 8.17 (ft)
Water column 8' (ft) x 0.~~165~~ 165 = 5.2
gallons static water (~~2~~ 4" casing)

5.2 gallons ÷ ~~.192~~ .37 gal/bailer (1-1/4" X 36" bailer) x 3
casing volume = ~~42~~ number full bails required

Amount bailed 41 bails

Condition of Water Before Bailing
Odor
Visibility
Other

Condition of Sample
Odor
Visibility
Other

Remarks

bail #	pH	EC (umhos/cm)	T (°C)	Remarks
1	7.85	850	14.0	sl. murky
20	7.75	1320	14.0	brown, murky, v. sl. sheen
40	7.9	900	15.5	Gray brown, murky

Good recharge

Sampled & purged 6/22/89

Date 6-22-89

well
~~Sample~~ Number 1-MW1201 Project Name LANGB

Project Number 0E072 Engnr./Geol. JAS/JEW

Time Sample was Taken: N/A (A.M./P.M.)

Weather: Mostly sunny, warm, 80's-90's °F

Type of Sample: GRAB COMPOSITE DEPTH INTERVAL (Circle one)

Calculations:

Total well depth _____ (ft)
Static water level _____ (ft)
Water column _____ (ft) x 0.165 = _____
gallons static water (2" casing)

_____ gallons ÷ .192 gal/bailer (1-1/4" X 36" bailer) x 3
casing volume = _____ number full bails required

Amount bailed _____

Condition of Water Before Bailing
Odor _____
Visibility _____
Other _____

Condition of Sample
Odor _____
Visibility _____
Other _____

Remarks 3" product in 1st bail - well not sampled. No downgradient wells available to substitute. Sample well 1203 instead.

Date 6-22-89

Sample Number LANGB-1-MW1203-GW1 Project Name LANGB

Project Number DE072 Engnr./Geol. JAS/JEW

Time Sample was Taken: 1345 (A.M.) (P.M.)

Weather: mostly sunny, warm, 80's-90's °F

Type of Sample: (GRAB) COMPOSITE DEPTH INTERVAL (Circle one)

Calculations:

Total well depth 8.44' (ft)
Static water level 11.21' (ft)
Water column 2.81' (ft) x 0.~~165~~ .65 = 1.8
gallons static water (~~2~~ 4" casing)

1.8 gallons ÷ .~~192~~ 37 gal/bailer (1-1/4" X 36" bailer) x 3
casing volume = 14.7 number full bails required

Amount bailed _____

Condition of Water Before Bailing
Odor _____
Visibility _____
Other _____

Condition of Sample
Odor _____
Visibility _____
Other _____

Remarks

bail #	pH	EC (umhos/cm)	T (°C)	Remarks
1	6.95	368	14.5	
7	6.85	372	15.0	sl. film on H_2O
11	6.85	380	15.0	SAA

Dry at 11 bails

Purged & sampled 6-22-89

Date 6-22-89

Sample Number LANGB-fmw0214-GW/ Project Name LANGB

Project Number DE072 Engnr./Geol. JEW/JAS

Time Sample was Taken: 0745 (A.M.)/P.M.)

Weather: Mostly sunny, warm, 80's-90's °F

Type of Sample: (GRAB) COMPOSITE DEPTH INTERVAL (Circle one)

Calculations:

Total well depth 17.70 (ft)
Static water level 8.25 (ft)
Water column 9.4 (ft) x 0.~~165~~ .65 = 6.1
gallons static water (~~2~~ 4" casing)

6.1 gallons ÷ ~~192~~ 137 gal/bailer (1-1/4" X 36" bailer) x 3
casing volume = 5c number full bails required

Amount bailed 31 bails

Condition of Water Before Bailing
Odor -
Visibility
Other

Condition of Sample
Odor
Visibility
Other

Remarks

# bails	EC (umhos/cm)	pH	Temp (°C)	Remarks
1	1420	7.35	13.0	black, murky, sl. fuel odor, sl. sheen
15	1450	7.55	14.0	SAA, fuel odor
18	1420	7.45	14.5	

Dry at 18 bails

Purged 6-21-89, sampled 6-22-89

Date 6-22-89

Sample Number LANGB-1-MW0286-GW1 Project Name LANGB

Project Number 0E072 Engnr./Geol. JEW/JAS

Time Sample was Taken: 0730 (A.M./P.M.)

Weather: Misty, sunny, warm, lo's -9.'s °F

Type of Sample: (GRAB) COMPOSITE DEPTH INTERVAL (Circle one)

Calculations:

Total well depth 15.26 (ft)

Static water level 8.08 (ft)

Water column 7.18 (ft) x ~~0.165~~ .65 = 4.6

gallons static water (2" casing)

4.6 gallons ÷ ~~.192~~ 0.37 gal/bailer ~~(1-1/4" X 36" bailer)~~ x 3

casing volume = 38 number full bails required

Amount bailed 13.5 bails

Condition of Water Before Bailing

Odor

Visibility

Other

Condition of Sample

Odor

Visibility

Other

Remarks

Bail #	Ec (umhos/cm)	pH	Temp (°C)	Remarks
1	900	6.55	15.5	Gray, turbid, V sl. sheen, sl. fuel odor
12.5	800	6.45	15.5	SAA
13.5	890	6.65	16.0	SAA

Dry at 13.5 bails

Purged 6-21-89, sampled 6-22-89

APPENDIX B3

GEOLOGIC BORING LOGS

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/20/89 to 06/21/89
BORING NO.	2-MW1	BORING DIA.:	8 1/4"	ELEV:	1158.11
RIG TYPE:	Mobile B57	CONTRACTOR:	Geotechnical Services Inc.	DATM:	Ground Surface
TEMP (°F):	80-95	WEATHER:	Sunny, windy, hot	GEOL:	JRH
		DRLG MED:	None		

Depth (ft.)	Profile	USCS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks
		CL	Lt to m brn mottled silty CLAY, dry.				5-6-7	
			SAA, w horizontal limonite-stained fractures, sl moist.					
							5-4-4	
			Changes at 4.5' to lt gray brn CLAY w sm silt,				3-3-3	
5			sm limonite staining, moist.					
							2-2-2	
			M brn clay w sm v fn to v crs sand, less limonite.				2-2-2	
			Changes at 8' to v fn to m SAND w sm clay to clayey					
		SC	SAND, v moist.				2-1-1	
10			SAA to 12.5'.				0-0-1	
							2-2-3	approx. 12.5'
		SW	M brn, fn to v crs SAND w tr granules & f to m pebbles,				2-3-6	TIP 12'-13.5': -1.5/2.6
			wet.					
15			SAA to 16.5'				2-3-5	
							5-6-1	TIP 15'-16.5': -0.6/-0.6
			Becoming m to v crs sand.					
							7-8-9	
			SAA				6-7-7	
20								
			M brn, m to v crs SAND w tr granules & f to m pebbles,				5-4-5	No recovery
			wet. One 0.2' thick layer of granular to pebbly sand.				4-4-6	
								TIP BH (23')=-12.0/-12.0
25								
								Total Depth=23.0'

sl - slight	v - very	fn - fine	SPLIT SPOON SAMPLE
tr - trace	lt - light	m - medium	
sm - some	dk - dark	crs - coarse	GRAB SAMPLE
& - and	bf - buff	BH - Bore Hole	
@ - at	brn - brown	SAA - Same As Above	EST. WATER TABLE
w - with	blk - black		

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/21/89
BORING NO.	3-MW1	BORING DIA.:	8 1/4"	ELEV:	1152.05
RIG TYPE:	Mobile B57	CONTRACTOR:	Geotechnical Services Inc.	DATM:	Ground Surface
TEMP (°F):	80	WEATHER:	Partly cloudy, windy, warm	GEOL:	JRH
		DRLG MED:	None		

Depth (ft.)	Profile	USCS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks
		CL	Lt gray-brown silty CLAY, dry.				5-5-5	
				SS-1	1.5'-6.0'			
			SAA, sl moist.				7-6-6	
		OL	Dk brn CLAY w tr silt, tr orange-brown mottling, sl moist.				4-6-7	
5								
			SAA, increased mottling, moist.				4-5-5	
							4-4-5	
				SS-2	6'-10.5'			
		CH	SAA, dk brn to dk gray-brown.				3-3-3	
10							2-1-1	
			Dk gray-brn CLAY, tr orange-brown staining, v moist.					
				SS-3	10.5'-12		3-3-4	
			SAA, dk brn-gray, no staining, v moist.				3-4-6	TIP 12'-13.5': -0.6/17.1
								approx. 11'
15			SAA				2-2-4	TIP 13.5'-15.0': -0.2/71.0
			SAA, to approximately 17.5', changing to gray-brown				2-3-6	TIP 15'-16.5': -1.0/40.2
			silty CLAY, v moist, tr v fn sand.					TIP 16.5'-18': -1.4/26.9
		CL					3-4-5	
		CL-ML	Lt brn SILT and CLAY, tr v fn sand, sm				2-2-4	TIP 18'-19.5': -1.6/19.1
20			orange-brown staining, wet.					TIP 19.5'-21': -0.4/7.1
		SP	M brn fn to m SAND w 0.2' layer of fn to v crs sand				2-4-6	TIP 21'-22.5': -0.2/2.5
			w tr granules, wet.				6-5-4	
			SAA, no crs sand or granules; 0.15' of dk gray clay					
			at bottom of last sample. No staining.				3-2-3	TIP 22.5'-24': 0.0/4.8
25								
								Total Depth=24.0'

sl - slight	v - very	fn - fine		SPLIT SPOON SAMPLE
tr - trace	lt - light	m - medium		
sm - some	dk - dark	crs - coarse		GRAB SAMPLE
& - and	bf - buff	BH - Bore Hole		
@ - at	brn - brown	SAA - Same As Above		EST. WATER TABLE
w - with	blk - black			

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/21/89
BORING NO.	3-BH2	BORING DIA.:	4"	ELEV:	Not Surveyed
RIG TYPE:	Hand-Auger	CONTRACTOR:	Engineering-Science	DATM:	Ground Surface
TEMP (°F):	80	WEATHER:	Partly cloudy, windy, warm	GEOL:	JAS
		DRLG MED:	None		

Depth (ft.)	Pro-file	US CS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks TIP = Bkgrnd/Reading (ppm)
		ML	Lt brn to tan v fn sandy SILT, tr fn granules, dry.	SS - 1	0.0-1.0			Composite from three
.5								boreholes
1								
1.5			Dk brn to blk SILT, tr sand, tr clay, no odor,					
			blk discoloration, dry to sl moist.					
2								
2.5			SAA					
3								
3.5		SM	Tan to gray silty SAND, tr clay, moist.					
4								
4.5			SAA to 5', w decreasing silt.	SS-2	4.0-5.0			Composite from three
5								boreholes
5.5								
6								Total Depth = 5.0'

sl - slight	v - very	fn - fine	SPLIT SPOON SAMPLE
tr - trace	lt - light	m - medium	
sm - some	dk - dark	crs - coarse	GRAB SAMPLE
& - and	bf - buff	BH - Bore Hole	
@ - at	brn - brown	SAA - Same As Above	EST. WATER TABLE
w - with	blk - black		

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/21/89
BORING NO.	3-BH3	BORING DIA.:	4"	ELEV:	Not Surveyed
RIG TYPE:	Hand-Auger	CONTRACTOR:	Engineering-Science	DATM:	Ground Surface
TEMP (°F):	80	WEATHER:	Partly cloudy, windy, warm	GEOL:	JAS
		DRLG MED:	None		

Depth (ft.)	Profile	US CS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks TIP = Bkgrnd/Reading (ppm)
		ML	Dk brn SILT, sm clay, tr sand, moist, tr granules,	SS – 1	0.0–1.0			Composite from three
.5			blk discoloration, no odor.					boreholes
1								
1.5			SAA					
2								
2.5			Brn clayey SILT, tr sand, tr granules, moist.					
3								
3.5			Brn to tan sandy SILT, tr clay, tr granules, moist.					
4								
4.5			Tan sandy SILT, moist.	SS–2	4.0–5.0			Composite from three
5								boreholes
5.5								Total Depth = 5.0'
6								

sl - slight; tr - trace; sm - some; & - and; @ - at; w - with

v - very; lt - light; dk - dark; bf - buff; brn - brown; blk - black

fn - fine; m - medium; crs - coarse; BH - Bore Hole; SAA - Same As Above

SPLIT SPOON SAMPLE

GRAB SAMPLE

EST. WATER TABLE

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/20/89
BORING NO.	4-BH1	BORING DIA.:	4"	ELEV:	Not Surveyed
RIG TYPE:	Hand-Auger	CONTRACTOR:	Engineering-Science	DATM:	Ground Surface
TEMP (°F):	80 - 95	WEATHER:	Sunny, windy, hot	GEOL:	JAS
		DRLG MED:	None		

Depth (ft.)	Pro-file	US CS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks TIP = Bkgmd/Reading (ppm)
		ML	Blk clayey SILT, tr sand, v fn granules, sl moist.	SS - 1	0.0-1.0			Composite from two borehole
.5			blk discoloration, sl odor.					
1								
1.5			SAA, no odor.					
2								
2.5			Dk brn to blk mottled clayey SILT, sm sand, moist.					
3								
3.5			SAA, dk brn, sl mottled.					
4								
4.5			SAA	SS-2	4.0-5.0			Composite from two borehole
5								
5.5								Total Depth = 5.0'
6								

sl - slight	v - very	fn - fine	SPLIT SPOON SAMPLE
tr - trace	lt - light	m - medium	
sm - some	dk - dark	crs - coarse	GRAB SAMPLE
& - and	bf - buff	BH - Bore Hole	
@ - at	brn - brown	SAA - Same As Above	EST. WATER TABLE
w - with	blk - black		

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/20/89
BORING NO.	4-BH2	BORING DIA.:	4"	ELEV:	Not Surveyed
RIG TYPE:	Hand-Auger	CONTRACTOR:	Engineering-Science	DATM:	Ground Surface
TEMP (°F):	80 - 95	WEATHER:	Sunny, windy, hot	GEOL:	JAS
		DRLG MED:	None		

Depth (ft.)	Pro-file	US CS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks TIP = Bkgrnd/Reading (ppm)
		ML	Dk brn – blk clayey SILT, tr sand, sl moist,	SS – 1	0.0–1.0			Composite from two boreho
.5			poss oil stain, no odor.					
1								
1.5			SAA to 2.5'.					
2								
2.5			SAA, increasing blk discoloration.					
3								
3.5			SAA, increasing blk discoloration.					
4								
4.5			SAA, increasing v fn sand content.	SS–2	4.0–5.0			Composite from two boreho
5								
5.5								Total Depth = 5.0'
6								

sl - slight
tr - trace
sm - some
& - and
@ - at
w - with

v - very
lt - light
dk - dark
bf - buff
brn - brown
blk - black

fn - fine
m - medium
crs - coarse
BH - Bore Hole
SAA - Same As Above

SPLIT SPOON SAMPLE
GRAB SAMPLE
EST. WATER TABLE

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/20/89
BORING NO.	4-BH3	BORING DIA.:	4"	ELEV:	Not Surveyed
RIG TYPE:	Hand-Auger	CONTRACTOR:	Engineering-Science	DATM:	Ground Surface
TEMP (°F):	80-95	WEATHER:	Sunny, windy, hot	GEOL:	JAS
		DRLG MED:	None		

Depth (ft.)	Pro-file	US CS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks TIP = Bkgrnd/Reading (ppm)
		ML	Dk brn clayey SILT, w tr sand, sl moist.	SS-1	0.0-1.0			Composite from two borehole
.5								
1								
			SAA 1'-1.5', v sl oil odor.					
1.5								
			1.5'-2': Lt brn clayey SILT, w tr sand, tr oil odor.					
2								
2.5			SAA					
3								
3.5			SAA					
4								
4.5			SAA	SS-2	4.0-5.0			Composite from two borehole
5								
5.5								
								Total Depth = 5.0'
6								

sl - slight; tr - trace; sm - some; & - and; @ - at; w - with

v - very; lt - light; dk - dark; bf - buff; brn - brown; blk - black

fn - fine; m - medium; crs - coarse; BH - Bore Hole; SAA - Same As Above

SPLIT SPOON SAMPLE

GRAB SAMPLE

EST. WATER TABLE

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/23/89
BORING NO.	5-MW1	BORING DIA.:	8 1/4"	ELEV:	1152.51'
RIG TYPE:	Mobile B57	CONTRACTOR:	Geotechnical Services Inc.	DATM:	Ground Surface
TEMP (°F):	90	WEATHER:	Sunny, hot , sl. breeze	GEOL:	JRH
		DRLG MED:	None (HSA)		

Depth (ft.)	Profile	US CS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks (TIP = Bkgmd/Reading (ppm))
		CL	0–0.2' SAND & GRAVEL, changing at 0.2' to dk gray	SS–1	0–3.5'		10–10–1	TIP 0–1.5': 0.5/17.1
			silty CLAY, sl moist to moist, w sm gravel 2'–2.5'.					
			SAA 3'–4.5', fuel odor.				5–9–12	TIP BH: –1.0/3.5
							4–5–6	TIP 3'–4.5': –0.3/6.4; fuel
5								odor in breathing zone at 3'
		ML	Dk gray and gray–brown mottled, v fn sandy SILT,				2–2–3	TIP 4.5'–6': 0.1/5.8
		CL	v moist to wet, fuel odor. Changes at 6.5'	SS–2	3.5–9.5'		1–1–2	TIP 6'–7.5': 1.0/5.3
			to dk gray & brn–gray mottled silty CLAY,					No recovery 7.5'–9'
			m plastic, moist, sl fuel odor.				3–6–8	⎓ 9.5'–10'
10		CL–CH	Gray–brn CLAY w tr to sm silt, m to v plastic, moist to wet,				1–2–3	TIP 9'–10.5': 0.7/0.9
			no fuel odor.					TIP BH: 0.0/0.0
							3–3–4	TIP 10.5'–12': –1.8/3.2
							1–3–3	TIP 12'–13.5': 0.0/5.1
		CH	Dk gray CLAY w tr silt, v plastic, no fuel odor.					TIP 13.5'–15': –1.2/1.0
15							2–2–4	
			SAA to 22'.				3–4–3	
								TIP 16.5'–18': –0.7/0.8
							3–2–3	
							3–3–4	TIP 18'–19.5': 0.0/0.0
20								TIP 19.5'–21': –1.0/–1.0
							2–2–2	TIP BH: –0.6/–0.6
25								
								* Taken in Split Spoons
								Total Depth w Augers=20
								Total Depth w Split Spoon
								21.0'

sl - slight	v - very	fn - fine	SPLIT SPOON SAMPLE
tr - trace	lt - light	m - medium	
sm - some	dk - dark	crs - coarse	GRAB SAMPLE
& - and	bf - buff	BH - Bore Hole	
@ - at	brn - brown	SAA - Same As Above	⎓ EST. WATER TABLE
w - with	blk - black		

GEOLOGIC BORING LOG

JOB NO.:	DE072	CLIENT:	Lincoln Air Nat'l Guard Base	DATE:	06/20/89
BORING NO.	6-MW1	BORING DIA.:	8 1/4"	ELEV:	1162.75'
RIG TYPE:	Mobile B57	CONTRACTOR:	Geotechnical Services Inc.	DATM:	Ground Surface
TEMP (°F):	80-95	WEATHER:	Sunny, windy, hot	GEOL:	JRH/JAS
		DRLG MED:	None		

Depth (ft.)	Pro-file	US CS	Geological Description	Samples No.	Samples Depth (ft)	Sample Type	Blow Counts	Remarks TIP = Bkgrnd/Reading (ppm)
							2-1-2	
		CL	Green-brn, m plastic CLAY, w sm silt, moist.					TIP 1.5'-3': 0.4/2.7
			SAA 1.5-3', tr limonite.				2-2-4	
				SS-1	2-6		2-2-2	
5			SAA, increased moisture.					TIP BH 5': 0.2/0.3
							2-2-3	TIP: 6'-7.5': 0.5/1.0
							2-2-3	TIP: 7.5'-9.': 0.4/0.4
			Becoming dk brn silty CLAY, moist to v moist.	SS-2	6-10.5			
							2-2-3	
10							2-2-2	TIP BH 10': 0.4/0.2
								TIP 9'-10.5': 0.0/0.1
		SW	M brn, v fn to crs SAND w sm silt, v moist.	SS-3	10.5-13.5		3-3-7	TIP 10.5'-12': -1.1/-1.1
							4-5-4	TIP 12'-13.5': 0.1/0.3
		SP	M to v crs SAND w tr granules, wet.					⎓ 13'-13.5'
15							4-1-7	TIP 13.5'-15': -0.2/-0.2
							4-5-6	TIP BH 15': -0.4/-0.4
			SAA, fn to v crs, tr fn to m pebbles.					TIP 15'-16.5': -0.2/-0.2
							4-5-7	TIP 16.5'-18': -0.2/-0.2
		SW-CL	Interlayered m brn, v fn to fn sandy CLAY and fn to v				2-2-4	
20			crs SAND w tr granules & pebbles, wet.					TIP 18'-19.5': -0.6/-0.7
			approximately 2"-8" layers				3-2-6	TIP BH 20': -0.1/-0.1
		SC-CL	Sandy CLAY to clayey SAND.				2-2	TIP 21' in Fe-stained sand: 0.6/1.1
25								
								Total Depth=22.0'

sl - slight
tr - trace
sm - some
& - and
@ - at
w - with

v - very
lt - light
dk - dark
bf - buff
brn - brown
blk - black

fn - fine
m - medium
crs - coarse
BH - Bore Hole
SAA - Same As Above

SPLIT SPOON SAMPLE
GRAB SAMPLE
⎓ EST. WATER TABLE

APPENDIX B4

UNIFIED SOIL CLASSIFICATION CHART

UNIFIED SOIL CLASSIFICATION CHART

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]				Soil Classification	
				Group Symbol	Group Name[B]
Coarse-Grained Soils	Gravels	Clean Gravels	$Cu \geq 4$ and $1 \leq Cc \leq 3$[E]	GW	Well-graded gravel[F]
More than 50% retained on No. 200 sieve	More than 50% of coarse fraction retained on No. 4 sieve	Less than 5% fines[C]	$Cu < 4$ and/or $1 > Cc > 3$[E]	GP	Poorly graded gravel[F]
		Gravels with Fines	Fines classify as ML or MH	GM	Silty gravel[F,G,H]
		More than 12% fines[C]	Fines classify as CL or CH	GC	Clayey gravel[F,G,H]
	Sands	Clean Sands	$Cu \geq 6$ and $1 \leq Cc \leq 3$[E]	SW	Well-graded sand[I]
	50% or more of coarse fraction passes No. 4 sieve	Less than 5% fines[D]	$Cu < 6$ and/or $1 > Cc > 3$[E]	SP	Poorly graded sand[I]
		Sands with Fines	Fines classify as ML or MH	SM	Silty sand[G,H,I]
		More than 12% fines[D]	Fines classify as CL or CH	SC	Clayey sand[G,H,I]
Fine-Grained Soils	Silts and Clays	Inorganic	PI > 7 and plots on or above "A" line[J]	CL	Lean clay[K,L,M]
50% or more passes No. 200 sieve	Liquid limit less than 50		PI < 4 or plots below "A" line[J]	ML	Silt[K,L,M]
		Organic	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OL	Organic clay[K,L,M,N] / Organic silt[K,L,M,O]
	Silts and Clays	Inorganic	PI plots on or above "A" line	CH	Fat clay[K,L,M]
	Liquid limit 50 or more		PI plots below "A" line	MH	Elastic silt[K,L,M]
		Organic	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OH	Organic clay[K,L,M,P] / Organic silt[K,L,M,Q]
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

A Based on the material passing the 3-in. (75-mm) sieve.

B If field sample contained cobbles or both, add "with cobbles or boulders, or both" to group name.

C Gravels with 5 to 12% fines require dual symbols:
GW-GM well-graded gravel with silt.
GW-GC well-graded gravel with clay.
GP-GM poorly graded gravel with silt.
GP-GC poorly graded gravel with clay.

D Sands with 5 to 12% fines require dual symbols:
SW-SM well-graded sand with silt.
SW-SC well-graded sand with clay.
SP-SM poorly graded sand with silt.
SP-SC poorly graded sand with clay.

E $Cu = D_{60}/D_{10}$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

F If soil contains $\geq$ 15% sand, add "with sand" to group name.

G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

H If fines are organic, add "with organic fines" to group name.

I If soil contains $\geq$ 15% gravel, add "with gravel" to group name.

J If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.

K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant.

L If soil contains $\geq$ 30% plus No. 200, predominantly sand, add "sandy" to group name.

M If soil contains $\geq$ 30% plus No. 200 predominantly gravel, add "gravelly" to group name.

N PI $\geq$ 4 and plots on or above "A" line.

O PI $<$ 4 or plots below "A" line.

P PI plots on or above "A" line.

Q PI plots below "A" line.

Source: ASTM 2487, 1983

APPENDIX B5
PRELIMINARY ASSESSMENT
BORING LOGS

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
.. ROBE BORINGS TO DETERMINE EXTENT OF FUEL CONTAMINATION IN AREA AROUND FUEL TANK NO.1 NEBRASKA AIR NATIONAL GUARD BAS LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (a)
444-82	0101	Acker AD II		January 31, 1982
LOCATION OF HOLE		DRILLING METHOD: Continuous Flight Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 14.0 Feet
ELEV.		AUGER SIZE: 6" Diameter / BIT TYPE: Clay	SURFACE MATERIAL: Concrete	DRILLER: B.Willis / HELPER: R. Haynes
DATUM		TYPE AND SIZE OF SAMPLERS: None	GWL DEPTH AND TIME OF READING: None Encountered	INSPECTOR: B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Mottled Yellow Brown To Medium Gray	Moist	Silty Clay (CL-CH)	Stiff	Alluvial Soils Moderate to High Plasticity				
5			Dark Gray	Moist	Silty Clay (CH)	Stiff	Organic Odor No Fuel Odor				
			Light to Medium Gray Brown w/Green Tint	Moist	Silty Clay (CL-CH)	Stiff	Moderate to High Plasticity No Fuel Odor				
10			Light Gray Brown	Very Moist to Saturated	Sandy Silt (SM)	Soft	Glacial Sediments Low Plasticity No Fuel Odor				
15				Bottom of Hole at 14.0 Feet							

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:

NEBRASKA AIR NATIONAL GUARD

Owner:

NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
:OBE BORINGS TO DETERMINE
EXTENT OF FUEL CONTAMINATI
IN AREA AROUND FUEL TANK
NEBRASKA AIR NATIONAL GUAR
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (s)
444-82	0102	Acker AD II	.	January 31, 1983

LOCATION OF HOLE	DRILLING METHOD	TOPOGRAPHY AND DRAINAGE	TOTAL DEPTH
	Continuous Flight Auger	Flat - Fair	14.0 Feet

ELEV.	AUGER SIZE	BIT TYPE	SURFACE MATERIAL	DRILLER	HELPER
	6" Diameter	Clay	Grass	B. Willis	R. Hayne

DATUM	TYPE AND SIZE OF SAMPLERS	GWL DEPTH AND TIME OF READING	INSPECTOR
	None	None Encountered	B. Willis

FIELD DATA | LABORATORY DATA

DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DA
			Dark Brown	Moist To Very Moist	Silty Clay (CL)		Alluvial Soils, Possibly Fill, Low to Moderate Plasticity				
5			Mottled Gray Brown	Moist	Silty Clay (CL-CH)	Stiff	Low to Moderate Fuel Odor from 2-4' Moderate to High Plasticity No Fuel Odor Beyond 4'				
			Dark Brown								
10			Medium Gray		Fat Clay (CH)		Highly Plastic No Fuel Odor				
			Gray Brown	Very Moist to Saturated	Sandy Silt (ML)	Soft	Glacial Sands, Very Fine Grained Sandy Silt, Low Plasticity No Fuel Odor				
15				Bottom of Hole at 14.0 Feet							

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
OBE BORINGS TO DETERMINE
EXTENT OF FUEL CONTAMINATION
IN AREA AROUND FUEL TANK NO. 1
NEBRASKA AIR NATIONAL GUARD BAS
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (a)
444-82	0103	Acker AD II		January 31, 1983

LOCATION OF HOLE	DRILLING METHOD	TOPOGRAPHY AND DRAINAGE	TOTAL DEPTH
	Continuous Flight Auger	Flat - Fair	14.5 Feet

ELEV.	AUGER SIZE / BIT TYPE	SURFACE MATERIAL	DRILLER / HELPER
	6" Diameter / Clay	Grass	B. Willis / R. Haynes

DATUM	TYPE AND SIZE OF SAMPLERS	GWL DEPTH AND TIME OF READING	INSPECTOR
	None	None Encountered	B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Gray Brown	Moist	Silty Clay (CL-CH)	Stiff	Alluvial Soils Moderately Plastic				
5			Dark Gray	Very Moist	Clayey Silt (ML) / Fat Clay (CH)	Medium Stiff to Stiff	Low Plasticity / Highly Plastic Faint Fuel Odor From ≈ 7.5' to 11.5'				
10			Medium Gray								
			Gray Brown	Very Moist	Sand to Clayey Silt (ML)	Soft	Glacial Sediments, Low Plasticity, Fine Sand No Fuel Odor				
15				Bottom	of Hole at 14.5 Feet						

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
PROBE BORINGS TO DETERMINE EXTENT OF FUEL CONTAMINATION IN AREA AROUND FUEL TANK
NEBRASKA AIR NATIONAL GUARD
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (s)
444-82	0104	Acker AD II		January 31, 198

LOCATION OF HOLE	DRILLING METHOD	TOPOGRAPHY AND DRAINAGE	TOTAL DEPTH
	Continuous Flight Auger	Flat - Fair	24.0 Feet

ELEV.	AUGER SIZE	BIT TYPE	SURFACE MATERIAL	DRILLER	HELPER
	6" Diameter	Clay	Grass	B. Willis	R. H

DATUM	TYPE AND SIZE OF SAMPLERS	GWL DEPTH AND TIME OF READING	INSPECTOR
	None	GWL Not Obtained	B. Willis

FIELD DATA								LABORATORY DA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	
0			Dark Brown	Moist	Silty Clay (CL-CH)		Alluvial Soils Moderately Plastic				
5			Dark Gray	Moist	Fat Clay (CH)		Highly Plastic Moderate to Strong Fuel Odor at 5' to ≈ 17'				
10			Medium Gray With Brown Tint				Highly Plastic				
15			Dark Gray Brown								
20			Medium Gray								
			Gray Brown to Yellow Brown	Saturated	Silty Sand		Glacial Sands, Silty Fine to Medium Sand, Possibly Slight Fuel Odor				
25				Bottom of Hole at 24.0 Feet							

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
:OBE BORINGS TO DETERMINE
EXTENT OF FUEL CONTAMINATION
IN AREA AROUND FUEL TANK NO. 1
NEBRASKA AIR NATIONAL GUARD BAS
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (a)
444-82	0105	Acker AD II		January 31, 1983
LOCATION OF HOLE		DRILLING METHOD: Continuous Flight Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 29.0 Feet
ELEV.		AUGER SIZE: 6" Diameter / BIT TYPE: Clay	SURFACE MATERIAL: Grass	DRILLER: B.Willis / HELPER: R.Haynes
DATUM		TYPE AND SIZE OF SAMPLERS: None	GWL DEPTH AND TIME OF READING: GWL Not Obtained	INSPECTOR: B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Gray Brown	Moist	Silty Clay (CL-CH)		Alluvial Soils Moderate Plasticity				
5			Dark Gray	Moist	Clayey Silt (ML)		Low Plasticity				
			Dark Gray		Silty Clay (CL-CH)		Moderate to High Plasticity, Strong Fuel Odor at ≈ 5'				
10			Green Gray								
			Dark Gray								
15											
			Medium Gray		Silty Clay (CL)		Low to Moderately Plastic, Difficult to Distinguish Between Fuel and Organic Odors Fuel Concentrations Very Weak if Present.				
20			Grey Brown to Yellow Brown	Saturated	Silty Sand (SM)		Glacial Sands, Silty Fine to Medium Sand, Very Faint Fuel Odor.				
25											
			Bottom of Hole at 29.0 Feet								

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
ROBE BORINGS TO DETERMINE EXTENT OF FUEL CONTAMINATION IN AREA AROUND FUEL TANK NO. [redacted]
NEBRASKA AIR NATIONAL GUARD [redacted]
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (a)
444-82	0106	Acker AD II		February 1, 1983
LOCATION OF HOLE		DRILLING METHOD: Continuous Flight Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 25.0 Feet
ELEV.		AUGER SIZE: 6" Diameter / BIT TYPE: Finger	SURFACE MATERIAL: Grass	DRILLER: B.Willis / HELPER: R. Haynes
DATUM		TYPE AND SIZE OF SAMPLERS: None	GWL DEPTH AND TIME OF READING: GWL Not Obtained	INSPECTOR: B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Mottled Gray And Brown	Moist	Silty Clay (CL)		Alluvial Sediments Moderately Plastic				
5			Dark Gray	Moist	Clayey Silt (ML)		Low Plasticity				
					Fat Clay (CH)		Starting to Get Moderate to Strong Fuel Odor at ≈ 5' Highly Plastic				
			Dark Gray Brown								
10			Green Gray.		Fat Clay (CH)		Highly Plastic Strong Fuel Odor				
					Clayey Sand (CL)						
15			Medium Gray	Very Moist To Satur-ated	Fat Clay (CH) / Clayey Silt (ML) / Fat Clay (CH)		No to Weak Fuel Odor at ≈ 17', Brought Raw Fuel Up With Augers On Top of Water, Green Color				
20			Light Gray Brown	Satur-ated	Silty Clay Grading to Clayey Silt (CL-ML) / Silty Sand (SM)		Glacial Sediments No Detectable Fuel Odor Silty Sand, Fine to Medium Grained				
25				Bottom of Hole at 25.0 Feet							

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (a)
444-82	0201	Acker AD II		February 10, 1983

LOCATION OF HOLE	DRILLING METHOD	TOPOGRAPHY AND DRAINAGE	TOTAL DEPTH
	Hollow Stem Auger	Flat - Fair	21.0 Feet

ELEV.	AUGER SIZE / BIT TYPE	SURFACE MATERIAL	DRILLER / HELPER
	7" Diameter / Finger	Grass	D.Kahler / R. Haynes

DATUM	TYPE AND SIZE OF SAMPLERS	GWL DEPTH AND TIME OF READING	INSPECTOR
	2" Split Spoon	11' 7" @ End of Drilling Inside Hollow Stem Augers 7.25' @ End of Drilling Inside Well	B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH tsf (11)	CLASSIF. DATA (12)
			Dark Gray Brown	Moist	Silty Clay (CL-CH)	Stiff	Alluvial Soils				
5	J-1	8					Moderate to High Plasticity				
				Moist To Very Moist	Clayey Silt (ML) Fat Clay (CH)	Medium Stiff Stiff	Organic Odor Low Plasticity				
			Green Gray	Very Moist	Silty Clay (CL)	Stiff	Slight Fuel Odor Low to Moderately Plastic Root Holes				
10	J-2	7									
			Dark Gray Brown	Saturated	Silty Clay (CH)	Stiff	Fuel Odor, Slick on Water, Water @ ≈ 13.5 Highly Plastic, Root Holes, No Fuel Odor In Soil				
15	J-3	12									
			Light Brown	Saturated	Silty Sand (SM)	Loose	Glacial Sands Silty Fine Sand With Sandy Silt Zones, No Fuel Odor of Slick				
20	J-4	6									
				Bottom of Hole at 21.0 Feet							

Screen 6' - 8" Long
Screen Set @ ≈ 18.6'
Gravel Packed to 6.67' From Surface
2' Riser Stick-up.

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:

NEBRASKA AIR NATIONAL GUARD

Owner:

NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT AND LOCATION: INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (s)
444-82	0202	Acker AD II		February 10, 1983
LOCATION OF HOLE		DRILLING METHOD: Hollow Stem Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 17.0 Feet
ELEV.		AUGER SIZE: 7" Diameter / BIT TYPE: Finger	SURFACE MATERIAL: Grass	DRILLER: D.Kahler / HELPER: R.Haynes
DATUM		TYPE AND SIZE OF SAMPLERS: 2" Split Spoon	GWL DEPTH AND TIME OF READING: 12.0' @ End of Drilling Inside Well	INSPECTOR: B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Dark Brown	Moist	Silty Clay (CL-CH)	Stiff	Fill				
							No Fuel Odor				
5	J-1	9	Yellow Brown / Dark Brown		Clayey Silt (ML) / Silty Clay (CH)		Low Plasticity, Moderate to High Plasticity				
			Green Gray	Moist	Fat Clay (CH)	Stiff	Alluvial Soils				
							Fuel Odor-Moderate				
							Root Holes, Iron Stains				
10	J-2	8					Highly Plastic				
							Water During Drilling at 13.25'				
			Dark Gray Brown	Saturated	Fat Clay (CH)		No Fuel Sheen or Odor				
							Traces of Sand				
15	J-3	10					Highly Plastic				
							Root Holes				
				Bottom	of Hole at 17.0 Feet						

Screen 6' - 8" Long

Screen Set @ 16.5'

Gravel Packed - 4.0'

Riser Stick-up 2.5'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION:
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (s)
444-82	0203	Acker AD II		February 10, 1983
LOCATION OF HOLE		DRILLING METHOD: Hollow Stem Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 26.0 Feet
ELEV.		AUGER SIZE: 7" Diameter / BIT TYPE: Finger	SURFACE MATERIAL: Grass	DRILLER: D.Kahler / HELPER: R.Haynes
DATUM		TYPE AND SIZE OF SAMPLERS: 2" Split Spoon	GWL DEPTH AND TIME OF READING: 8.0' @ End of Drilling Inside Well	INSPECTOR: B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV. (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Dark Brown	Damp	Fat Clay (CH)	Very Stiff	Fill Highly Plastic No Fuel Odor				
5	J-1	25									
			Gray Brown	Moist	Fat Clay (CH)	Stiff	Alluvial Soils No Fuel Odor Becomes More Silty With Depth, Root Holes, Iron Stains				
10	J-2	8									
			Dark Gray Brown	Very Moist			No Fuel Odor Traces of Fine Sand Moderate to High Plasticity Root Holes Water @ ≈ 18' During Drilling				
15	J-3	7									
			Blue Gray				Highly Plastic, No Fuel Odor, Traces of Sand				
20	J-4	12									
			Yellow Brown	Saturated	Sand (SP)	Medium Dense	Fine to Medium Grained Sand Water @ ≈ 14' after Sampling @ 25', No Fuel Odor. Fine to Coarse Sand With Gravel, Some Silt				
25	J-5	6									
				Bottom of Hole at 26.0 Feet							

Screen Length 6' - 8"
Screen Set @ 22.67'
Gravel Packed to ≃ 10'
Riser Pipe Stick-up 2'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:

NEBRASKA AIR NATIONAL GUARD

Owner:

NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (s)
444-82	0204	Acker AD II		February 10, 1983
LOCATION OF HOLE		DRILLING METHOD: Hollow Stem Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 21.5 Feet
ELEV.		AUGER SIZE: 7" Diameter / BIT TYPE: Finger	SURFACE MATERIAL: Grass	DRILLER: D. Kahler / HELPER: R. Hayne
DATUM		TYPE AND SIZE OF SAMPLERS: 2" Split Spoon	GWL DEPTH AND TIME OF READING: 9.5' @ End of Drilling Inside Well	INSPECTOR: B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Dark Gray Brown	Moist	Silty Clay (CL)	Medium Stiff	Alluvial Soils				
5	J-1	6					Moderately Plastic, Root Holes and Hairs, No Fuel Odor.				
			Medium Green Gray		Silty Clay (CL-CH)	Medium Stiff To Stiff					
10	J-2	8					Moderate Fuel Odor Moderate to High Plasticity, Root Holes, Iron Stains				
			Dark Green Gray	Very Moist	Fat Clay (CH)	Stiff					
15	J-3	10					Highly Plastic, Root Holes, Traces of Very Fine Sand No Fuel Odor.				
			Yellow Brown	Saturated	Sand (SP)	Loose	Water @ ≈ 11' After Sampling J-3, No Fuel Odor, Fine to Medium Grained Sand, Traces of Silt				
20	J-4	7									
				Bottom of Hole at 21.5 Feet							
25											

Screen Length - 6-8"

Screen Set @ ≈ 9.75

Gravel Packed to 3'

Riser Stick-up - 1.7'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (s)
444-82	0205	Acker AD II		February 11, 1983

LOCATION OF HOLE	DRILLING METHOD	TOPOGRAPHY AND DRAINAGE	TOTAL DEPTH
	Hollow Stem Auger	Flat - Fair	16.0 Feet

ELEV.	AUGER SIZE	BIT TYPE	SURFACE MATERIAL	DRILLER	HELPER
	7" Diameter	Finger	Grass	D.Kahler	R.Haynes

DATUM	TYPE AND SIZE OF SAMPLERS	GWL DEPTH AND TIME OF READING	INSPECTOR
	2" Split Spoon	8.5' @ End Of Drilling Inside Well	B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Dark Gray Brown	Moist	Sandy Silty Clay (CL)	Medium Stiff To Stiff	Alluvial Soils				
5	J-1	7					Some Fine to Medium Grained Sand Moderate Plasticity, No Fuel Odor				
			Medium Gray Brown	Moist To Very Moist	Fat Clay (CH)	Medium Stiff					
10	J-2	6					No Fuel Odor. Highly Plastic, Iron Stains, Root Holes, Carbon				
			Light Brown	Satur-ated	Silty Sand (SM)	Loose	Glacial Sands Apparently Silty Fine Sand				
15	J-3	3									
				Bottom of Hole at 16.0 Feet.							
20											
25											

Screen 6' - 8" Long
Screen Set @ 14.9'
Gravel Packed to 2.0'
Riser Stick-up 1.5'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (a)
444-82	0206	Acker AD II		February 11, 1983

LOCATION OF HOLE	DRILLING METHOD	TOPOGRAPHY AND DRAINAGE	TOTAL DEPTH
	Hollow Stem Auger	Flat - Fair	16.0 Feet

ELEV.	AUGER SIZE / BIT TYPE	SURFACE MATERIAL	DRILLER / HELPER
	7" Diameter / Finger	Grass	D. Kahler / R. Haynes

DATUM	TYPE AND SIZE OF SAMPLERS	GWL DEPTH AND TIME OF READING	INSPECTOR
	2" Split Spoon	Water at 10' During Drilling, 7.3' @ End of Drilling, Inside well	B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
5	J-1	9	Dark Gray	Moist	Silty Clay (CL)	Stiff	Alluvial Soils Moderately Plastic, Root Holes, No Fuel Odor.				
			Dark Gray Brown	Very Moist	Fat Clay (CH)		Highly Plastic				
10	J-2	8			Silty Clay (CL-CH)		No Fuel Odor. Root Holes, Iron Stains, Highly Plastic Moderately Plastic, Traces of Sand.				
			Light Brown	Saturated	Interbedded Silty Sand & Sandy Silt (ML-SM)	Loose	Galcial Sands. Interbedded Fine Grained Silty Sands And Sandy Silts				
15	J-3	6									
				Bottom	of Hole at 16.0 Feet						
20											

Well Screen 6' - 8" Lor
Screen Set @ ≈14.9'
Gravel Packed to ≈1'
Riser Stick-up 1.5'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (a)
444-82	0207	Acker AD II		February 11, 1983
LOCATION OF HOLE		DRILLING METHOD: Hollow Stem Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 16.0 Feet
		AUGER SIZE: 7" Diameter / BIT TYPE: Finger	SURFACE MATERIAL: Grass	DRILLER: D. Kahler / HELPER: R. Haynes
ELEV.		TYPE AND SIZE OF SAMPLERS: 2" Split Spoon	GWL DEPTH AND TIME OF READING: 8.9' in Well @ End of Drilling	INSPECTOR: B. Willis
DATUM				

FIELD DATA

DEPTH IN Ft. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)
			Dark Gray Brown	Moist	Silty Clay (CH)	Stiff	Alluvial Soils,
5	J-1	11					No Fuel Odor. Highly Plastic, Root Holes, Iron Stains
			Medium Gray Brown				No Fuel Odor. Highly Plastic, Root Holes
10	J-2	7	Dark Brown	Very Moist	Silty Clay (CL-CH)	Medium Stiff to Stiff	Moderately Plastic
			Yellow Brown	Saturated	Sand (SP-SW)	Loose	Glacial Sands Traces of Silt And Gravel, Clean Fine to Coarse Sand
15	J-3	8					
				Bottom of Hole at 16.0 Feet			
20							

LABORATORY DATA

MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)

Screen Length - 6' - 8'

Screen Set @ 12.9'

Gravel Packed to 1.0'

Riser Stick-up - 3.2'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (a)
444-82	0208	Acker AD II		February 11, 1983

LOCATION OF HOLE	DRILLING METHOD	TOPOGRAPHY AND DRAINAGE	TOTAL DEPTH
	Hollow Stem Auger	Flat - Fair	16.5 Feet

ELEV.	AUGER SIZE	BIT TYPE	SURFACE MATERIAL	DRILLER	HELPER
	7" Diameter	Finger	Grass	D. Kahler	R. Haynes

DATUM	TYPE AND SIZE OF SAMPLERS	GWL DEPTH AND TIME OF READING	INSPECTOR
	2" Split Spoon	8.1' in Well @ End of Drilling. Water @ ≈ 10' in Hollow Stem Auger	B. Willis

FIELD DATA | LABORATORY DATA

DEPTH IN FT or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
			Dark Brown	Very Moist	Clayey Silt (ML)	Medium Stiff	Alluvial Soils				
5	J-1	9					Low Plasticity, No Fuel Odor.				
					Fat Clay (CH)	Stiff	High Plasticity, Root Holes				
			Medium Gray Brown With Green Tint	Moist To Very Moist							
10	J-2	10					Weak Fuel Odor to ≈ 11.5' Where It Disappears. Highly Plastic, Iron Stains, Root Holes				
			Yellow Brown	Saturated	Silty Clay (CL)	Soft	Glacial Sediments. No Fuel Odor. Low Plasticity, Traces of Sand				
15	J-3	4									
				Bottom of Hole at 16.5 Feet							
20											

Screen Length - 6' - 8'
Screen Set @ ≈ 4.8'
Gravel Packed to 1'
Riser Stick-up 1.9'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (s)
444-82	0209	Acker AD II		February 11, 1983
LOCATION OF HOLE		DRILLING METHOD: Hollow Stem Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 21.5 Feet
ELEV.		AUGER SIZE: 7" Diameter; BIT TYPE: Finger	SURFACE MATERIAL: Grass	DRILLER: D. Kahler; HELPER: R. Haynes
DATUM		TYPE AND SIZE OF SAMPLERS: 2" Split Spoon	GWL DEPTH AND TIME OF READING: 11.7' in Well @ End of Drilling	INSPECTOR: B. W.llis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH tsf. (11)	CLASSIF. DATA (12)
			Black	Very Moist	Silty Clay With Clayey Silt (ML-CL)	Medium Stiff	Alluvial Soils				
5	J-1	8					No Fuel Odor. Low Plasticity, Organic				
				Moist	Fat Clay (CH)	Stiff	High Plasticity Root Hairs, Root Holes				
			Green Gray				Water @≈ 9' During Drilling, High Plasticity, Root Holes, Iron Stains.				
10	J-2	12									
			Dark Gray				Strong Fuel Odor, Fuel Sheen on Sampler, High Plasticity				
15	J-3	13					Strong Fuel Odor				
			Medium Gray Brown	Saturated	Silty Clay (CL)	Soft to Medium Stiff	Low Plasticity, Very Faint Fuel Odor If Present.				
20	J-4	7									
				Bottom of Hole at 21.5 Feet							

Screen Length 6' - 8"
Screen Set @≈19.6'
Gravel Packed to 1.0'
Riser Stick-up + 3.0'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

Client:
NEBRASKA AIR NATIONAL GUARD

Owner:
NEBRASKA AIR NATIONAL GUARD

SUMMARY OF BORING

NEBRASKA TESTING LABORATORIES
OMAHA, NEBRASKA

PROJECT and LOCATION
INSTALLATION OF GROUNDWATER MONITORING WELLS AT LINCOLN AIR NATIONAL GUARD BASE
LINCOLN, NEBRASKA

JOB NO.	BORING NO.	DRILL RIG	AMOUNT OF CUT OR FILL	DATE (s)
444-82	0210	Acker AD II		February 11, 1983
LOCATION OF HOLE		DRILLING METHOD: Hollow Stem Auger	TOPOGRAPHY AND DRAINAGE: Flat - Fair	TOTAL DEPTH: 21.5 Feet
ELEV.		AUGER SIZE: 7" Diameter / BIT TYPE: Finger	SURFACE MATERIAL: Grass and Gravel	DRILLER: D. Kahler / HELPER: R. Hayne
DATUM		TYPE AND SIZE OF SAMPLERS: 2" Split Spoon	GWL DEPTH AND TIME OF READING: 8.0' @ End of Drilling Inside Well	INSPECTOR: B. Willis

FIELD DATA								LABORATORY DATA			
DEPTH IN FT. or ELEV (1)	SAMPLE DATA (2)	SPT BL/FT (3)	COLOR (4)	MOISTURE (5)	TEXTURAL CLASSIF. (6)	CONSISTENCY or DENSITY (7)	GEOLOGICAL DESCRIPTION and OTHER REMARKS (8)	MOISTURE IN % (9)	DRY DENSITY PCF. (10)	UNCONFINED COMPRESSIVE STRENGTH TSF (11)	CLASSIF. DATA (12)
5	J-1	5	Mottled Gray Brown	Moist To Very Moist	Silty Clay With Seams Of Clayey Silt (CL-ML)	Medium Stiff	Fill Low Plasticity, Organic Odor, No Fuel Odor.				
10	J-2	6	Green Gray	Moist To Very Moist	Fat Clay (CH)	Medium Stiff	Alluvial Soils Moderate to High Plasticity, Moderate to Strong Fuel Odor, Root Holes, Iron Stains				
15	J-3	8	Dark Brown	Saturated		Stiff	Water During Drilling @ ≈ 14' Highly Plastic, Fuel Odor, Very Faint				
20	J-4	2	Light Gray Brown	Saturated	Silty Sand (SM)	Loose	Glacial Sand (?) Silty Fine Sand				
				Bottom of Hole at 21.5 Feet							

Screen Length 6' - 8'
Screen Set @ ≈ 20'
Gravel Packed to 2.0'
Riser Stick-up 2'

SOURCE: HAZARDOUS MATERIALS TECHNICAL CENTER, 1987.

APPENDIX C
SURVEY DATA

APPENDIX C1

BORING AND WELL SURVEY DATA

TABLE C-1

BORING AND WELL SURVEY DATA
LINCOLN ANGB

WELL ID.	TYPE OF WELL/BORING	NORTH (ft)	EAST (ft)	PVC ELEVATION (ft above M.S.L.)	STICK-UP (ft)	SURFACE ELEVATION (ft above M.S.L.)
Site 1						
MW-0103	Monitor	438884.08	2760338.43	1152.59	- a/	-
MW-0201	Monitor	438876.46	2760088.55	1152.50	-	-
MW-0202	Monitor	438719.25	2760200.00	1151.96	-	-
MW-0203	Monitor	438637.30	2760488.20	1151.40	-	-
MW-0204	Monitor	438700.39	2760350.30	1151.48	-	-
MW-0206	Monitor	439012.25	2760430.03	1150.93	-	-
MW-0207	Monitor	439016.81	2760301.41	1150.73	-	-
MW-0209	Monitor	438823.06	2760191.13	1152.43	-	-
MW-0210	Monitor	438819.22	2760126.28	1152.06	-	-
MW-0212	Monitor	438849.41	2760379.96	1152.59	-	-
MW-0213	Monitor	438959.79	2760156.37	1152.37	-	-
MW-0214	Monitor	438707.49	2760185.28	1151.65	-	-
MW-0215	Monitor	438689.15	2760257.57	1151.21	-	-
MW-0216	Monitor	438681.00	2760273.20	1151.27	-	-
MW-0217	Monitor	438653.79	2760333.50	1151.54	-	-
MW-1201	Monitor	438751.98	2760297.57	1152.15	-	-
MW-1202	Monitor	438781.85	2760255.14	1151.97	-	-
MW-1203	Monitor	438868.30	2760275.49	1152.81	-	-
MW-1204	Monitor	438877.95	2760319.47	1152.33	-	-
RW-1	Recovery	438880.75	2760292.31	1154.57	-	-
RW-2	Recovery	438854.10	2760239.07	1154.57	-	-
RW-3	Recovery	438745.81	2760229.60	1154.34	-	-
RW-4	Recovery	438699.37	2760262.42	1154.70	-	-
RW-5	Recovery	438669.82	2760313.53	1154.15	-	-
RW-6	Recovery	438651.06	2760368.75	1154.30	-	-
Site 2						
2-MW-1	Monitor	439522.42	2758584.82	1158.11	-0.28	1158.39
Site 3						
3-MW-1	Monitor	438402.92	2760417.65	1152.05	-0.25	1152.30
3-BH2	Hand Auger	438314.19	2760355.71	-	-	-
3-BH3	Hand Auger	438219.26	2760586.98	-	-	-
Site 4						
4-BH1	Hand Auger	438548.37	2760212.45	-	-	-
4-BH2	Hand Auger	438360.46	2760570.30	-	-	-
4-BH3	Hand Auger	438197.85	2760867.91	-	-	-
Site 5						
5-MW-1	Monitor	438766.79	2759695.12	1152.51	-0.25	1152.76
Site 6						
6-MW-1	Monitor	440283.08	2759288.58	1162.75	-0.35	1163.10

a/ - (Dash) = Not applicable or available.

APPENDIX C2

SURVEY DATA FOR SURFACE WATER STATIONS

TABLE C-2

SURVEY DATA FOR OAK CREEK SURFACE WATER STATIONS
LINCOLN ANGB

STREAM GAGING STATION	NORTH (ft)	EAST (ft)	ELEVATION OF TOP OF GAGING STATION (ft above M.S.L.)	HEIGHT OF GAGE (ft)	SURFACE ELEVATION a/ (ft above M.S.L.)
2-SW1	438344.74	2760790.56	1143.90	5	1138.90
2-SW3	438597.68	2760348.53	1147.42	5.75	1141.67
2-SW4	438920.97	2759700.77	1146.56	5	1141.56
2-SW5	439160.63	2759173.23	1145.43	3	1142.43
2-SW6	439343.50	2758694.77	1146.48	3	1143.48

a/ Elevation of streambed and of "0" foot mark on stream gage.

APPENDIX D
QUALITY CONTROL

APPENDIX D1

CHAIN-OF-CUSTODY DOCUMENTATION

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

CHAIN OF CUSTODY RECORD

SO4, Cl, F, NO2, NO3

Project Number	Project Name/Company
DE072	Lincoln Engineering Science

Samplers: (Signature) J. K. Hicks J. S. Walters (Printed) John Hicks J. Walters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Volatiles EPA 624	Semivol EPA 625	Pet. HC 418.1	Common Anions SM4A 429			REMARKS
LANGB-2-SW-1	6/14/89	15:00			Old Oak Cr.	6 LAT	2 bottles X	3 bottles X	X	X			A TRIP BLANK WAS
LANGB-2-SW-2	6/14/89	15:30			Tributary	6 LAT	2 bottles X	3 bottles X	X	X			NOT INCLUDED WITH
													THIS DELIVERY.
													THERE WAS SIGNIFICANT
													HEADSPACE IN SEMI-
													VOLATILES AND
													PETROLEUM HYDROCARBONS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Lisa A Kerner	6/15/89	18:00					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Skelly	6/19/89	1810	
(Printed)			(Printed)	Cooler No.	Cooler Temp.	

D1-1

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

SO4, Cl, F
NO3, NO2

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company
DE072	Lincoln EES

Samplers: (Signature)	(Printed)
J.R. Hicks J.S. Walters	J. Hicks J. Walters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Vol. Exp	Semi Vol 625	Pet HC 418.1	Conventionals SM4 4.5			REMARKS
LNG-2-SW-3	6/16	15:15			Old Oak Cr.	7	2	3	1	1			A TRIP BLANK WAS
LANG-2-SW-7 (LAK)	6/18	14:30			Old Oak Cr								NOT INCLUDED WITH
													THIS DELIVERY
													THERE WAS SIGNIFICANT
													HEADSPACE IN SEMI-
													VOLATILES AND
													PETROLEUM HYDROCARBONS
													625

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Lisa A Kerner	6/19/89	17:00					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/19/89	1810	
(Printed)			(Printed)	Cooler	Cooler	

D1-2

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

SO4, Cl, F
NO3

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company
DE072	Lincoln ES

Samplers: (Signature) J.J. Hicks DE72 J.S. Wilkes

(Printed) J. Hicks J. Wilkes

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Vol. 624	Semivol. 625	624. HC 418.1	Coliform counts Subtg 4 ml			REMARKS
LANG-2-SW-7	6/17	1553				7	2	3	1	1			A TRIP BLANK WAS NOT INCLUDED WITH THIS DELIVERY. THERE WAS SIGNIFICANT HEADSPACE IN SEMI-VOLATILES & PETROLEUM HYDROCARBONS. AJS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
(Printed)			(Printed) Peggy S. Sherry	Cooler No. 20	Cooler Temp 1.0	

Peggy J. Sherry

D1-3

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

As, Ba, Cd, Cr, Pb, Hg, Se, Ag

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company		
DE072	Lincoln Engineering Science		
Samplers: (Signature)	(Printed)		
John K. Hicks	J. Hicks		
	J. Walters		

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Metals 3010/6010/7000	REMARKS
LANGB-2-SW-1	6/19	15:00			Old Oak Cr.	1	1	Metals need filtering + acid right away
LANGB-2-SW-2	6/19	15:30			Tributary	1	1	"
LANGB-2-SW-3	6/19	16:15			Old Oak Cr	1	1	"
LANGB-2-SW-7	6/19	16:30			Old Oak Cr	1	1	"
								FILTERING AND THE ADDITION OF HCl WAS COMPLETED BY 1900 DS 6/19/89

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Lisa A Korner	6/19/89	18:00					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Skelly	6/19/89	1810	
(Printed)			(Printed)	Cooler	Cooler	

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

CHAIN OF CUSTODY RECORD

Sulfate, Alkalinity, As, Ba, Cd, Cr, Pb, Hg, Se, F, Cl, NO_3, NO_2

Project Number	Project Name/Company
DE072	Lincoln Engineering Science

Samplers: (Signature)

(Printed) J. Hicks, J. Winters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Alkalinity SM 403/310.1	Sulfate SM 426C/375.4	Chloride SM 426C/325.3	Metals + Hardness - 6010/7000 series	Nitrates SM 418.1/353.2		REMARKS
LANGB-2-SD-1 DUP	6/19	15:00			Old Oak Cr.	4	1	1	1	1			BS. AS, BA, CD, CR, PB, HG, SE
~~LANGB-2-SD-2~~ LAB DUP	6				tributary								
LANGB-2-SD-3	6/19	17:00			Old Oak Cr	4	1	1	1	1			
LANGB-2-SD-7	6/19	17:30			Old Oak Cr	4	1	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Lisa A Kovner	6/19	18:00					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J Sherry	6/19/19	1310	
(Printed)			(Printed) PEGGY J. SHERRY	Cooler No. 17	Cooler Temp 2°C	

D1-5

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company
DE072	ES Lincoln

Samplers: (Signature) J. E. Walters (Printed) J. Walters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: EDB 624	Analysis Requested: volatile SW 8240	Analysis Requested: Lead	REMARKS
LANGB-2-SW-4	6/20/89	9:15				2 LAK / 2	2	LAK / 1		
LANGB-2-SD-4	6/20/89	9:30				1		1		
Trip Blank	6/20/89					2	2			
LANGB-2-SW-5	6/20/89	10:15				2	2	LAK / 1		
LANGB-2-SD-5	6/20/89	10:30				1		1		
LANGB-2-SW-6	6/20/89	11:15	20 LAK			2	2			
LANGB-2-SD-6	6/20/89	11:45				1		1		
LANGB-2-SW-8	6/20/89	11:55				2	2			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Shaw	6/20/89	1730					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/20/89	1800	
(Printed)			(Printed)	Cooler	Cooler	

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HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
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Lincoln, Nebraska 68501
(402) 475-5968

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company													
DE072	LINCOLN AIR NATIONAL GUARD / ENGINEERING SCIENCE													
Samplers: (Signature) James A. Short	(Printed) James A. Short JR													
								Analysis Requested						
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	VOLATILES SW8240F						REMARKS	
LANGB-6-B111-551	6-20	0900		✓	Site 6 2'-2.5'	1	1						Soil Undisturbed	
LANGB-6-B111-552	6-20	0930		✓	Site 6 6'-6.5'	1	1						Soil Undisturbed	
LANGB-6-B111-553	6-20	1000		✓	Site 6 10.5'-11.0'	1	1						Soil Undisturbed	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Short	6-20-89	1730					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/20/89	1800	
(Printed)			(Printed) PEGGY J. SHERRY	Cooler No: ES D-1	Cooler Temp	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company												
DE072	LANL8/Engineering-Science												
Samplers: (Signature) John R. Hicks	(Printed) John R. Hicks												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Volatile Organics EPA 624						REMARKS
LANL8-3-MW1-GW1	6/24/88	1310		X	Site 3	2	2						Groundwater

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
John R. Hicks	6/24/88	1330					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/24/88	1337	
(Printed)			(Printed)	Cool	oler	

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CHAIN OF CUSTODY RECORD

| Project Number | Project Name/Company | | |

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company													
PE072	Lincoln Air National Guard / Engineering - Science													
Samplers: (Signature) James A. Short JR / James E. Walters	(Printed) JAMES A. SHORT JR. JAMES E. WALTERS													
								Analysis Requested						
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Petroleum Hydrocarbons EPA 418.1	PCB's 8080	METALS 3010/3020 11010 / 7000	ANIONS SM4420				REMARKS
LANGB-4-BH3-SS1	6-20-89	1445	✓		Site 4	3	1	1	1					Soil Hand Auger
LANGB-4-BH3-SS2	6-20-89	1515	✓		Site 4	3	1	1	1					Soil Hand Auger
LANGB-4-BH4-SS1	6-20-89	1530	✓		Site 4	3	1	1	1					Soil Hand Auger
LANGB-4-BH2-SS1	6-20-89	1545	✓		Site 4	3	1	1	1					Soil Hand Auger
LANGB-4-BH2-SS2	6-20-89	1630	✓		Site 4	3	1	1	1					Soil Hand Auger
LANGB-4-BH1-SS1	6-20-89	1645	✓		Site 4	3	1	1	1					Soil Hand Auger
LANGB-4-BH1-SS2	6-20-89	1700	✓		Site 4	3	1	1	1					Soil Hand Auger

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Short JR	6-20-89						
(Printed) JAMES A SHORT JR			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy A. Reese	6/20/89	1800	
(Printed)			(Printed)			

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CHAIN OF CUSTODY RECORD

Project Number: DE072
Project Name/Company: ES Lincoln
Samplers: (Signature): James A. Shoaf
(Printed): J. Walters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Volatiles 8240	Semivol SW 8270	Pet HC 418.1	Metals 3050/6010 Anions SW4			REMARKS
LANGB-2-SD-4	6/28/89	9:30	X		Old Oak Cr.	3		1	1	1			

Analysis Requested: 7000 / 6000 As, Ba, Cd, Cr, Pb, Hg, Se, Ag
Anions: SO_4, Cl, F, NO_2, NO_3

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Shoaf	6/28/89	1730					
(Printed) James A. Shoaf Jr.			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/30/89	1500	
(Printed)			(Printed) PEGGY J. SHERRY	Cooler No. 2	Cooler Temp.	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company
DE072	ES Lincoln
Samplers: (Signature)	(Printed) J. Walters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: EPA 624 + 601, EPA 418.1	EPA 625 Screen	Metals 3010/3020, 6010/7000 (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	Anions SM4 4259 (Cl, F, NO2, SO4, NO3)			REMARKS
LANGB-2-SW-4	6/26/89	9:15			Old Oak Cr	6	1	3	1	1			Metals needs filtering + acid right away
LANGB-2-SW-5	6/26/89	10:15			Old Oak Cr.	6	1	3	1	1			11

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A Short	6-26-89	1730					
(Printed) James A. Short Jr			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
(Printed)			Peggy J. Sherry	6/26/89	1800	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company
DE073	ES / Lincoln

Samplers: (Signature) James E. Walls (Printed) J. Walters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Soil / Semivol. SW8270	Soil / Pest & PC 418.1	Soil / Metals Cations	Water / Semivol. EPA 625	Water / anions SM4A 429	Water / metals As Ba Cd Cr Pb Hg Se Ag	REMARKS
LANGB-2-SD-5	6/20/89	10:35			Old Oak Cr	3	1	1	1				
LANGB-2-SW-6	6/20/89	11:20			"	6		1		3	1	1*	* needs filtering right away + HCl
LANGB-2-SD-6	6/20/89	11:45			"	3	1	1	1				
LANGB-2-SW-8	6/20/89	11:55			"	6 4 LAK		1		2 LAK 3	Out of 1	1*	* "

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Ishut Jr	6-20-89	1730					
(Printed) James A. Ishut Jr			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/20/89	1800	
(Printed)			(Printed) PEGGY J. SHERRY	Cooler No:	Cooler Temp	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company													
D607 2	LINCOLN INTERNATIONAL/HARRIS ENGINEERING SCIENCE													
Samplers: (Signature)		(Printed) J WALTERS J SHORT												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	VOL + TCLP SW 8240 CAS						REMARKS	
LANGB-3-BH2-SS1	6-21-89	0830	TW	✓		1	✓						SOIL HAND AUGER	
LANGB-3-BH2-SS2	6-21-89	0915		✓		1	✓						SOIL HAND AUGER	
LANGB-3-BH4-SS1	6-21-89	0845		✓		1	✓						SOIL HAND AUGER	
LANGB-3-BH3-SS1	6-21-89	0945		✓		1	✓						SOIL HAND AUGER	
LANGB-3-BH3-SS2	6-21-89	1000		✓		1	✓						FIRST 3 - OMITTED FROM 10 CM SAMPLE BTS	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Jane E. Walter	6-21-89	1700					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/21/89	1415	
(Printed)			(Printed)			

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company						Analysis Requested						
DE072	LINCOLN AIR NATIONAL GUARD / Engineering-Science						Petroleum Hydrocarbons EPA 418.1	metals (SW 3010/3020; 6010/7000 series) Arsenic SW 7060 Lead 7421	Semi volatiles SW 8270				
Samplers: (Signature) James A. Short James E. Walters	(Printed) JAMES A. SHORT JR JAMES E. WALTERS												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers							REMARKS
LANGB-3-BH2-SS1	6-21-89	0830	✓		Site 3	3	1	1	1				Soil HAND AUGER
LANGB-3-BH2-SS2	6-21-89	0915	✓		Site 3	3	1	1	1				Soil HAND AUGER
LANGB-3-BH4-SS1	6-21-89	0845	✓		Site 3	3	1	1	1				Soil HAND AUGER
LANGB-3-BH3-SS1	6-21-89	0915	✓		Site 3	3	1	1	1				Soil HAND AUGER
LANGB-3-BH3-SS2	6-21-89	1000	✓		Site 3	3	1	1	1				FIRST 3 WAS LEFT OUT OF Soil HAND AUGER ID LIST, ON ALL THREE SAMPLE CONTAINERS P.I.S

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Short	6-21-89	1700					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/21/89	1415	
(Printed)			(Printed) PEGGY J. SHERRY	Cooler No. 111	Cooler Temp.	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company						Analysis Requested						
DE072	LANGB / Engineering-Science												
Samplers: (Signature) J. R. Hicks	(Printed) John R. Hicks												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Semi-Volatile Organics SW8270	Petroleum Hydrocarbons EPA 418.1	Metals SW 6010/7000	Common Anions SM4 426			REMARKS
LANGB-3-BH1-SS-1	6/21/89	1600	X		1.5'-6' depth	4	1	1	1	1			
LANGB-3-BH1-SS2	6/21/89	1630	X		6'-10.5' depth	4	1	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
John R. Hicks	6/21/89	1830					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/21/89	1830	
(Printed)			(Printed)			

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company												
DE072	LANGB / Engineering-Science												
Samplers: (Signature) John R. Hicks	(Printed) John R. Hicks												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Volatile Organics, SW8240						REMARKS
LANGB-3-BH1-SS-1	6/21/89	1600	X		1.5'-6' dry ft	1	1						
LANGB-3-BH1-SS-2	6/21/89	1630	X		6'-10.5' dry ft	1	1						
LANGB-3-BH1-SS-3	6/21/89	1700		X	11' dry ft	1	1						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
John R. Hicks	6/21/89	1830					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/21/89	1830	
(Printed)			(Printed) Peggy J. Sherry	Cooler No.	Cooler Temp.	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company						Analysis Requested						
DE022	Lincoln Air National Guard / Engineering-Science												
Samplers: (Signature) James A. Shot Jr, James E. Walters	(Printed) James A. Shot Jr, James E. Walters												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Petroleum Hydrocarbons EM18.1	Volatile Organics EPA 624	Amines SMA 429	Metals SW 3010/3020 Gold 7421	Semi Volatile Organics SMA 429		REMARKS
LANGB-1-MW0204-GW1	6-22	0700		✓	Site 1	5	1	2	1	1			Ground water
LANGB-1-MW0216-GW1	6-22	0730		✓	Site 1	5	1	2	1	1			Ground Water
LANGB-1-MW0214-GW1	6-22	0745		✓	Site 1	5	1	2	1	1			Ground water
LANGB-1-MW0210-GW1	6-22	1300		✓	Site 1	5	1	2	1	1			Ground Water
LANGB-1-FieldBlank	6-22	1415		✓	Site 1	8	1	2	1	1	3		Ground Water
													Metals need filtering + preserved w/ HNO3
													Petrol. Hydroc. preserved with H_2SO_4

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Shot	6-22-89	1730					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/23/89	1946	
(Printed)			(Printed)			

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0210
0204
0216
0214

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company
DE072	Lincoln Air National Guard / Engineering Science

Samplers: (Signature) James A. Short, James E. Walters
(Printed) James A. Short JR. James E. Walters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Petroleum Hydrocarbons E418.1	Volatile Organics EPA 624	Semi-Volatile Organics EPA 625	Amons SM4 429	Metals Sw 3010/3020/6010 7000		REMARKS
LANGB-1-MW0206-GW1	6-22	1415		✓	Site 1	8	1	2	3	1	1		Ground water
LANGB-1-MW0218-GW1	6-22	1430		✓	Site 2 RH 6-23-89	8	1	2	3	1	1		Ground waters CLIENT I.D. DISAGREES WITH LOCATION
LANGB-1-TripBlank	6-22	-		-	-	2		2					
													metals Needs Filtering &
													HNO3 preservation.
													Petrol. Hydroc. preserved
													with H_2SO_4.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Short	6-22-89	1730					
(Printed) JAMES A. SHORT JR			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/23/89	1946	
(Printed)			(Printed) PEGGY J. SHERRY	Cooler No: 10	Cooler Temp.	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company
DE072	Lincoln Air National Guard / Engineering-Science

Samplers: (Signature) James A. Short Jr / James E. Walters

(Printed) James A. Short Jr / James E. Walters

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Petroleum Hydrocarbons E418.1	Volatile Organics EPA 624	Sem. Volatile Organics EPA 625	Anions SM4-429	Metals SW 3510/3520; 6010 7000		REMARKS
LANGB-1-MW1203-GW1	6-22	1345		✓	Site 1	5	1	2		1	1		Ground water
LANGB-1-MW0209-GW1	6-22	1330		✓	Site 1	5	1	2		1	1		Ground water
LANGB-1-RinsateBlank	6-22	1630		✓	Site 1	8	1	2	3	1	1		Ground water
													metals need filtering &
													HNO_3 preservative
													Petrol. Hydroc. preserved
													with H_2SO_4

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Short	6-22-89	1730					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Reggy J. Sterry	6/23/89	1946	
(Printed)			(Printed)	Cooler	Cooler	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company						Analysis Requested						
DE072	Lincoln Air National Guard / Engineering-Science						Volatile Organics SW8260						
Samplers: (Signature) John R. Hicks	(Printed) John R. Hicks												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers							REMARKS
LANGB-5-BH1-SS1	6-23	1115		✓	Site 5	1	1						Brass Cylinder - So.1-In S.W
LANGB-5-BH1-SS2	6-23	1150		✓	Site 5	1	1						Brass Cylinder - So.1-In S.W

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Short Jr.	6-23-89	1700					
(Printed) James A. Short Jr.			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Kelly	6/23/89	1710	
(Printed)			(Printed) Peggy J. Sickel	Cooler No. 24	Cooler Temp. 4°C	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company												
DE072	LANGB/ Engineering - Science												
Samplers: (Signature)	(Printed)												
John R. Hicks	John R. Hicks												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Semivolatile organics SW 8270	Metals SW 6010/7000	Anions SM 4500	Petroleum hydrocarbons EPA 418.1			REMARKS
LANGB-S-BH1-SS-1	6/23/89	1115	X		Site S, 0'-3.5'	4'	1	1	1	1			
LANGB-S-BH1-SS-2 (TMS)	6/23/89	1150	X		Site S, 3.5'-9.5'	4'	1	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A Short	6-22-89	1700					
(Printed) James A Short JR			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/23/89	1710	
(Printed)			(Printed)	Cooler	Cooler	

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CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company											
DE072	Lincoln Air National Guard / Engineering - Science											
Samplers: (Signature) James A. Short Jr, James E. Walker	(Printed) James A. Short Jr, James E. Walker											

Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Petroleum Hydrocarbons E418.1	Arsenic SM4129	Metals; 6010/7000 Sw3010/3020/3040/3050	Semi Volatile Org. EDA 625	Volatile Organics EPA 624		REMARKS
LANGB-2-MW1-GW	6/23	0900		✓	Site 2	8	1	1	1	3	2		Ground water
LANGB-2-Rinsate Blank	6/23	0930		✓	Site 2	8	1	1	1	3	2		
Site 2 Trip Blank	6/23	-		-	Site 2	2					2		
													Petroleum Hydro. preserved
													with HCL.
													Metals Need Filtering and
													Preserved with HNO3

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Short	6-23-87	1700					
(Printed) James A. Short Jr.			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/23/87	1710	
(Printed)			(Printed) PEGGY J. SHERRY	Cooler No. 7	Cooler Temp 2.2°C	

D1-23

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company													
DE072	Lincoln Air National Guard / Engineering-Science.													
Samplers: (Signature) James A. Short / James E. Walkes	(Printed) James A. Short Jr. James E. Walkes													
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Petroleum Hydrocarbons EPA 418.1	Volatile Organics EPA 624	Semi Volatile Organics EPA 625	Metals 7000 Series 200.7/200.8/200.9	Anions SM4 429		REMARKS
LANGB-6-MW1-GW1	6-23	1630		✓	Site 6	7	1	2	3	1			GROUNDWATER
LANGB-6-TAP WATER	6-23	1330		✓	Site 6	8	1	2	3	1	1		TAP WATER USED AT SITE
													Petroleum Hydro. preserved with HCL.
													Metals need Filtering & preservative

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Short	6-23-89	1700					
(Printed) James A. Short JT.			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/23/89	1710	
(Printed)			(Printed)	Cool	ole	

D1-24

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company												
DE072	Lincoln Air National Guard / Engineering Science												
Samplers: (Signature) James A. Shart Jr. Rebecca Smith	(Printed) James A. Shart-Jr. Rebecca Smith												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Analysis Requested: Volatile organics EPA 624	Semi-volatile organics EPA 625	Metals (Ground Water Suite)	Arsenic SMA 4.2.9	Petroleum Hydrocarbons EPA 418.1		REMARKS
LANGB-5-MW1-GW	6-24	1220		✓	Site 5	8	2	3	1	1	1		Ground water
LANGB-5-Rinsate Blank	6-24	1300		✓	Site 5	8	2	3	1	1	1		Ground water.
LANGB-TRIP BLANK	6-24	-		✓	Site 5	2	2						
													Metals needs filtering & Preserv.
													Petrol-Hydro preserved with H_2SO_4

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
James A. Shart Jr.	6-24-89	1500					
(Printed) JAMES A. SHART JR.			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Sherry	6/24/89	1505	
(Printed)			(Printed) PEGGY J. SHERRY	Cooler No. 21	Cooler Temp 12.0°C	

HET

HARRIS ENVIRONMENTAL TECHNOLOGIES, INC.
627 Rose Street, P.O. Box 83408
Lincoln, Nebraska 68501
(402) 475-5968

CHAIN OF CUSTODY RECORD

Project Number	Project Name/Company						Analysis Requested						
DE072	LANGB / Engineering-Science												
Samplers: (Signature)	(Printed)												
John R. Hicks	John R. Hicks												
Sample Number	Date	Time	Comp	Grab	Sample Location/Description	No. of Containers	Semivolatile Organics EPA 625	Metals 6010/7000 Series 3010/3020/3050	Anions SM 4425	Petroleum Hydrocarbons EPA 418.1			REMARKS
LANGB-3-MW1-GW	6/26/89	1210		X	Site 3	6	3	1	1	1			Ground Water
													EPA 418.1 preserved w/ H_2SO_4
													Metals real filtering & preservation

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
John R. Hicks	6/26/89	1330					
(Printed)			(Printed)	(Printed)			(Printed)

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Results to:
			Peggy J. Terry	6/26/89	1337	
(Printed)			(Printed)	Cooler	Cooler	

APPENDIX D2

LABORATORY EQUIPMENT CALIBRATION RESULTS

HET STUDY: 51312
CLIENT: Engineering-Science, Inc.
METHOD: E.P.A. 418.1 Total Recoverable Petroleum Hydrocarbons

Analytical Rav Data

Data of Analysis: 6/30/89
Calibration Curve Used: 1
Sample Matrix: Water

HET Sample ID	Sample Volume (g)	ΔBS	Dilution Factor
6601	996.0	0.0179	1
6601	995.8	0.0057	1
6607	994.9	0.0086	1
6612	998.7	0.0145	1
6721	995.0	0.0083	1
6722	998.4	0.0086	1
6729	998.6	0.0089	1
6730	997.0	0.0063	1
6893	995.6	0.1063	10
6894	997.3	0.0446	10
6895	998.1	0.0023	1
6901	997.7	0.0075	1
6902	998.0	0.0070	1
6903	993.6	0.0065	1
6904	995.4	0.0219	1
6905	996.8	0.0074	1
6909	998.1	0.0084	1
6910	998.9	0.0668	1
6915	995.3	0.0084	1
6916	997.1	0.0085	1
6920	994.9	0.0203	1
6921	997.3	0.0084	1
6927	995.2	0.0072	1
6928	996.1	0.0069	1
6930	997.6	0.0061	1

HET STUDY: 51312
CLIENT: Engineering-Science, Inc.
METHOD: E.P.A. 418.1 Total Recoverable Petroleum Hydrocarbons

Analytical Raw Data

Data of Analysis: 6/30/89
Calibration Curve Used: 1
Sample Matrix: Soil/Sediment

HET Sample ID	Sample Volume (g)	ΔBS	Dilution Factor
6624	20.1425	0.1006	1
6625	20.2865	0.0758	1
6626	20.0370	0.1099	1
6699	20.0325	0.0188	1
6700	20.1648	0.0137	1
6701	20.0806	0.0704	1
6705	20.2722	0.0124	1
6706	19.8797	0.0168	1
6707	19.9609	0.0129	1
6708	20.0433	0.0167	1
6709	19.7339	0.0116	1
6710	19.9818	0.0426	1
6711	20.0256	0.0167	1
6713	20.4700	0.0203	1
6727	19.9087	0.0645	10
6728	20.0711	0.1229	1
6888	19.7910	0.0174	1
6889	20.0864	0.0237	1
6741	19.9112	0.0019	1
6742	20.2606	0.0262	1
6743	20.0846	0.195	1
6744	19.9371	0.0122	1
6745	20.0215	0.0106	1
6922	19.7100	0.0360	1
6923	19.7112	0.0229	1

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Water Samples

Analytical Raw Data
Element: Chloride (Cl)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Std. Curve Used
6603	1.68	1.68	286181	20	2
6604	1.69	1.68	553611	25	5
6609	1.68	1.68	364616	5	2
6613	1.68	1.68	345296	5	2
6719	1.68	1.68	218573	10	2
6720	1.67	1.68	156283	20	2
6735	1.68	1.68	369904	20	2
6893	1.73	1.70	273395	2	6
6894	1.72	1.70	141453	20	6
6895	N.D.*	1.70	N.D.*	1	1
6901	1.68	1.68	193267	20	2
6902	1.68	1.68	363579	20	2
6903	1.68	1.68	314307	20	2
6904	1.72	1.70	334707	20	6
6905	N.D.*	1.70	N.D.*	1	1
6909	1.68	1.68	401875	20	2
6910	1.68	1.68	385211	20	2
6916	1.68	1.68	136784	10	2
6920	1.69	1.68	200381	20	2
6921	N.D.*	1.68	N.D.*	1	1
6927	1.70	1.68	136173	20	2
6928	N.D.*	1.68	N.D.*	1	1
6930	1.70	1.68	421283	20	2

*N.D. = None Detected

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

Analytical Raw Data
Element: Chloride (Cl)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Initial Sample Weight or Volume (g)	Dry Wt (g)	Sample Volume (ml)	Std. Curve Used
6627	1.68	1.68	123104	2	3.00	1.62	30.0	4
6628	1.71	1.70	112429	2	3.00	1.52	30.0	4
6629	1.71	1.70	107797	2	3.00	1.52	30.0	4
6705	1.66	1.68	111223	1	3.00	2.62	30.0	3
6706	1.66	1.68	75775	1	3.00	2.48	30.0	3
6707	1.68	1.68	134309	1	3.00	2.49	30.0	3
6708	1.68	1.68	257600	1	3.00	2.61	30.0	3
6709	1.67	1.68	365405	1	3.00	2.32	30.0	3
6710	1.71	1.70	233747	2	3.00	2.58	30.0	4
6711		1.70		2	3.00	2.50	30.0	5
6714	1.72		106755	2	3.00	1.40	30.0	4
6731	1.68	1.68	262309	1	3.00	1.73	30.0	3
6732	1.72	1.68	219829	1	3.00	1.97	30.0	4
6741	1.68	1.68	194853	1	3.00	2.76	30.0	3
6742	1.68	1.68	160923	1	3.00	2.68	30.0	3
6743	1.68	1.68	134216	1	3.00	2.73	30.0	3
6744	1.68	1.68	327576	1	3.00	2.60	30.0	3
6745	1.68	1.68	42949	1	3.00	2.54	30.0	3
6888	1.68	1.68	399592	1	3.00	2.27	30.0	3
6889	1.72	1.68	179835	1	3.00	2.30	30.0	4
6922	1.68	1.68	203597	1	3.00	2.46	30.0	3
6923	1.68	1.68	260232	1	3.00	2.39	30.0	3

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Water Samples

Analytical Raw Data
Element: Fluoride (F)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Std. Curve Used
6603	1.31	1.33	113429	1	1
6604	1.30	1.33	191344	1	1
6609	1.31	1.33	55223	1	1
6613	1.32	1.33	54811	1	1
6719	1.29	1.33	56787	1	1
6720	1.31	1.33	88603	1	1
6735	1.28	1.33	69808	1	1
6893	1.36	1.35	39101	1	6
6894	1.29	1.35	162019	1	6
6895	N.D.*	1.33	N.D.*	1	1
6901	1.26	1.33	72616	1	1
6902	1.26	1.33	83155	1	1
6903	1.26	1.33	80677	1	1
6904	1.30	1.35	79989	1	6
6905	N.D.*	1.33	N.D.*	1	7
6909	1.27	1.33	78032	1	7
6910	1.27	1.33	79445	1	7
6916	1.31	1.33	106184	1	7
6920	1.27	1.33	73957	1	7
6921	N.D.*	1.33	N.D.*	1	7
6927	1.25	1.33	158536	1	7
6928	N.D.*	1.33	N.D.*	1	7
6930	1.26	1.33	111317	1	6

*N.D. = None Detected

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

Analytical Raw Data
Element: Fluoride (F)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Initial Sample Weight or Volume (g)	Dry Wt (g)	Sample Volume (ml)	Std. Curve Used
6627	1.33	1.33	133493	1	3.00	1.62	30.0	3
6628	1.33	1.33	109680	1	3.00	1.52	30.0	3
6629	1.31	1.33	89521	1	3.00	1.52	30.0	3
6705	1.31	1.33	403507	1	3.00	2.62	30.0	3
6706	1.31	1.33	153268	1	3.00	2.48	30.0	3
6707	1.34	1.33	312731	1	3.00	2.49	30.0	3
6708	1.33	1.33	264795	1	3.00	2.61	30.0	3
6709	1.34	1.33	335013	1	3.00	2.32	30.0	3
6710	1.34	1.33	613981	1	3.00	2.58	30.0	3
6711	1.33	1.33	294568	1	3.00	2.50	30.0	3
6714	1.33	1.33	119851	1	3.00	1.40	30.0	3
6731	1.34	1.33	120080	1	3.00	1.73	30.0	3
6732	1.31	1.33	11612	1	3.00	1.97	30.0	3
6741	1.34	1.33	289133	1	3.00	2.76	30.0	3
6742	1.34	1.33	394416	1	3.00	2.68	30.0	3
6743	1.34	1.33	179515	1	3.00	2.73	30.0	3
6744	1.34	1.33	269704	1	3.00	2.60	30.0	3
6745	1.33	1.33	174683	1	3.00	2.54	30.0	3
6888	1.35	1.33	473896	1	3.00	2.27	30.0	3
6889	1.35	1.33	420405	1	3.00	2.30	30.0	3
6922	1.34	1.33	286928	1	3.00	2.46	30.0	3
6923	1.34	1.33	420949	1	3.00	2.39	30.0	3

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Water Samples

Analytical Raw Data
Element: Nitrate (NO_3)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Std. Curve Used
6603	3.06	3.08	9297	1	7
6604	2.93	3.00	N.D.*	1	1
6609	N.D.*	3.08	N.D.*	1	7
6613	3.06	3.08	3578	1	7
6719	3.14	3.00	5881	1	1
6720	3.07	3.00	69341	1	1
6735	3.09	3.00	61987	1	1
6893	N.D.*	3.08	N.D.*	1	7
6894	3.01	3.00	4921	1	7
6895	N.D.*	3.08	N.D.*	1	7
6901	3.13	3.00	44394	1	1
6902	2.96	2.92	13517	20	7
6903	3.07	3.00	137340	1	1
6904	3.00	3.00	24985	20	6
6905	N.D.*	3.08	N.D.*	1	7
6909	3.05	3.00	233259	1	1
6910	3.05	3.00	230347	1	1
6916	3.10	3.00	59073	1	1
6920	3.01	2.92	23886	20	2
6921	N.D.*	3.08	N.D.*	1	7
6927	2.81	3.00	36837	1	1
6928	N.D.*	3.08	N.D.*	1	7
6930	3.10	3.00	135069	1	1

*N.D. = None Detected

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

Analytical Raw Data
Element: Nitrate (NO_3)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Initial Sample Weight or Volume (g)	Dry Wt (g)	Sample Volume (ml)	Std. Curve Used
6627	N.D.*	2.95	N.D.*	1	3.00	1.62	30.0	3
6628	N.D.*	2.95	N.D.*	1	3.00	1.52	30.0	3
6629	N.D.*	2.95	N.D.*	1	3.00	1.52	30.0	3
6705	2.96	2.95	34956	1	3.00	2.62	30.0	3
6706	2.96	2.95	24049	1	3.00	2.48	30.0	3
6707	2.96	2.95	23803	1	3.00	2.49	30.0	3
6708	3.00	3.00	148021	2	3.00	2.61	30.0	4
6709	3.00	3.00	147761	2	3.00	2.32	30.0	4
6710	3.05	3.00	43241	2	3.00	2.58	30.0	4
6711	3.04	3.00	71971	1	3.00	2.50	30.0	4
6714	N.D.*	2.95	N.D.*	1	3.00	1.40	30.0	3
6731	N.D.*	2.95	N.D.*	1	3.00	1.73	30.0	3
6732	N.D.*	2.95	N.D.*	1	3.00	1.97	30.0	3
6741	2.93	2.95	81300	1	3.00	2.76	30.0	3
6742	2.94	2.95	12252	1	3.00	2.68	30.0	3
6743	2.91	2.95	98960	1	3.00	2.73	30.0	3
6744	2.98	3.00	237773	1	3.00	2.60	30.0	4
6745	2.93	2.95	56761	1	3.00	2.54	30.0	3
6888	3.00	3.00	187480	1	3.00	2.27	30.0	4
6889	2.92	2.95	100111	1	3.00	2.30	30.0	3
6922	2.87	2.95	355017	1	3.00	2.46	30.0	3
6923	N.D.*	2.95	N.D.*	1	3.00	2.39	30.0	3

*N.D. = None Detected

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Water Samples

Analytical Raw Data
Element: Nitrite (NO_2)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Std. Curve Used
6603	N.D.*	1.95	N.D.*	1	1
6604	N.D.*	1.95	N.D.*	1	1
6609	N.D.*	1.95	N.D.*	1	1
6613	N.D.*	1.95	N.D.*	1	1
6719	N.D.*	1.95	N.D.*	1	1
6720	N.D.*	1.95	N.D.*	1	1
6735	N.D.*	1.95	N.D.*	1	1
6893	N.D.*	1.95	N.D.*	1	6
6894	N.D.*	1.95	N.D.*	1	6
6895	N.D.*	1.95	N.D.*	1	1
6901	N.D.*	1.95	N.D.*	1	1
6902	N.D.*	1.95	N.D.*	1	1
6903	N.D.*	1.95	N.D.*	1	1
6904	N.D.*	1.95	N.D.*	1	6
6905	N.D.*	1.95	N.D.*	1	1
6909	N.D.*	1.95	N.D.*	1	1
6910	N.D.*	1.95	N.D.*	1	1
6916	N.D.*	1.95	N.D.*	1	1
6920	N.D.*	1.95	N.D.*	1	1
6921	N.D.*	1.95	N.D.*	1	1
6927	N.D.*	1.95	N.D.*	1	1
6928	N.D.*	1.95	N.D.*	1	1
6930	N.D.*	1.95	N.D.*	1	1

*N.D. = None Detected

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

Analytical Raw Data
Element: Nitrite (NO_2)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Initial Sample Weight or Volume (g)	Dry Wt (g)	Sample Volume (ml)	Std. Curve Used
6627	N.D.*	1.91	N.D.*	1	3.00	1.62	30.0	3
6628	N.D.*	1.91	N.D.*	1	3.00	1.52	30.0	3
6629	N.D.*	1.91	N.D.*	1	3.00	1.52	30.0	3
6705	N.D.*	1.91	N.D.*	1	3.00	2.62	30.0	3
6706	N.D.*	1.91	N.D.*	1	3.00	2.48	30.0	3
6707	N.D.*	1.91	N.D.*	1	3.00	2.49	30.0	3
6708	N.D.*	1.91	N.D.*	1	3.00	2.61	30.0	3
6709	N.D.*	1.91	N.D.*	1	3.00	2.32	30.0	3
6710	N.D.*	1.91	N.D.*	1	3.00	2.58	30.0	3
6711	N.D.*	1.91	N.D.*	1	3.00	2.50	30.0	3
6714	N.D.*	1.91	N.D.*	1	3.00	1.40	30.0	3
6731	N.D.*	1.91	N.D.*	1	3.00	1.73	30.0	3
6732	N.D.*	1.91	N.D.*	1	3.00	1.97	30.0	3
6741	1.90	1.91	22992	1	3.00	2.76	30.0	3
6742	N.D.*	1.91	N.D.*	1	3.00	2.68	30.0	3
6743	N.D.*	1.91	N.D.*	1	3.00	2.73	30.0	3
6744	N.D.*	1.91	N.D.*	1	3.00	2.60	30.0	3
6745	N.D.*	1.91	N.D.*	1	3.00	2.54	30.0	3
6888	1.90	1.91	28136	1	3.00	2.27	30.0	3
6889	1.91	1.91	19675	1	3.00	2.30	30.0	3
6922	1.91	1.91	43077	1	3.00	2.46	30.0	3
6923	N.D.*	1.91	N.D.*	1	3.00	2.39	30.0	3

*N.D. = None Detected

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Water Samples

Analytical Raw Data
Element: Sulfate (SO_4)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Std. Curve Used
6603	5.31	5.30	94179	20	2
6604	5.31	5.30	150087	20	2
6609	5.24	5.30	399771	1	1
6613	5.24	5.30	401214	1	1
6719	5.31	5.30	96258	10	2
6720	5.28	5.30	175188	20	2
6735	5.28	5.30	426565	1	1
6893	5.12	5.05	22589	1	6
6894	5.10	5.05	276268	1	6
6895	N.D.*	5.30	N.D.*	1	1
6901	5.31	5.30	133656	5	2
6902	5.31	5.30	50421	20	2
6903	5.31	5.30	64897	20	2
6904	5.12	5.05	45812	20	6
6905	N.D.*	5.30	N.D.*	1	7
6909	5.31	5.30	71945	20	2
6910	5.31	5.30	70771	20	2
6916	5.28	5.30	209758	10	2
6920	5.31	5.30	41349	20	2
6921	N.D.*	5.30	N.D.*	1	1
6927	5.31	5.30	58840	20	2
6928	N.D.*	5.30	N.D.*	1	7
6930	5.28	5.30	62803	20	2

*N.D. = None Detected

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

Analytical Raw Data
Element: Sulfate (SO_4)

HET Sample Code	Sample Rt. Min.	Std. Rt. Min.	Area	Dil. Factor	Initial Sample Weight or Volume (g)	Dry Wt (g)	Sample Volume (ml)	Std. Curve Used
6627	5.05	5.06	252207	2	3.00	1.62	30.0	4
6628	5.01	5.06	526189	2	3.00	1.52	30.0	4
6629	5.06	5.06	205298	2	3.00	1.52	30.0	4
6705	5.04	5.06	124944	1	3.00	2.62	30.0	6
6706	5.08	5.06	176729	1	3.00	2.48	30.0	3
6707	5.04	5.06	102129	1	3.00	2.49	30.0	4
6708	5.04	5.06	113132	2	3.00	2.61	30.0	4
6709	5.04	5.06	135070	2	3.00	2.32	30.0	4
6710	5.02	5.06	382934	2	3.00	2.58	30.0	4
6711	5.04	5.06	151732	1	3.00	2.50	30.0	4
6714	5.02	5.06	444072	2	3.00	1.40	30.0	4
6731	5.04	5.06	202810	2	3.00	1.73	30.0	4
6732	5.04	5.06	354597	1	3.00	1.97	30.0	4
6741	5.07	5.06	164151	1	3.00	2.76	30.0	3
6742	5.06	5.06	203457	1	3.00	2.68	30.0	4
6743	5.03	5.06	78548	1	3.00	2.73	30.0	3
6744	5.07	5.06	287101	1	3.00	2.60	30.0	3
6745	5.07	5.06	49412	1	3.00	2.54	30.0	3
6888	5.05	5.06	293533	1	3.00	2.27	30.0	4
6889	5.06	5.06	232561	1	3.00	2.30	30.0	4
6922	5.06	5.06	219599	1	3.00	2.46	30.0	4
6923	5.10	5.06	221276	1	3.00	2.39	30.0	3

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429 & 375.2

CALIBRATION CURVE

Curve No.: 1
Date: 6/27/89

Fluoride (F)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	23899	70176	320744	694472	1030381

Corr. Coef.: .9998

Chloride (Cl)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	20713	41472	153712	329464	491048

Corr. Coef.: .9996

Nitrite (NO_2)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	974.1	24419	92707	197192	298696

Corr. Coef.: .9997

Nitrate (NO_3)

Concentration mg/L	0.25	0.50	2.5	5.0	10.0
Response	5207	12232	62885	131639	268356

Corr. Coef.: .9999

Sulfate (SO_4)

Concentration mg/L	0.5	1.0	5.0	15.0	25.0
Response	8491	18292	96333	321747	564835

Corr. Coef.: .9994

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429 & 375.2

CALIBRATION CURVE

Curve No.: 2
Date: 6/27/89

Fluoride (F)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	25320	73251	332005	714789	1057259

Corr. Coef.: .9998

Chloride (Cl)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	28624	41715	156328	344539	501899

Corr. Coef.: .9990

Nitrite (NO_2)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	10091	25203	97072	210168	312507

Corr. Coef.: .9997

Nitrate (NO_3)

Concentration mg/L	0.25	0.5	2.5	5.0	10.0
Response	5884	13489	68257	143055	294160

Corr. Coef.: .9998

Sulfate (SO_4)

Concentration mg/L	0.5	1.0	5.0	15.0	25.0
Response	8700	17905	99443	330245	577966

Corr. Coef.: .9995

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429 & 375.2

CALIBRATION CURVE

Curve No.: 3
Date: 6/29/89

Fluoride (F)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	10576	41805	187725	440555	977437

Corr. Coef.: .9994

Chloride (Cl)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	16419	64163	127933	239005	471008

Corr. Coef.: .9987

Nitrite (NO_2)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	25795	31683	77309	151901	292765

Corr. Coef.: .9996

Nitrate (NO_3)

Concentration mg/L	0.25	0.5	2.5	5.0	10.0
Response	7019	19567	41245	83076	206237

Corr. Coef.: .9999

Sulfate (SO_4)

Concentration mg/L	0.5	1.0	5.0	15.0	25.0
Response	5229	29390	60373	118039	31156

Corr. Coef.: .9998

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429 & 375.2

CALIBRATION CURVE

Curve No.: 4
Date: 6/30/89

Fluoride (F)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	19080	65000	312275	691744	1019275

Corr. Coef.: .9996

Chloride (Cl)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	21051	41464	152163	337131	504957

Corr. Coef.: .9993

Nitrite (NO_2)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	9921	24315	94533	201211	306157

Corr. Coef.: .9997

Nitrate (NO_3)

Concentration mg/L	0.25	0.5	2.5	5.0	10.0
Response	5097	11635	65019	135941	279880

Corr. Coef.: .9999

Sulfate (SO_4)

Concentration mg/L	0.5	1.0	5.0	15.0	25.0
Response	8772	18912	100566	343527	603023

Corr. Coef.: .9993

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429 & 375.2

CALIBRATION CURVE

Curve No.: 5
Date: 7/6/89

Fluoride (F)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	20123	66595	322072	700976	1044917

Corr. Coef.: .9998

Chloride (Cl)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	21549	41536	162779	344365	517456

Corr. Coef.: .9997

Nitrite (NO_2)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	10328	25173	96835	205808	312493

Corr. Coef.: .9997

Nitrate (NO_3)

Concentration mg/L	0.25	0.5	2.5	5.0	10.0
Response	5952	13565	68969	142681	291855

Corr. Coef.: .9999

Sulfate (SO_4)

Concentration mg/L	0.5	1.0	5.0	15.0	25.0
Response	8950	19610	105959	354377	621229

Corr. Coef.: .9995

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429 & 375.2

CALIBRATION CURVE

Curve No.: 6
Date: 7/5/89

Fluoride (F)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	18829	66592	321203	703291	1052784

Corr. Coef.: .9998

Chloride (Cl)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	20124	40565	157453	339491	519755

Corr. Coef.: .9994

Nitrite (NO_2)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	10229	25320	96491	205493	311365

Corr. Coef.: .9997

Nitrate (NO_3)

Concentration mg/L	0.25	0.5	2.5	5.0	10.0
Response	5696	12428	68087	142284	291564

Corr. Coef.: .9999

Sulfate (SO_4)

Concentration mg/L	0.5	1.0	5.0	15.0	25.0
Response	8874	19686	104850	352942	620569

Corr. Coef.: .9994

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429 & 375.2

CALIBRATION CURVE

Curve No.: 7
Date: 7/7/89

Fluoride (F)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	30019	73563	195664	445059	983896

Corr. Coef.: .9989

Chloride (Cl)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	25560	92493	122117	237325	501563

Corr. Coef.: .9944

Nitrite (NO_2)

Concentration mg/L	0.2	0.5	2.0	4.0	6.0
Response	12315	42611	77248	151909	304984

Corr. Coef.: .9988

Nitrate (NO_3)

Concentration mg/L	0.25	0.5	2.5	5.0	10.0
Response	7015	20545	42104	84667	210815

Corr. Coef.: .9999

Sulfate (SO_4)

Concentration mg/L	0.5	1.0	5.0	15.0	25.0
Response	5509	30148	60560	123940	321193

Corr. Coef.: .9999

Calibration Check Report

Title: CLP 624 BTX ID FILE WITH %REC
Calibrated: 890616 15:56

Check Standard Data File: >A1571
Injection Time: 890619 21:47

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
Chloromethane	1.33476	1.18073	11.54	Average	
Bromomethane	.66681	.66788	.16	Average	
Vinyl Chloride	.81186	.94360	16.23	Average	
Chloroethane	.52229	.52602	.71	Average	
Methylene Chloride	.97652	.84038	13.94	Average	
Acetone	.55161	.63003	14.22	Average	
Carbon Disulfide	4.10124	3.37196	17.78	Average	
Trichlorofluoromethane	2.25540	2.00670	11.03	Average	
1,1-Dichloroethene	1.11714	.96402	13.71	Average	
1,1-Dichloroethane	2.49501	2.04789	17.92	Average	
1,2-Dichloroethene (total)	1.25058	1.08131	13.53	Average	
Chloroform	2.47579	2.12677	14.10	Average	
1,2-Dichloroethane-d4	1.45985	1.28378	12.06	Average	(Conc=50.00)
1,2-Dichloroethane-d4 (%)	.72993	.64189	12.06	Average	(Conc=100.00)
1,2-Dichloroethane	1.64962	1.44062	12.67	Average	
2-Butanone	.68158	.61489	9.79	Average	
1,1,1-Trichloroethane	1.90236	1.65261	13.13	Average	
Carbon Tetrachloride	1.99408	1.83414	8.02	Average	
Vinyl Acetate	2.83708	2.46082	13.26	Average	
Bromodichloromethane	2.82011	2.41315	14.25	Average	
1,2-Dichloropropane	.55604	.48431	12.90	Average	
cis-1,3-Dichloropropene	.71092	.63563	10.59	Average	(Conc=64.00)
Trichloroethene	.52129	.52794	1.28	Average	
Dibromochloromethane	.79452	.82994	4.46	Average	
1,1,2-Trichloroethane	.39169	.37726	3.68	Average	
Benzene	1.04995	.98182	6.49	Average	
trans-1,3-Dichloropropene	.57204	.53702	6.12	Average	(Conc=36.00)
2-Chloroethylvinyl ether	.03959	.03575	9.70	Average	
Bromoform	.88080	.98973	12.37	Average	
4-Methyl-2-Pentanone	.50708	.43951	13.32	Average	
2-Hexanone	.43323	.43376	.12	Average	
Tetrachloroethene	.62896	.69217	10.05	Average	
1,1,2,2-Tetrachloroethane	.84215	.78442	6.86	Average	
Toluene	.73429	.64972	11.52	Average	
Toluene-d8	1.09710	1.04380	4.86	Average	(Conc=50.00)
Toluene-d8 (%)	.54855	.52190	4.86	Average	(Conc=100.00)
Chlorobenzene	.94145	.87413	7.15	Average	
Ethylbenzene	.42956	.39592	7.83	Average	
Styrene	.94125	.85574	9.09	Average	
Xylene (total)	.54608	.49488	9.38	Average	

- Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration

%Diff - % Difference from original average or curve

Calibration Check Report

Title: CLP 624 BTX ID FILE WITH %REC
Calibrated: 890616 15:56

Check Standard Data File: >A1571
Injection Time: 890619 21:47

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
romofluorobenzene	1.04619	1.06282	1.59	Average	(Conc=50.00)
Bromofluorobenzene (%)	.52310	.53141	1.59	Average	(Conc=100.00)
,4-Dichlorobenzene	-	-	-	Average	

- Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration

iff - % Difference from original average or curve

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7001VO Calibration Date: 6/20/89 Time: 15:33

Lab File ID: A1583 Init. Calib. Date(s): 6/16/89 6/16/89

Matrix:(soil/water) SOIL Level:(low/med): LOW Column:(pack/cap) PA

Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*)

COMPOUND	RRF	RRF50	%D	
Chloromethane	1.335	1.200	10.1	#
Bromomethane	.667	.582	12.7	
Vinyl Chloride	.812	.874	7.6	*
Chloroethane	.522	.492	5.8	
Methylene Chloride	.977	.771	21.0	
Acetone	.552	.633	14.7	
Carbon Disulfide	4.101	3.804	7.3	
1,1-Dichloroethene	1.117	1.059	5.2	*
1,1-Dichloroethane	2.495	2.284	8.5	#
1,2-Dichloroethene (total)	1.251	1.156	7.6	
Chloroform	2.476	2.328	6.0	*
1,2-Dichloroethane	1.650	1.527	7.4	
2-Butanone	.682	.617	9.4	
1,1,1-Trichloroethane	1.902	1.769	7.0	
Carbon Tetrachloride	1.994	1.936	2.9	
Vinyl Acetate	2.837	2.616	7.8	
Bromodichloromethane	2.820	2.605	7.6	
1,2-Dichloropropane	.556	.527	5.2	*
cis-1,3-Dichloropropene	.910	.881	3.2	
Trichloroethene	.521	.557	6.8	
Dibromochloromethane	.795	.865	8.8	
1,1,2-Trichloroethane	.392	.397	1.4	
Benzene	1.050	1.015	3.3	
trans-1,3-Dichloropropene	.412	.406	1.3	
Bromoform	.881	.974	10.6	#
4-Methyl-2-Pentanone	.507	.463	8.7	
2-Hexanone	.433	.438	1.2	
Tetrachloroethene	.629	.714	13.5	
1,1,2,2-Tetrachloroethane	.842	.831	1.3	#
Toluene	.734	.718	2.2	*
Chlorobenzene	.941	.939	.2	#
Ethylbenzene	.430	.417	2.8	*
Styrene	.941	.929	1.3	
Xylene (total)	.546	.543	.5	
Toluene-d8	1.097	1.075	2.0	
Bromofluorobenzene	1.046	1.063	1.6	
1,2-Dichloroethane-d4	1.460	1.293	11.4	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Instrument ID: 7001VO Calibration Date: 6/21/89 Time: 16:01

Lab File ID: A1599 Init. Calib. Date(s): 6/16/89 6/16/89

Matrix:(soil/water) SOIL Level:(low/med): LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*) is 3

COMPOUND	RRF	RRF50	%D	
Chloromethane	1.335	1.121	16.0	#
Bromomethane	.667	.570	14.5	
Vinyl Chloride	.812	.850	4.7	*
Chloroethane	.522	.484	7.3	
Methylene Chloride	.977	.874	10.5	
Acetone	.552	.603	9.3	
Carbon Disulfide	4.101	3.773	8.0	
1,1-Dichloroethene	1.117	1.066	4.6	*
1,1-Dichloroethane	2.495	2.286	8.4	#
1,2-Dichloroethene (total)	1.251	1.158	7.4	
Chloroform	2.476	2.321	6.2	*
1,2-Dichloroethane	1.650	1.509	8.5	
2-Butanone	.682	.633	7.1	
1,1,1-Trichloroethane	1.902	1.779	6.5	
Carbon Tetrachloride	1.994	1.890	5.2	
Vinyl Acetate	2.837	2.650	6.6	
Bromodichloromethane	2.820	2.612	7.4	
1,2-Dichloropropane	.556	.513	7.7	*
cis-1,3-Dichloropropene	.910	.867	4.8	
Trichloroethene	.521	.545	4.6	
Dibromochloromethane	.795	.848	6.8	
1,1,2-Trichloroethane	.392	.394	.5	
Benzene	1.050	1.051	.1	
trans-1,3-Dichloropropene	.412	.405	1.7	
Bromoform	.881	.920	4.4	#
4-Methyl-2-Pentanone	.507	.451	11.0	
2-Hexanone	.433	.446	2.9	
Tetrachloroethene	.629	.686	9.1	
1,1,2,2-Tetrachloroethane	.842	.815	3.2	#
Toluene	.734	.712	3.1	*
Chlorobenzene	.941	.944	.2	#
Ethylbenzene	.430	.423	1.5	*
Styrene	.941	.908	3.5	
Xylene (total)	.546	.532	2.6	
Toluene-d8	1.097	1.038	5.4	
Bromofluorobenzene	1.046	1.004	4.0	
1,2-Dichloroethane-d4	1.460	1.220	16.4	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Instrument ID: 7001VO Calibration Date: 6/22/89 Time: 17:22

Lab File ID: A1612 Init. Calib. Date(s): 6/16/89 6/16/89

Matrix:(soil/water) SOIL Level:(low/med): LOW Column:(pack/cap) PAC

Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*

COMPOUND	RRF	RRF50	%D	
Chloromethane	1.335	1.107	17.0	#
Bromomethane	.667	.588	11.9	
Vinyl Chloride	.812	.872	7.4	*
Chloroethane	.522	.502	3.8	
Methylene Chloride	.977	.826	15.4	
Acetone	.552	.597	8.2	
Carbon Disulfide	4.101	3.764	8.2	
1,1-Dichloroethene	1.117	1.064	4.7	*
1,1-Dichloroethane	2.495	2.309	7.4	#
1,2-Dichloroethene (total)	1.251	1.181	5.6	
Chloroform	2.476	2.321	6.2	*
1,2-Dichloroethane	1.650	1.515	8.2	
2-Butanone	.682	.669	1.8	
1,1,1-Trichloroethane	1.902	1.807	5.0	
Carbon Tetrachloride	1.994	1.923	3.6	
Vinyl Acetate	2.837	2.522	11.1	
Bromodichloromethane	2.820	2.635	6.6	
1,2-Dichloropropane	.556	.515	7.4	*
cis-1,3-Dichloropropene	.910	.862	5.3	
Trichloroethene	.521	.547	4.9	
Dibromochloromethane	.795	.818	2.9	
1,1,2-Trichloroethane	.392	.390	.5	
Benzene	1.050	1.015	3.4	
trans-1,3-Dichloropropene	.412	.394	4.5	
Bromoform	.881	.902	2.4	#
4-Methyl-2-Pentanone	.507	.442	12.8	
2-Hexanone	.433	.440	1.6	
Tetrachloroethene	.629	.655	4.2	
1,1,2,2-Tetrachloroethane	.842	.778	7.6	#
Toluene	.734	.690	6.0	*
Chlorobenzene	.941	.923	1.9	#
Ethylbenzene	.430	.425	1.1	*
Styrene	.941	.908	3.5	
Xylene (total)	.546	.527	3.4	
Toluene-d8	1.097	1.029	6.2	
Bromofluorobenzene	1.046	.974	6.9	
1,2-Dichloroethane-d4	1.460	1.238	15.2	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 4

Instrument ID: 7001VO Calibration Date: 6/23/89 Time: 17:07

Lab File ID: A1627 Init. Calib. Date(s): 6/16/89 6/16/89

Matrix:(soil/water) SOIL Level:(low/med): LOW Column:(pack/cap) PAC

Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*)

COMPOUND	RRF	RRF50	%D	
Chloromethane	1.335	1.063	20.4	#
Bromomethane	.667	.570	14.5	
Vinyl Chloride	.812	.842	3.8	*
Chloroethane	.522	.474	9.3	
Methylene Chloride	.977	.761	22.1	
Acetone	.552	.553	.2	
Carbon Disulfide	4.101	3.607	12.1	
1,1-Dichloroethene	1.117	1.039	7.0	*
1,1-Dichloroethane	2.495	2.222	10.9	#
1,2-Dichloroethene (total)	1.251	1.155	7.6	
Chloroform	2.476	2.217	10.5	*
1,2-Dichloroethane	1.650	1.456	11.7	
2-Butanone	.682	.541	20.7	
1,1,1-Trichloroethane	1.902	1.722	9.5	
Carbon Tetrachloride	1.994	1.865	6.5	
Vinyl Acetate	2.837	2.469	13.0	
Bromodichloromethane	2.820	2.538	10.0	
1,2-Dichloropropane	.556	.500	10.0	*
cis-1,3-Dichloropropene	.910	.849	6.6	
Trichloroethene	.521	.550	5.6	
Dibromochloromethane	.795	.836	5.3	
1,1,2-Trichloroethane	.392	.388	.8	
Benzene	1.050	.981	6.5	
trans-1,3-Dichloropropene	.412	.395	4.1	
Bromoform	.881	.947	7.6	#
4-Methyl-2-Pentanone	.507	.426	15.9	
2-Hexanone	.433	.391	9.8	
Tetrachloroethene	.629	.672	6.8	
1,1,2,2-Tetrachloroethane	.842	.777	7.8	#
Toluene	.734	.694	5.5	*
Chlorobenzene	.941	.935	.7	#
Ethylbenzene	.430	.419	2.5	*
Styrene	.941	.900	4.4	
Xylene (total)	.546	.527	3.4	
Toluene-d8	1.097	1.025	6.6	
Bromofluorobenzene	1.046	.986	5.8	
1,2-Dichloroethane-d4	1.460	1.197	18.0	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Instrument ID: 7001VO Calibration Date: 6/24/89 Time: 16:44

Lab File ID: A1644 Init. Calib. Date(s): 6/16/89 6/16/89

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PA

Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*)

COMPOUND	RRF	RRF50	%D	
Chloromethane	1.335	1.095	17.9	#
Bromomethane	.667	.598	10.4	
Vinyl Chloride	.812	.848	4.4	*
Chloroethane	.522	.469	10.3	
Methylene Chloride	.977	.714	26.9	
Acetone	.552	.537	2.6	
Carbon Disulfide	4.101	3.688	10.1	
1,1-Dichloroethene	1.117	1.065	4.7	*
1,1-Dichloroethane	2.495	2.258	9.5	#
1,2-Dichloroethene (total)	1.251	1.150	8.0	
Chloroform	2.476	2.288	7.6	*
1,2-Dichloroethane	1.650	1.476	10.6	
2-Butanone	.682	.534	21.7	
1,1,1-Trichloroethane	1.902	1.775	6.7	
Carbon Tetrachloride	1.994	1.878	5.8	
Vinyl Acetate	2.837	2.498	12.0	
Bromodichloromethane	2.820	2.581	8.5	
1,2-Dichloropropane	.556	.499	10.2	*
cis-1,3-Dichloropropene	.910	.847	6.9	
Trichloroethene	.521	.544	4.3	
Dibromochloromethane	.795	.827	4.0	
1,1,2-Trichloroethane	.392	.384	1.9	
Benzene	1.050	.959	8.6	
trans-1,3-Dichloropropene	.412	.390	5.2	
Bromoform	.881	.901	2.3	#
4-Methyl-2-Pentanone	.507	.414	18.4	
2-Hexanone	.433	.390	9.9	
Tetrachloroethene	.629	.675	7.4	
1,1,2,2-Tetrachloroethane	.842	.762	9.5	#
Toluene	.734	.683	7.0	*
Chlorobenzene	.941	.925	1.7	#
Ethylbenzene	.430	.416	3.1	*
Styrene	.941	.890	5.4	
Xylene (total)	.546	.523	4.2	
Toluene-d8	1.097	1.026	6.4	
Bromofluorobenzene	1.046	.984	5.9	
1,2-Dichloroethane-d4	1.460	1.210	17.1	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Instrument ID: 7001VO Calibration Date: 6/26/89 Time: 6:46

Lab File ID: A1659 Init. Calib. Date(s): 6/16/89 6/16/89

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*) is

COMPOUND	RRF	RRF50	%D	
Chloromethane	1.335	1.216	8.9	#
Bromomethane	.667	.651	2.3	
Vinyl Chloride	.812	.901	11.0	*
Chloroethane	.522	.518	.9	
Methylene Chloride	.977	.768	21.4	
Acetone	.552	.594	7.7	
Carbon Disulfide	4.101	4.148	1.1	
1,1-Dichloroethene	1.117	1.148	2.7	*
1,1-Dichloroethane	2.495	2.506	.4	#
1,2-Dichloroethene (total)	1.251	1.269	1.5	
Chloroform	2.476	2.502	1.0	*
1,2-Dichloroethane	1.650	1.603	2.8	
2-Butanone	.682	.646	5.3	
1,1,1-Trichloroethane	1.902	1.859	2.3	
Carbon Tetrachloride	1.994	1.994	.0	
Vinyl Acetate	2.837	2.877	1.4	
Bromodichloromethane	2.820	2.791	1.0	
1,2-Dichloropropane	.556	.545	1.9	*
cis-1,3-Dichloropropene	.910	.908	.2	
Trichloroethene	.521	.542	4.0	
Dibromochloromethane	.795	.814	2.4	
1,1,2-Trichloroethane	.392	.394	.6	
Benzene	1.050	1.045	.4	
trans-1,3-Dichloropropene	.412	.411	.2	
Bromoform	.881	.877	.4	#
4-Methyl-2-Pentanone	.507	.469	7.5	
2-Hexanone	.433	.445	2.8	
Tetrachloroethene	.629	.671	6.7	
1,1,2,2-Tetrachloroethane	.842	.818	2.9	#
Toluene	.734	.737	.4	*
Chlorobenzene	.941	.960	2.0	#
Ethylbenzene	.430	.436	1.4	*
Styrene	.941	.941	.1	
Xylene (total)	.546	.554	1.4	
Toluene-d8	1.097	1.078	1.7	
Bromofluorobenzene	1.046	1.046	.0	
1,2-Dichloroethane-d4	1.460	1.324	9.3	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Instrument ID: 7001VO Calibration Date: 6/29/89 Time: 12:11

Lab File ID: A1674 Init. Calib. Date(s): 6/16/89 6/16/89

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PA

Min RRF50 for SPCC(#) = .300 (0.250 for Bromoform) Max %D for CCC(*)

COMPOUND		RRF	RRF50	%D	
Chloromethane	#	1.335	1.216	8.9	#
Bromomethane		.667	.625	6.3	
Vinyl Chloride	*	.812	.895	10.3	*
Chloroethane		.522	.498	4.6	
Methylene Chloride		.977	.729	25.3	
Acetone		.552	.667	20.9	
Carbon Disulfide		4.101	4.095	.1	
1,1-Dichloroethene	*	1.117	1.155	3.4	*
1,1-Dichloroethane	#	2.495	2.568	2.9	#
1,2-Dichloroethene (total)		1.251	1.265	1.1	
Chloroform	*	2.476	2.509	1.3	*
1,2-Dichloroethane		1.650	1.633	1.0	
2-Butanone		.682	.686	.7	
1,1,1-Trichloroethane		1.902	1.893	.5	
Carbon Tetrachloride		1.994	1.962	1.6	
Vinyl Acetate		2.837	2.985	5.2	
Bromodichloromethane		2.820	2.811	.3	
1,2-Dichloropropane	*	.556	.548	1.5	*
cis-1,3-Dichloropropene		.910	.887	2.5	
Trichloroethene		.521	.502	3.7	
Dibromochloromethane		.795	.755	5.0	
1,1,2-Trichloroethane		.392	.385	1.8	
Benzene		1.050	1.008	4.0	
trans-1,3-Dichloropropene		.412	.410	.6	
Bromoform	#	.881	.777	11.8	#
4-Methyl-2-Pentanone		.507	.495	2.4	
2-Hexanone		.433	.463	6.8	
Tetrachloroethene		.629	.586	6.8	
1,1,2,2-Tetrachloroethane	#	.842	.818	2.8	#
Toluene	*	.734	.726	1.1	*
Chlorobenzene	#	.941	.917	2.6	#
Ethylbenzene	*	.430	.416	3.1	*
Styrene		.941	.905	3.8	
Xylene (total)		.546	.523	4.2	
Toluene-d8		1.097	1.050	4.3	
Bromofluorobenzene		1.046	1.000	4.4	
1,2-Dichloroethane-d4		1.460	1.376	5.7	

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 0

Lab File ID: A1554 BFB Injection Date: 6/16/89

Instrument ID.: 7001VO BFB Injection Time: 9:57

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATI ABUNDAN
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	41.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	.0 (
174	Greater than 50.0% of mass 95	83.7
175	5.0 - 9.0% of mass 174	6.2 (7
176	Greater than 95.0%, but less than 101.0% of mass 174	83.3 (99
177	5.0 - 9.0% of mass 176	6.3 (7

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDAI

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZEI
1	VSTD020		A1555	6/16/89	10:40
2	VSTD050		A1556	6/16/89	11:25
3	VSTD100		A1557	6/16/89	12:10
4	VSTD150		A1558	6/16/89	12:55
5	VSTD200		A1559	6/16/89	13:40
6					
7					
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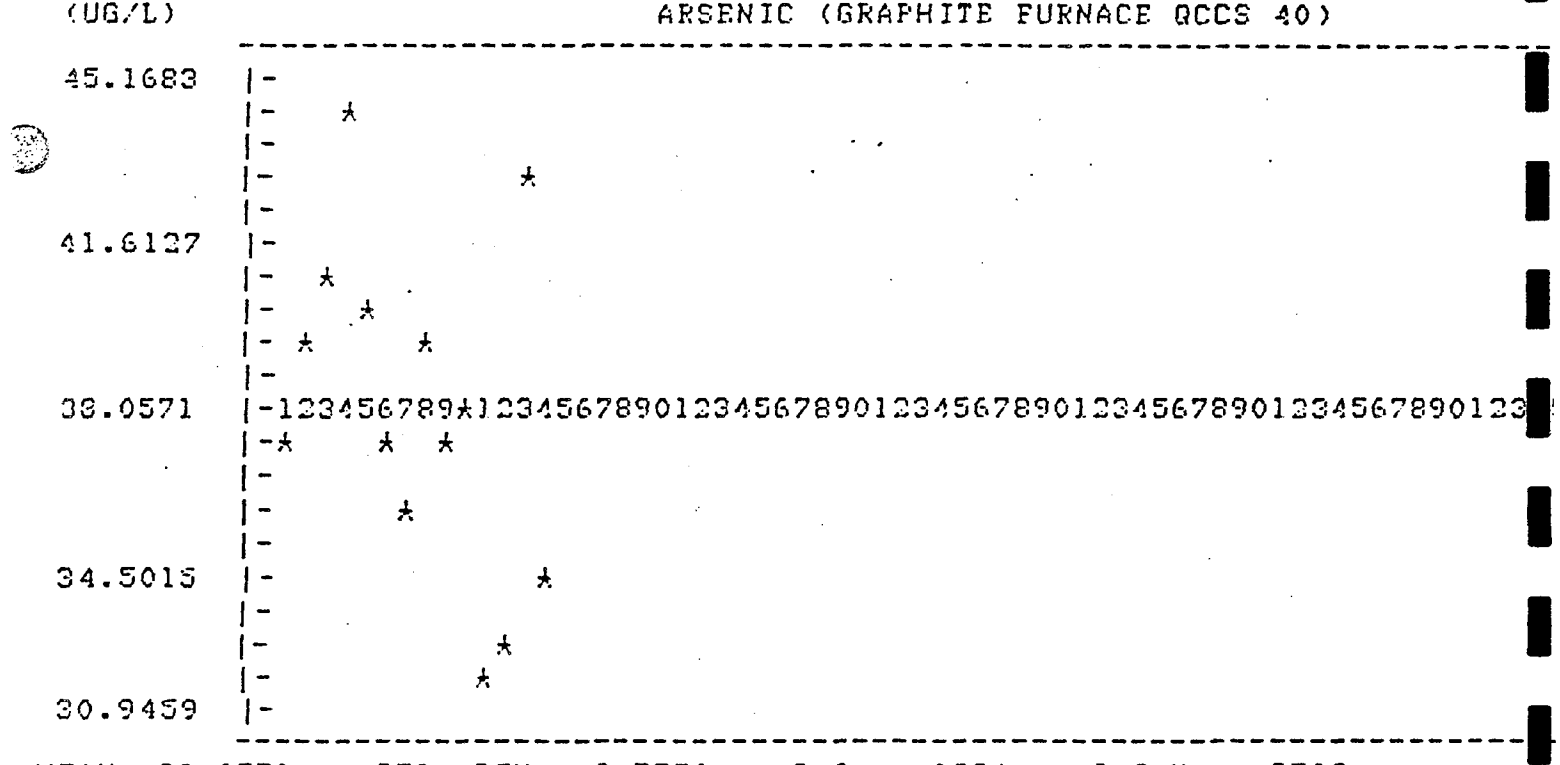
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

ASQC 29-Jun-89 08:56 AM

DATA POINTS:

1	=	37.3
2	=	39.7
3	=	41
4	=	44.6
5	=	40
6	=	37.2
7	=	35.6
8	=	39.6
9	=	37.2
10	=	38.2
11	=	32.3
12	=	32.8
13	=	42.8
14	=	34.5

MEAN	=	38.0571
STD. DEV.	=	3.5556
C.C.	=	.0934
S.E.M.	=	.9502



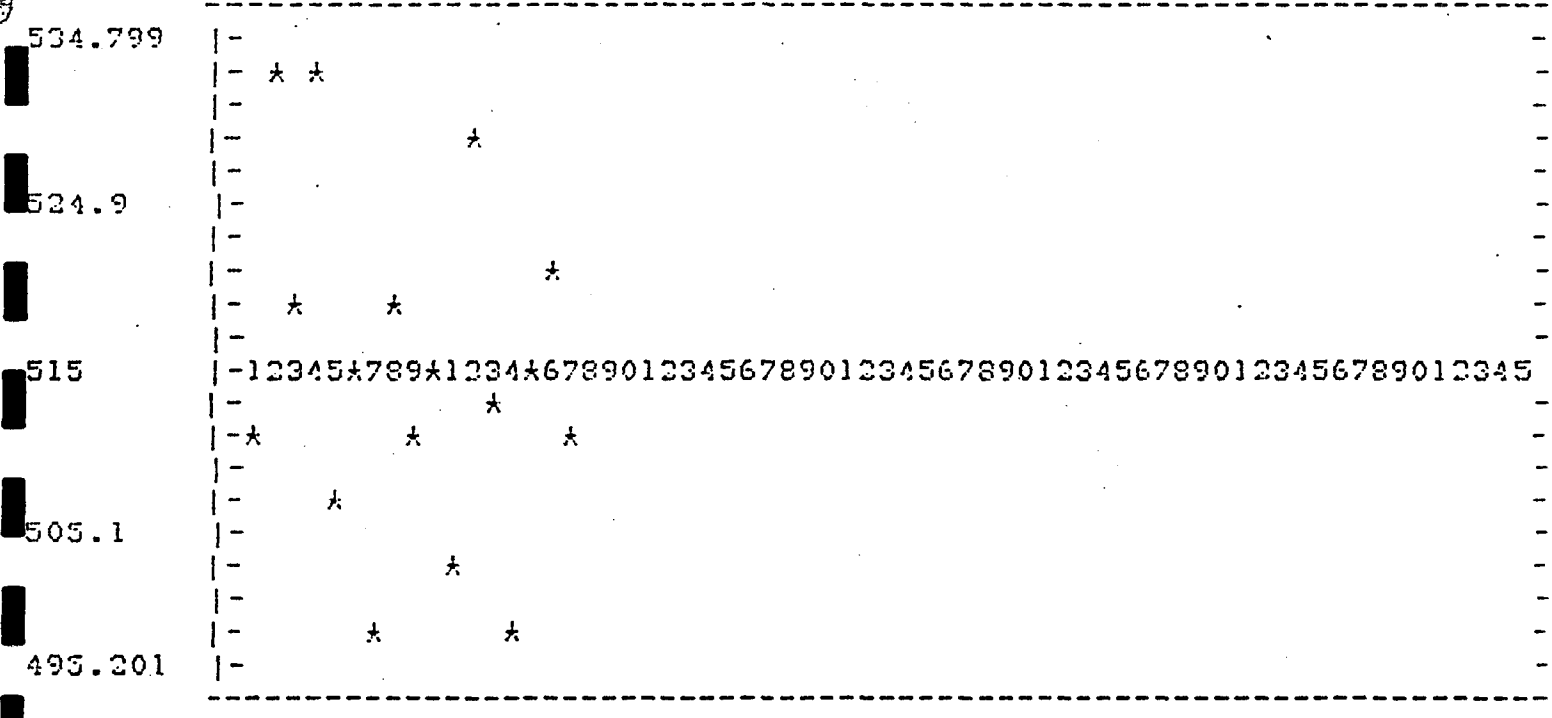
AQC 29-Jun-89 10:59 AM

DATA POINTS:

1	=	511
2	=	533
3	=	518
4	=	533
5	=	508
6	=	515
7	=	499
8	=	519
9	=	512
10	=	514
11	=	504
12	=	528
13	=	513
14	=	500
15	=	515
16	=	521
17	=	512

MEAN	=	515
STD. DEV.	=	9.8996
C.C.	=	.0192
S.E.M.	=	2.401

(UG/L) BARIUM (ICP QCCS 500)



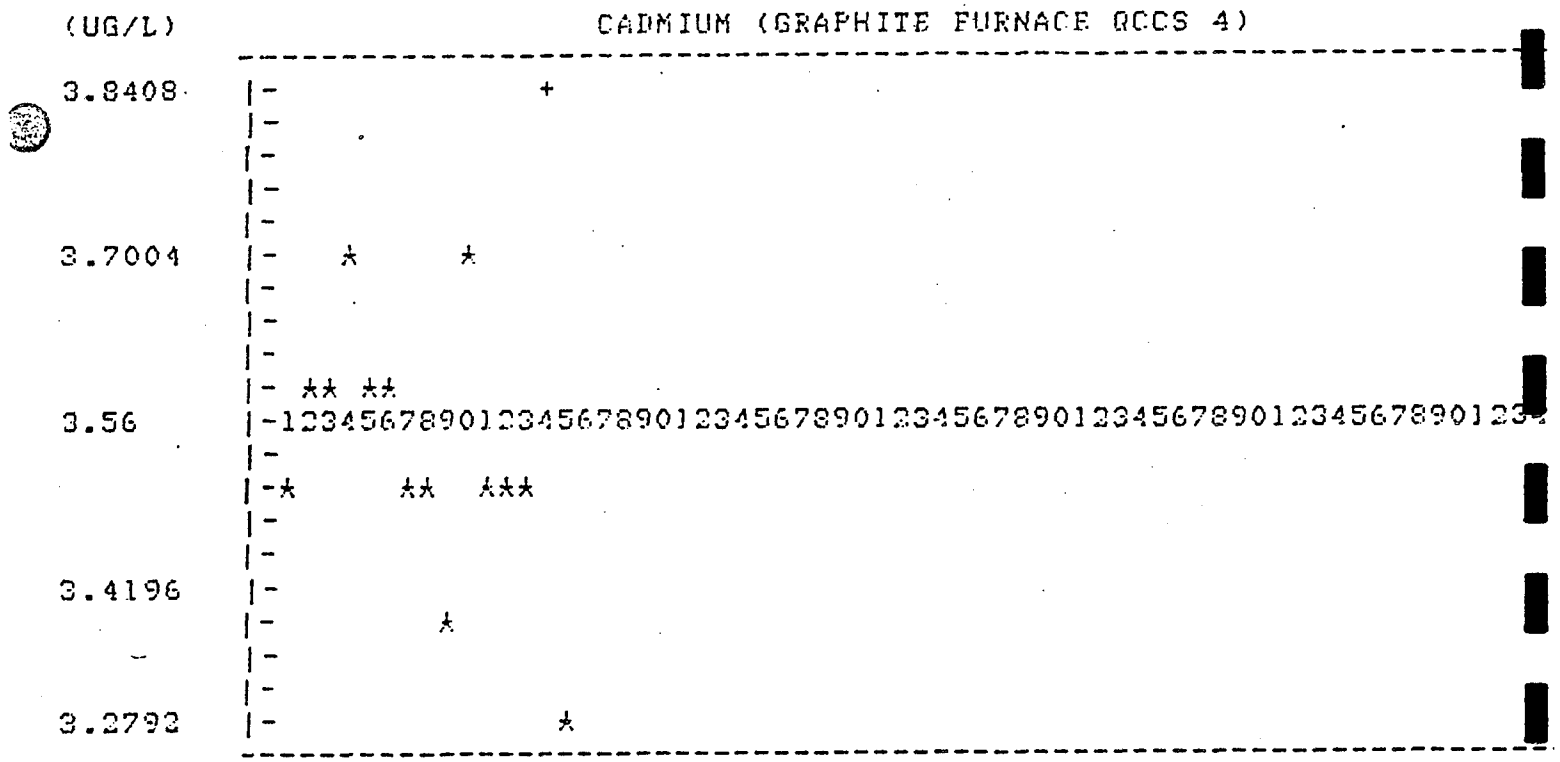
MEAN = 515 , STD. DEV.= 9.8996 , C.C.= .0192 , S.E.M.= 2.401
TRUE VALUE = 500 85% LIMITS = 425 - 575

CDQC 09-Jun-89 09:09 AM

DATA POINTS:

1	=	3.5
2	=	3.6
3	=	3.6
4	=	3.7
5	=	3.6
6	=	3.6
7	=	3.5
8	=	3.5
9	=	3.4
10	=	3.7
11	=	3.5
12	=	3.5
13	=	3.5
14	=	3.9
15	=	3.3

MEAN	=	3.56
STD. DEV.	=	.1404
C.C.	=	.0394
S.E.M.	=	.0362



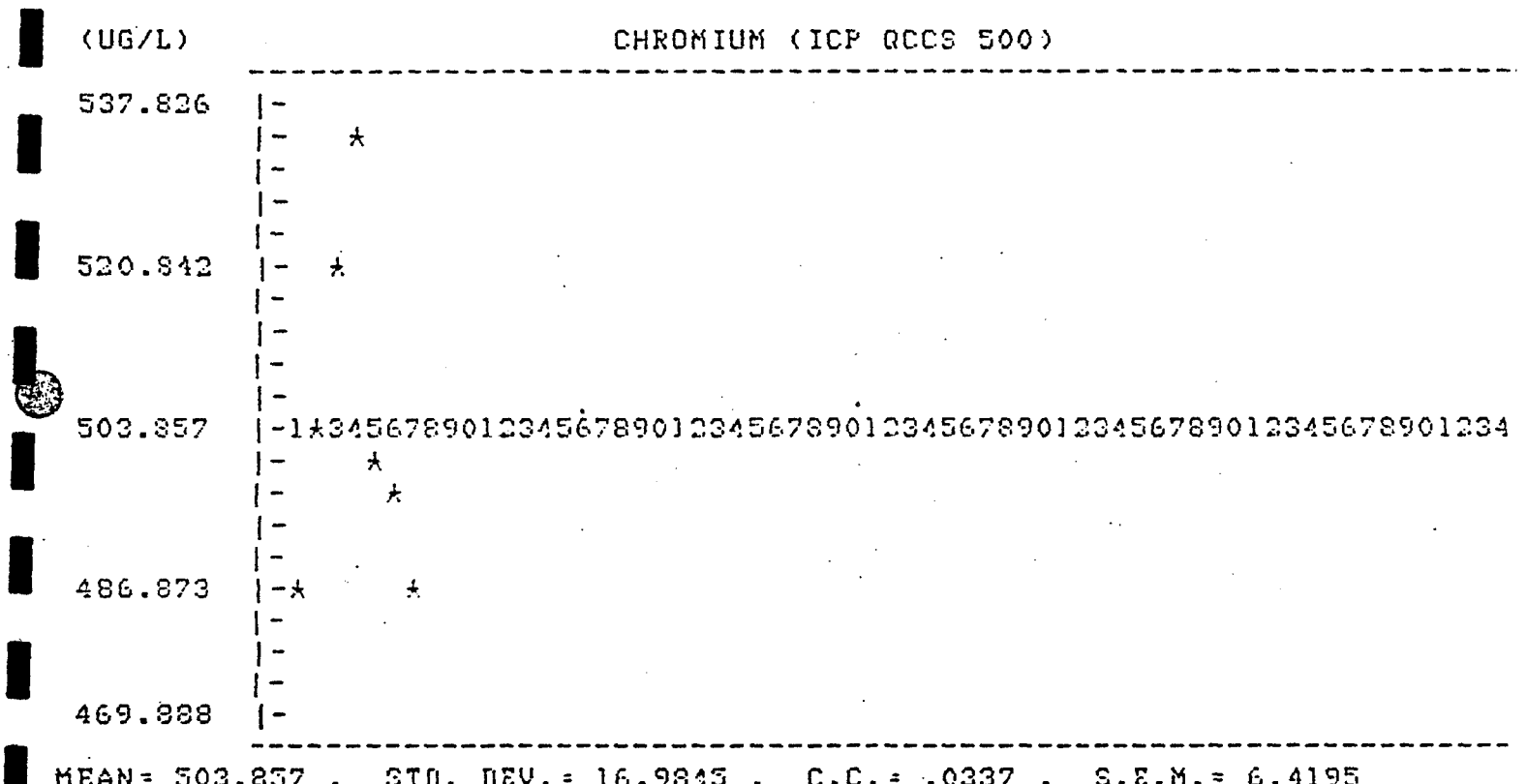
MEAN= 3.56 , STD. DEV.= .1404 , C.C.= .0391 , S.E.M.= .0362
TRUE = 4.0 85% LIMITS = 3.4 - 4.6

CRQC 29-Jun-89 09:12 AM

DATA POINTS:

1	=	488
2	=	504
3	=	520
4	=	533
5	=	499
6	=	496
7	=	487

MEAN	=	503.857
STD. DEV.	=	16.9845
C.C.	=	.0337
S.E.M.	=	6.4195



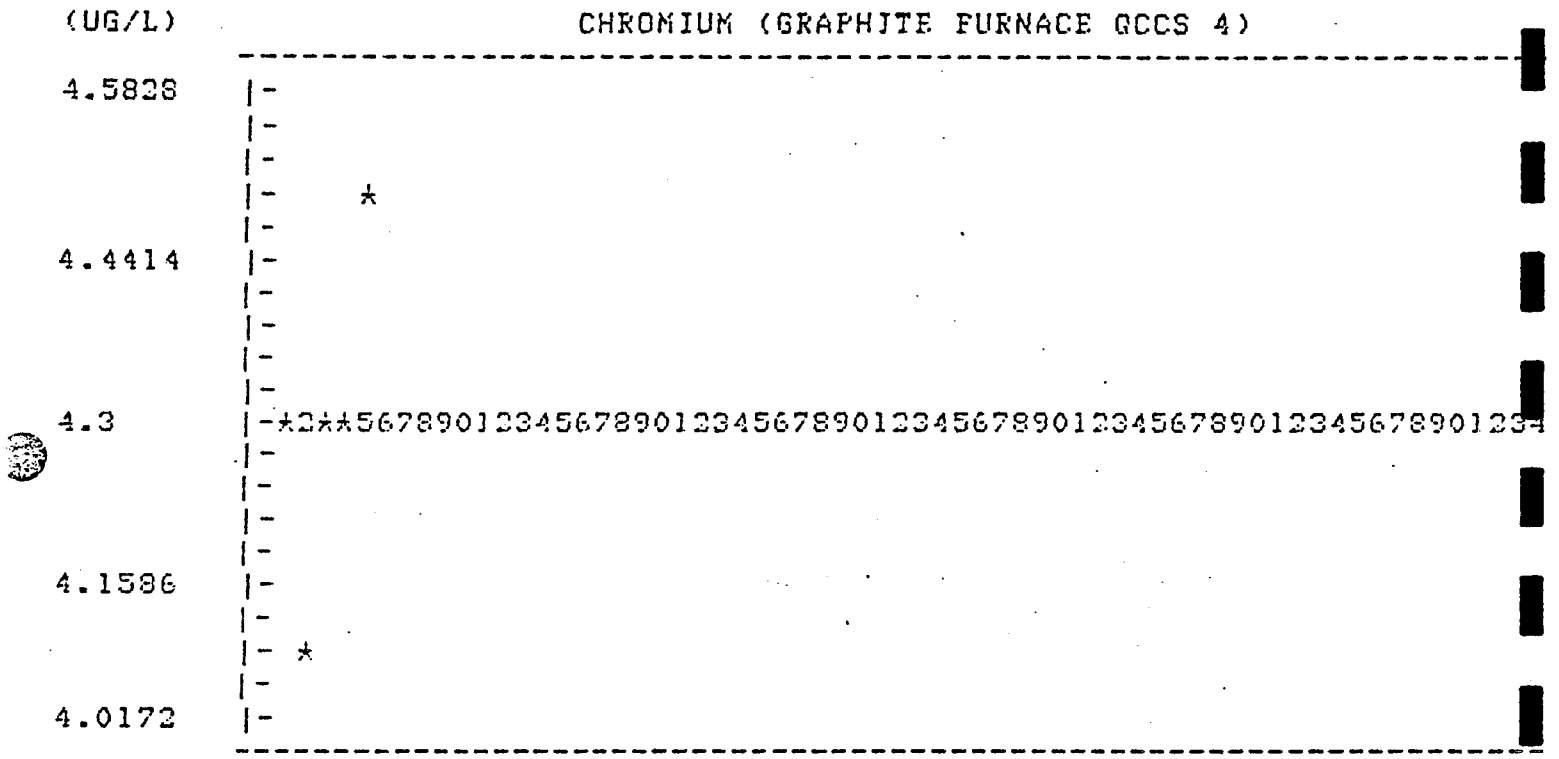
MEAN= 503.857 , STD. DEV.= 16.9845 , C.C.= .0337 , S.E.M.= 6.4195
TRUE = 500 85% LIMITS = 425 - 575

CRQC1 29-Jun-89 09:13 AM

DATA POINTS:

1	=	4.3
2	=	4.1
3	=	4.3
4	=	4.3
5	=	4.5

MEAN	=	4.3
STD. DEV.	=	.1414
C.C.	=	.0328
S.E.M.	=	.0632



MEAN= 4.3 , STD. DEV.= .1414 , C.C.= .0328 , S.E.M.= .0632
TRUE = 4.0 85% LIMITS = 3.4 - 4.6

[redacted]QC 29-Jun-89 09:03 AM

DATA POINTS:

[redacted] = 38.8
2 = 36.2
[redacted] = 33.5
[redacted] = 37
5 = 38.6
[redacted] = 41.5
[redacted] = 38.4
[redacted] = 37
9 = 36.7
[redacted]10 = 39.5
[redacted]11 = 35.7
12 = 37.8
[redacted]13 = 35.4
[redacted]14 = 40.3

[redacted]EAN = 37.6
[redacted]TD. DEV. = 2.1118
C.C. = .0561
S.E.M. = .5644

(UG/L) LEAD (GRAPHITE FURNACE QCCS 40)

```
 41.8236 |-                                                                -
         |-      *                                                         -
         |-                                                                -
         |-                                                                -
         |-                *                                               -
 39.7118 |-           *                                                    -
         |-                                                                -
         |-*                                                               -
         |-     * *                                                        -
         |-                                                                -
 37.6    |-12345678901*34567890123456789012345678901234567890123456789012345
         |-    *    *                                                      -
         |-          *                                                     -
         |- *                                                              -
         |-             *                                                  -
 35.4882 |-                *                                               -
         |-                                                                -
         |-                                                                -
         |-                                                                -
 33.3764 |-  +                                                             -
```

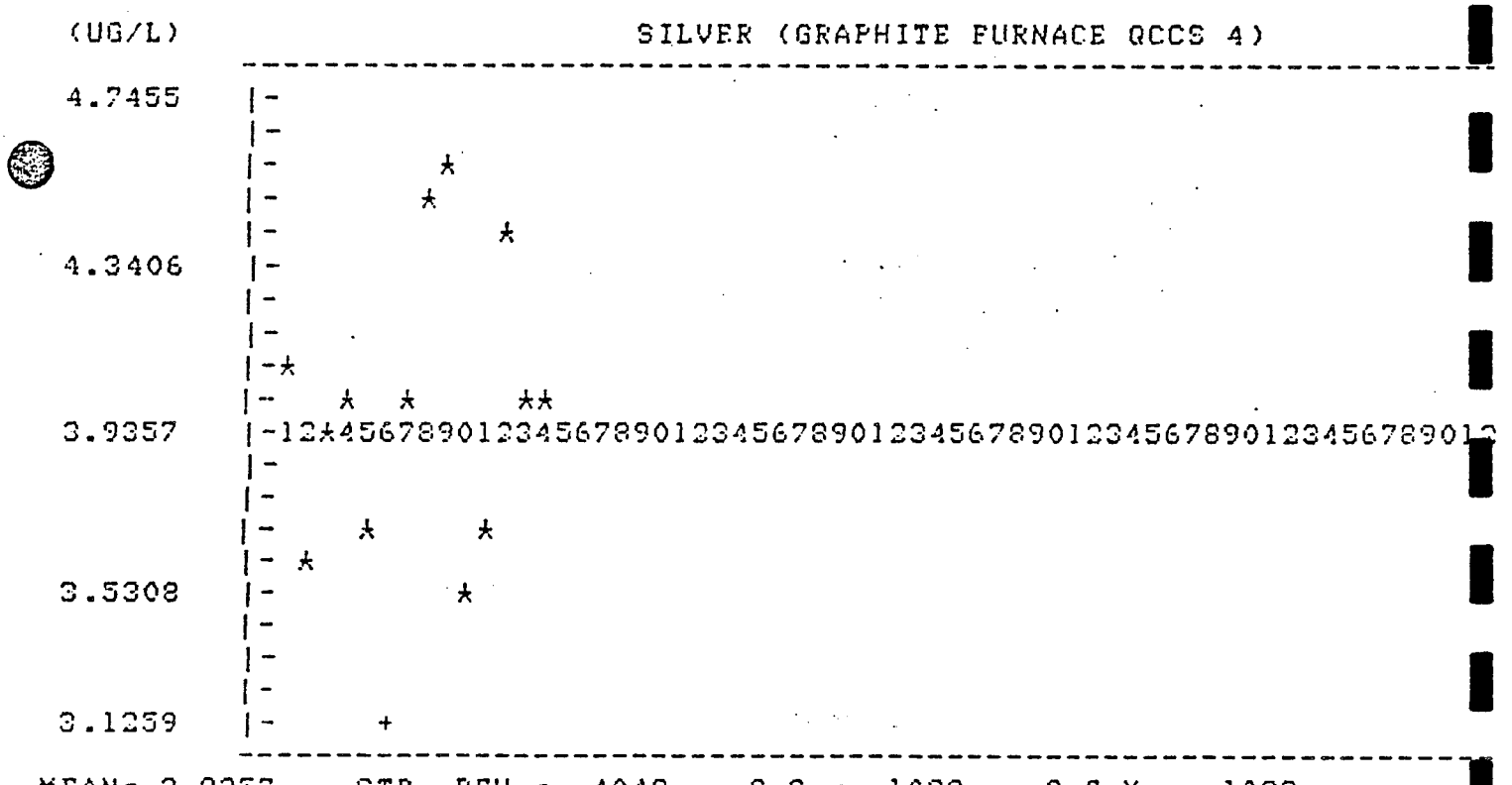
[redacted]EAN= 37.6 , STD. DEV.= 2.1118 , C.C.= .0561 , S.E.M.= .5644
[redacted]RUE = 40.0 85% LIMITS = 34 - 46

AGQC 29-Jun-89 09:18 AM

DATA POINTS:

1	=	4.1
2	=	3.6
3	=	3.9
4	=	4
5	=	3.7
6	=	3.1
7	=	4
8	=	4.5
9	=	4.6
10	=	3.5
11	=	3.7
12	=	4.4
13	=	4
14	=	4

MEAN	=	3.9357
STD. DEV.	=	.4049
C.C.	=	.1028
S.E.M.	=	.1082

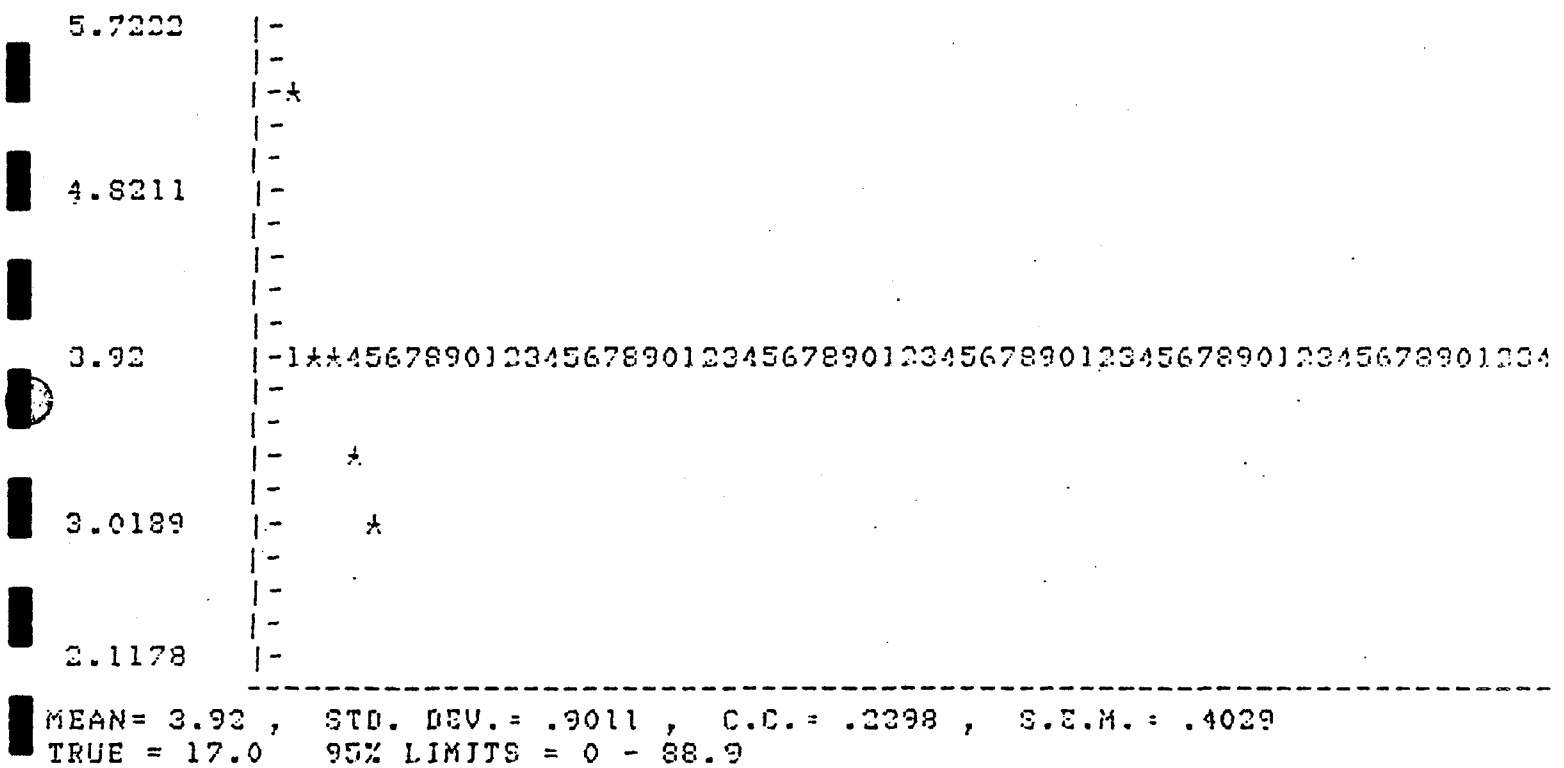


MEAN= 3.9357 , STD. DEV.= .4049 , C.C.= .1028 , S.E.M.= .1082
TRUE = 4.0 85% LIMITS = 3.4 - 4.6

DATA POINTS:

1	=	5.4
2	=	3.9
3	=	3.9
4	=	3.3
5	=	3.1

MEAN	=	3.92
STD. DEV.	=	.9011
C.C.	=	.2298
S.E.M.	=	.4029



MEAN= 3.92 , STD. DEV.= .9011 , C.C.= .2298 , S.E.M.= .4029
TRUE = 17.0 95% LIMITS = 0 - 88.9

DATA POINTS:

1	=	413
2	=	498
3	=	481
4	=	493

MEAN	=	471.25
STD. DEV.	=	39.4831
C.C.	=	.0837
S.E.M.	=	19.7415

(MG/KG) BARIUM (EPA SLUDGE QC)

```
550.216 |-
        |-
        |-
        |-
        |-
510.733 |-
        |-
        |- * *
        |-
        |-  *
471.25  |-1234567890123456789012345678901234567890123456789012345678901234567890123
        |-
        |-
        |-
        |-
431.767 |-
        |-
        |-*
        |-
392.284 |-
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MEAN= 471.25 , STD. DEV.= 39.4831 , C.C.= .0837 , S.E.M.= 19.7415
NO TRUE VALUE DATA GIVEN WITH SAMPLE

DATA POINTS:

1	=	16.1
2	=	16.5
3	=	17.4
4	=	18.5

MEAN	=	17.125
STD. DEV.	=	1.0657
C.C.	=	.0622
S.E.M.	=	.5328

(MG/KG) CADMIUM (EPA SLUDGE QC)

```
19.2564 |-
        |-
        |-
        |-
        |-    *
18.1907 |-
        |-
        |-
        |-
        |-   *
17.125  |-1234567890123456789012345678901234567890123456789012345678901234567890123
        |-
        |-
        |-  *
        |-
16.0593 |-*
        |-
        |-
        |-
14.9936 |-
```

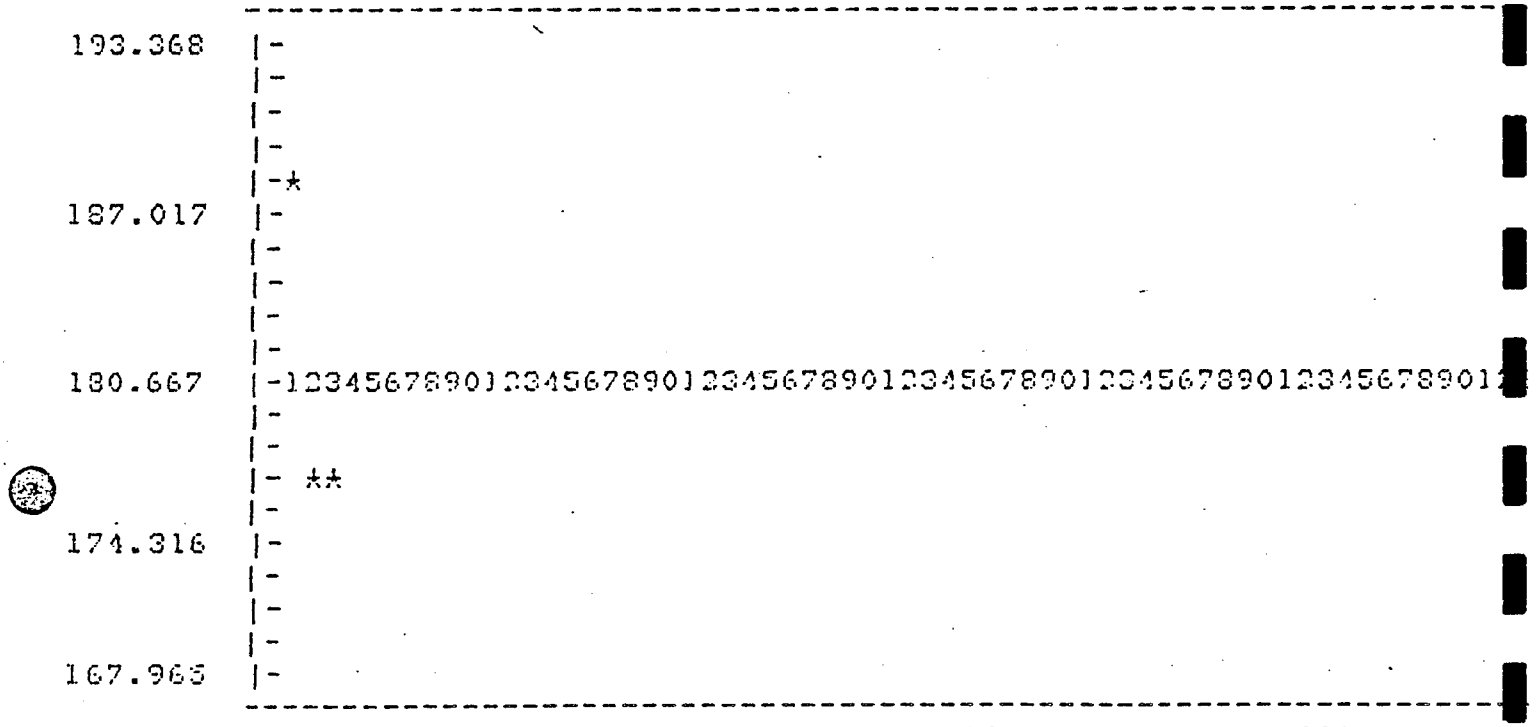
MEAN= 17.125 , STD. DEV.= 1.0657 , C.C.= .0622 , S.E.M.= .5328
TRUE = 19.1 95% LIMITS = 10.5 - 27.8

DATA POINTS:

1	=	188
2	=	177
3	=	177

MEAN	=	180.667
STD. DEV.	=	6.3508
C.C.	=	.0351
S.E.M.	=	3.6666

(MG/KG) CHROMIUM (EPA SLUDGE QC)

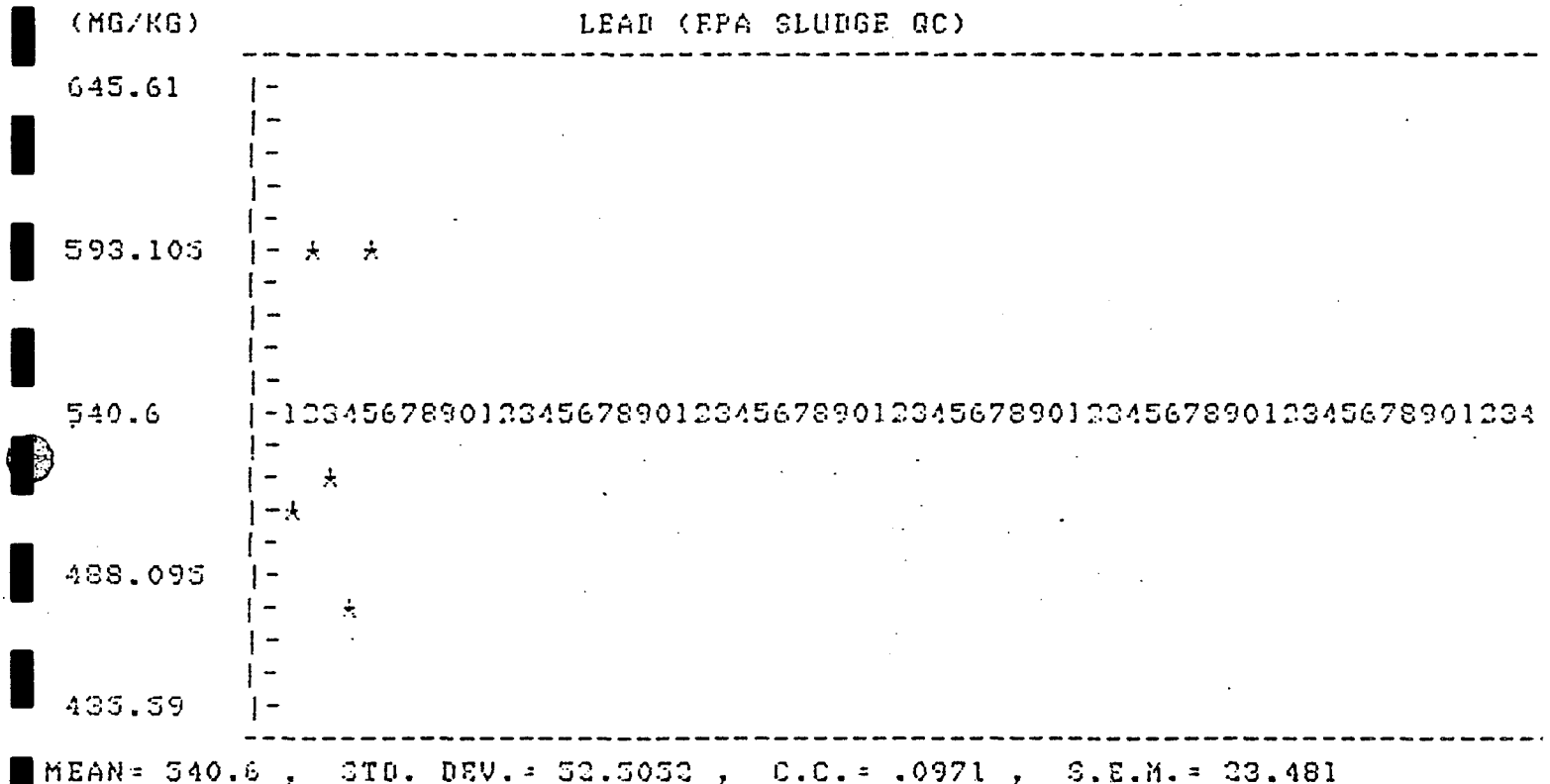


MEAN= 180.667 , STD. DEV.= 6.3508 , C.C.= .0351 , S.E.M.= 3.6666
TRUE = 193 95% LIMITS = 150 - 246

DATA POINTS:

1	=	512
2	=	598
3	=	518
4	=	481
5	=	594

MEAN	=	540.6
STD. DEV.	=	53.5052
C.C.	=	.0971
S.E.M.	=	23.481

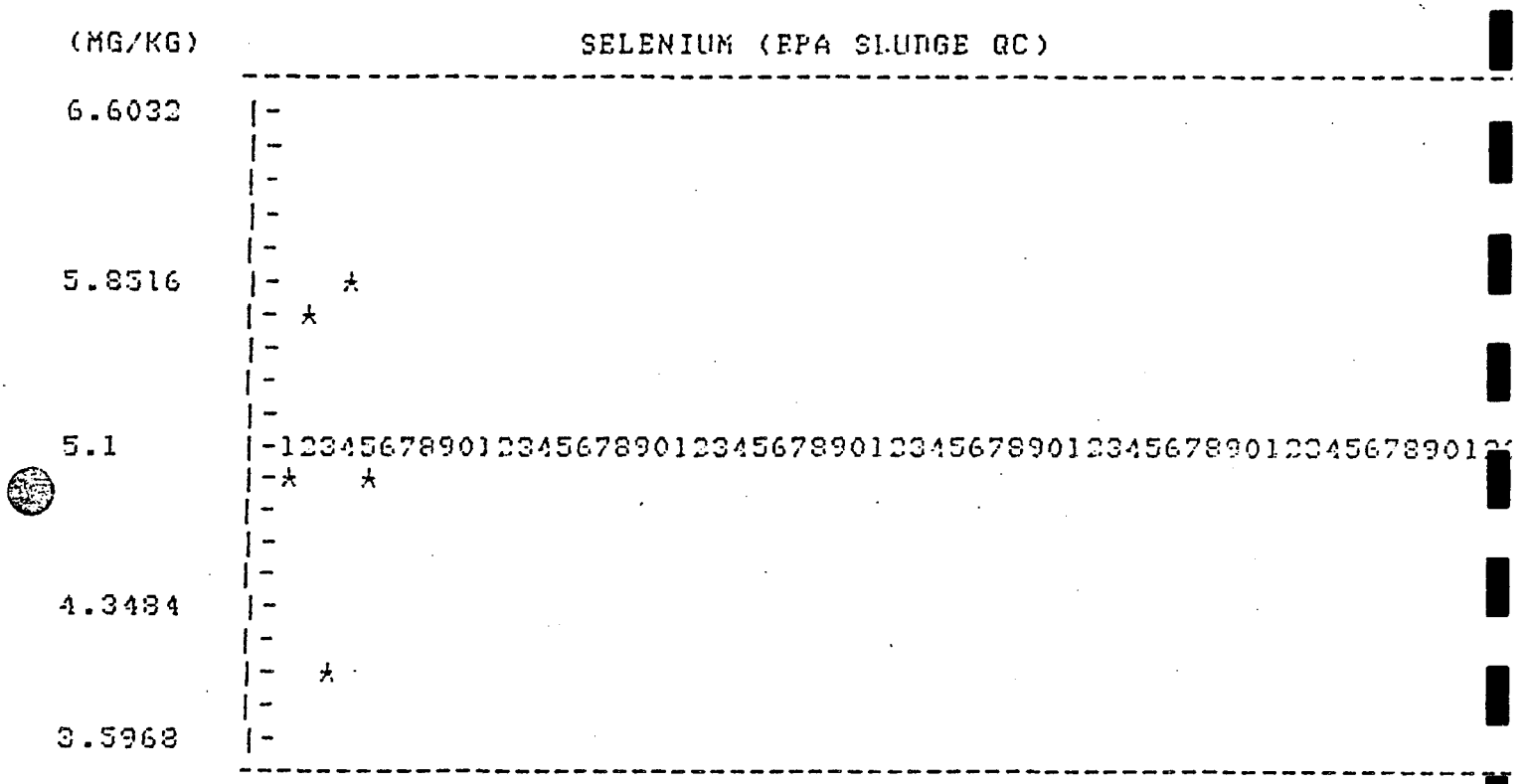


MEAN= 540.6 , STD. DEV.= 53.5052 , C.C.= .0971 , S.E.M.= 23.481
TRUE = 526 95% LIMITS = 372 - 680

DATA POINTS:

1	=	5
2	=	5.7
3	=	4
4	=	5.9
5	=	4.9

MEAN	=	5.1
STD. DEV.	=	.7516
C.C.	=	.1473
S.E.M.	=	.3361

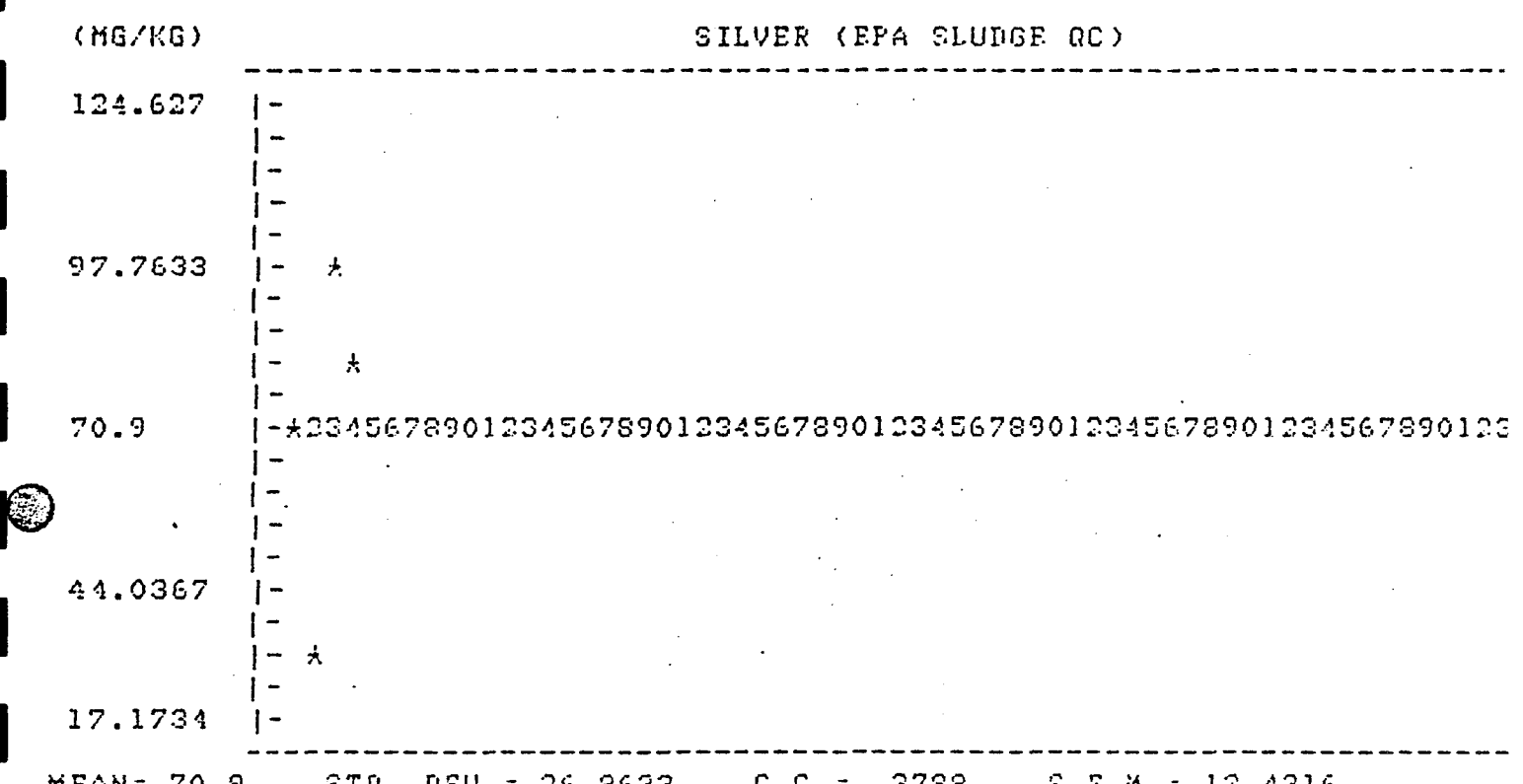


MEAN= 5.1 , STD. DEV.= .7516 , C.C.= .1473 , S.E.M.= .3361
NO TRUE VALUE DATA GIVEN

DATA POINTS:

1	=	69.6
2	=	34
3	=	96
4	=	84

MEAN	=	70.9
STD. DEV.	=	26.8633
C.C.	=	.3788
S.E.M.	=	13.4316

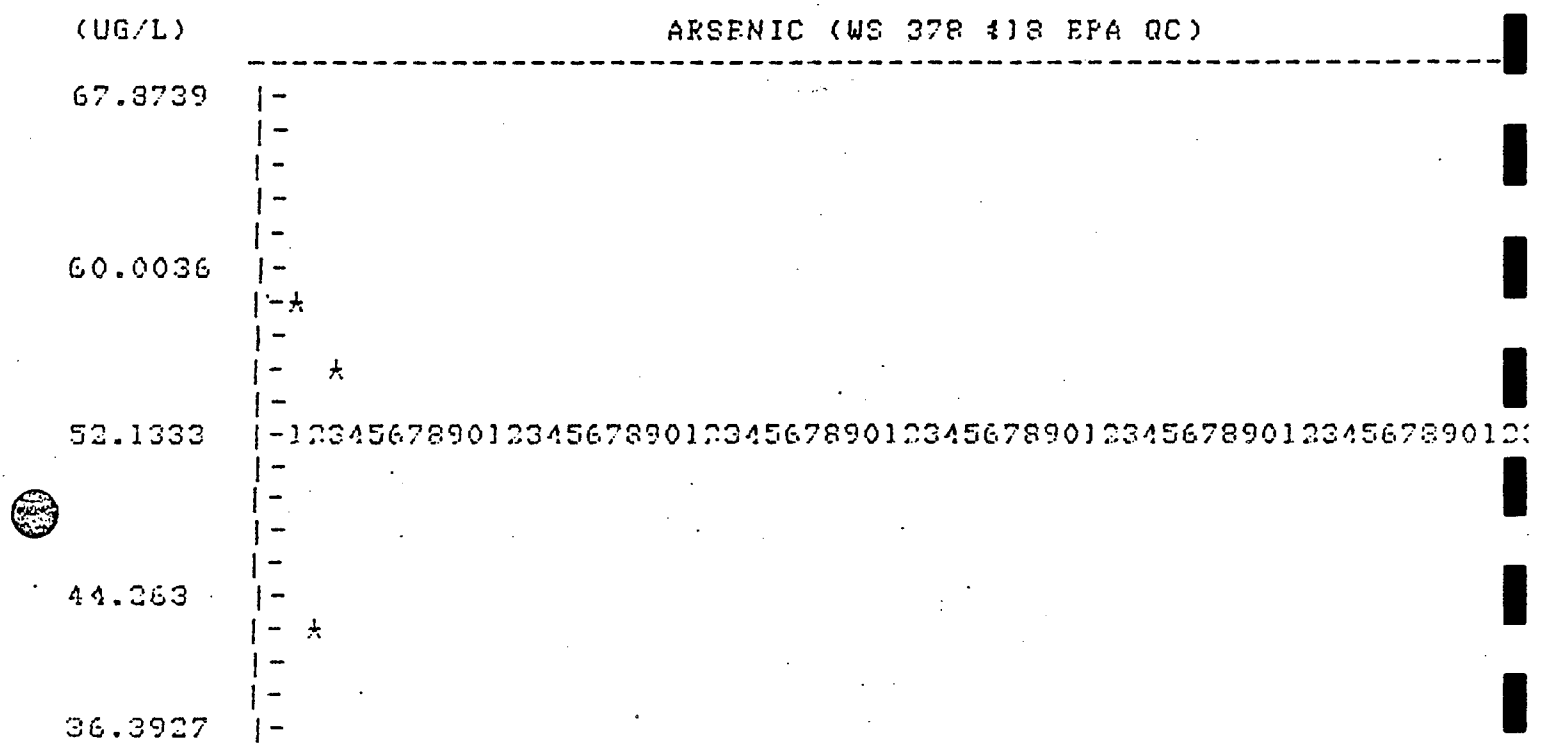


MEAN= 70.9 , STD. DEV.= 26.8633 , C.C.= .3788 , S.E.M.= 13.4316
TRUE = 80.6 95% LIMITS = 0 - 203

DATA POINTS:

1	=	58.4
2	=	43.3
3	=	54.7

MEAN	=	52.1333
STD. DEV.	=	7.8703
C.C.	=	.1509
S.E.M.	=	4.5439

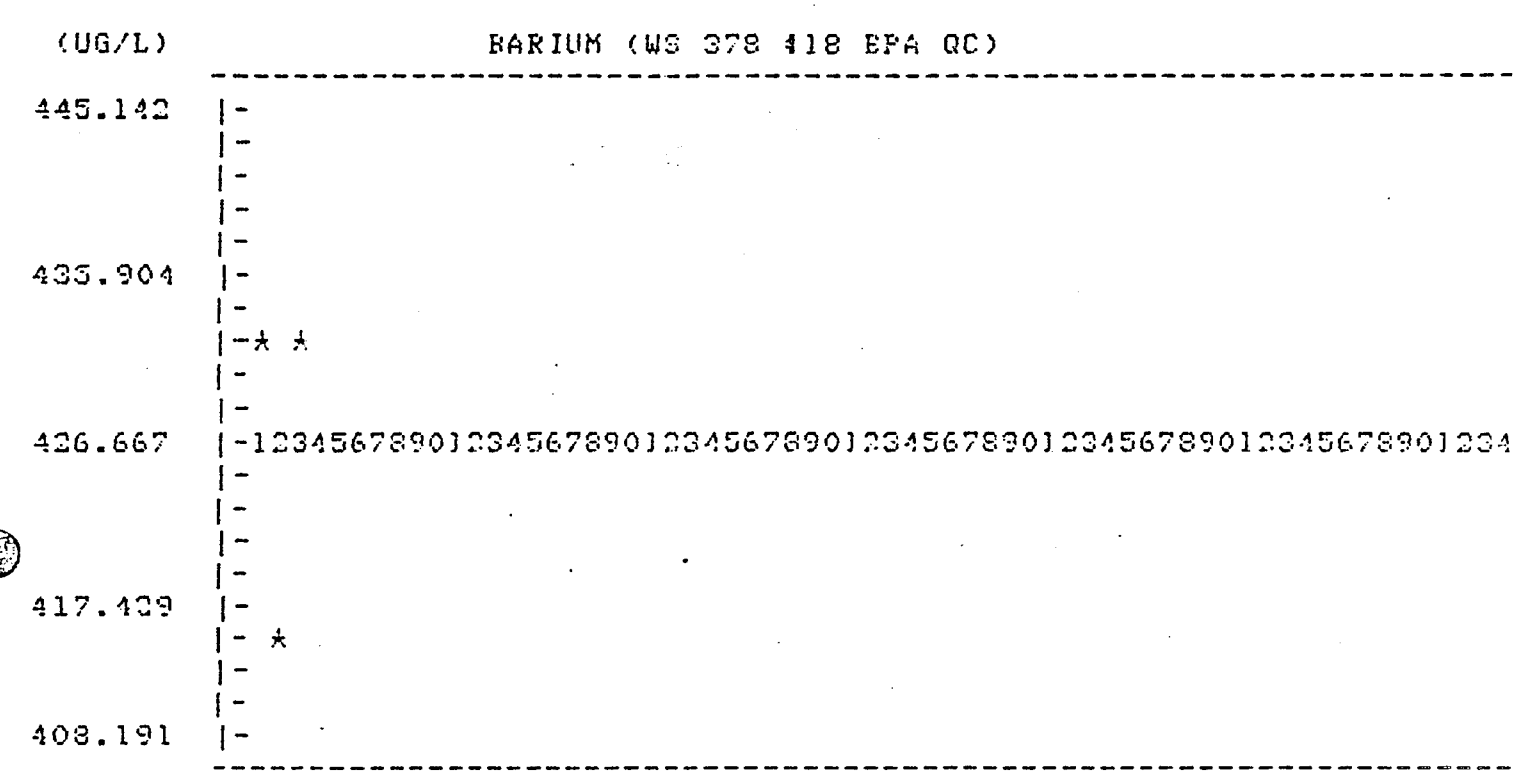


MEAN= 52.1333 , STD. DEV.= 7.8703 , C.C.= .1509 , S.E.M.= 4.5439
TRUE = 51.0 95% LIMITS = 41.6 - 58.7

WSBA1 29-Jun-89 06:55 AM
DATA POINTS:

1	=	432
2	=	416
3	=	432

MEAN	=	426.667
STD. DEV.	=	9.2376
C.C.	=	.0216
S.E.M.	=	5.3333



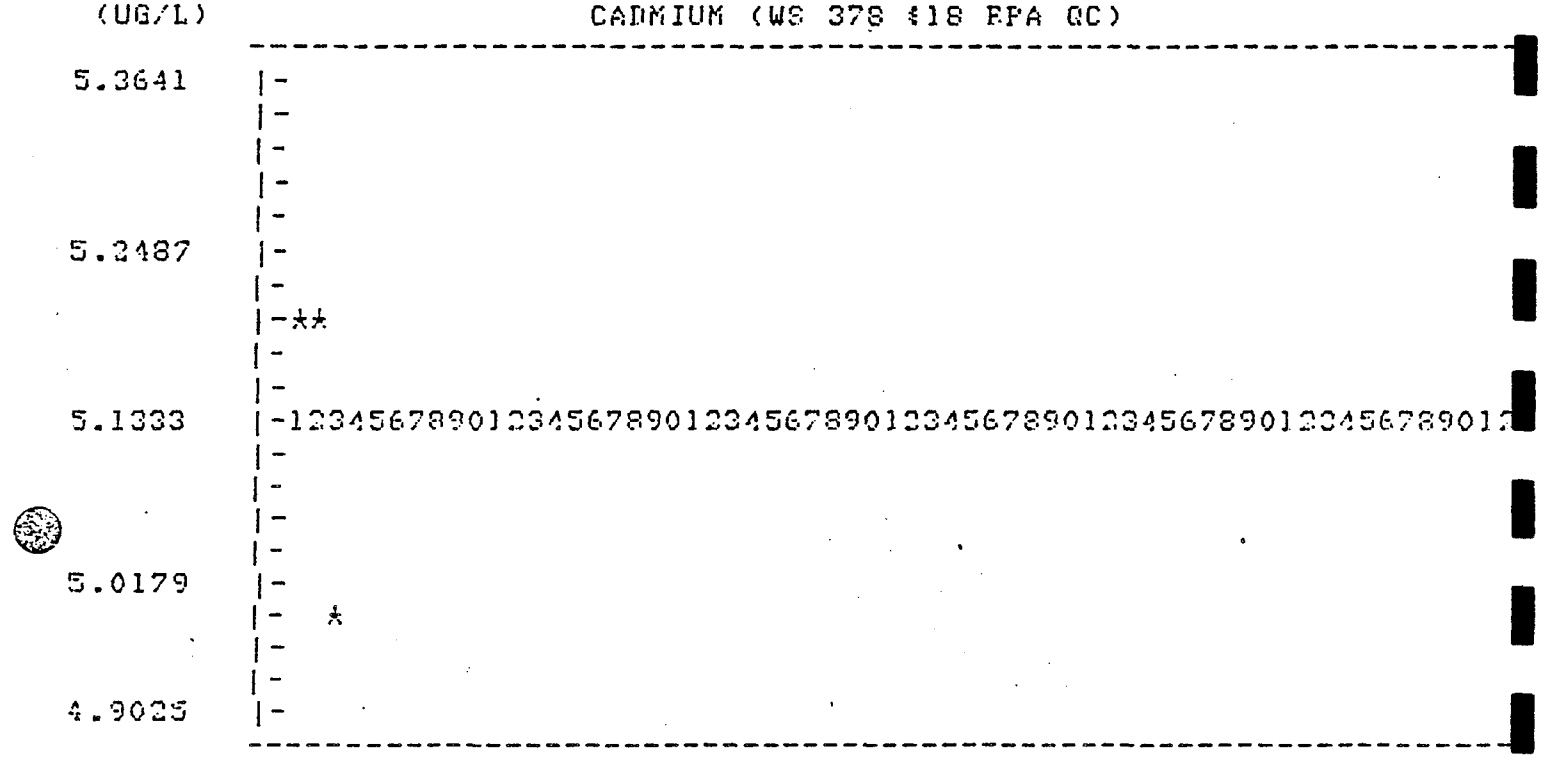
MEAN= 426.667 , STD. DEV.= 9.2376 , C.C.= .0216 , S.E.M.= 5.3333
TRUE = 389 95% LIMITS = 330 - 443

WSCD1 29-Jun-89 06:59 AM

DATA POINTS:

1 = 5.2
2 = 5.2
3 = 5

MEAN = 5.1333
STD. DEV. = .1154
C.C. = .0224
S.E.M. = .0666

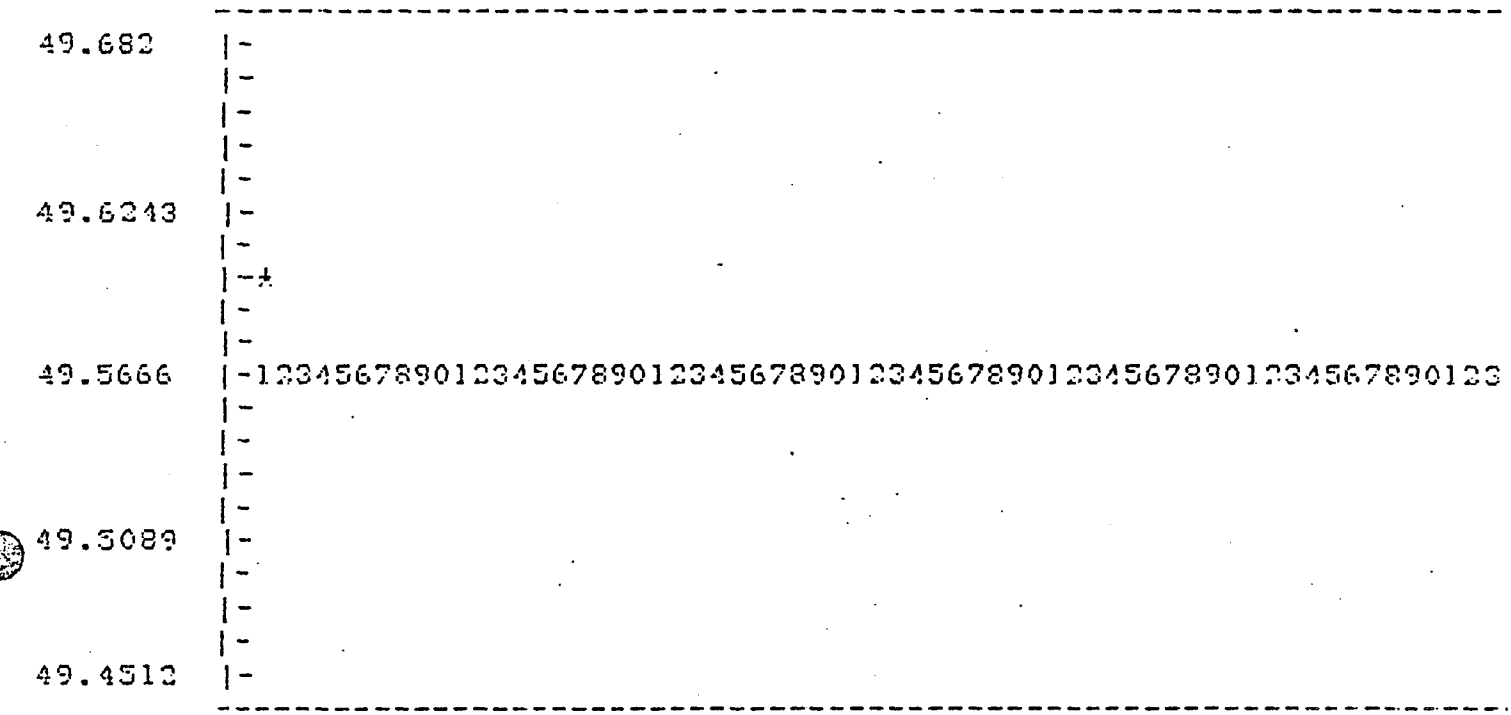


MEAN= 5.1333 , STD. DEV.= .1154 , C.C.= .0224 , S.E.M.= .0666
TRUE = 5.8 95% LIMITS = 4.44 - 6.42

DATA POINTS:

1 = 49.6

MEAN	= 49.6
STD. DEV.	= 0.0
C.C.	= 0.0
S.E.M.	= 0.0

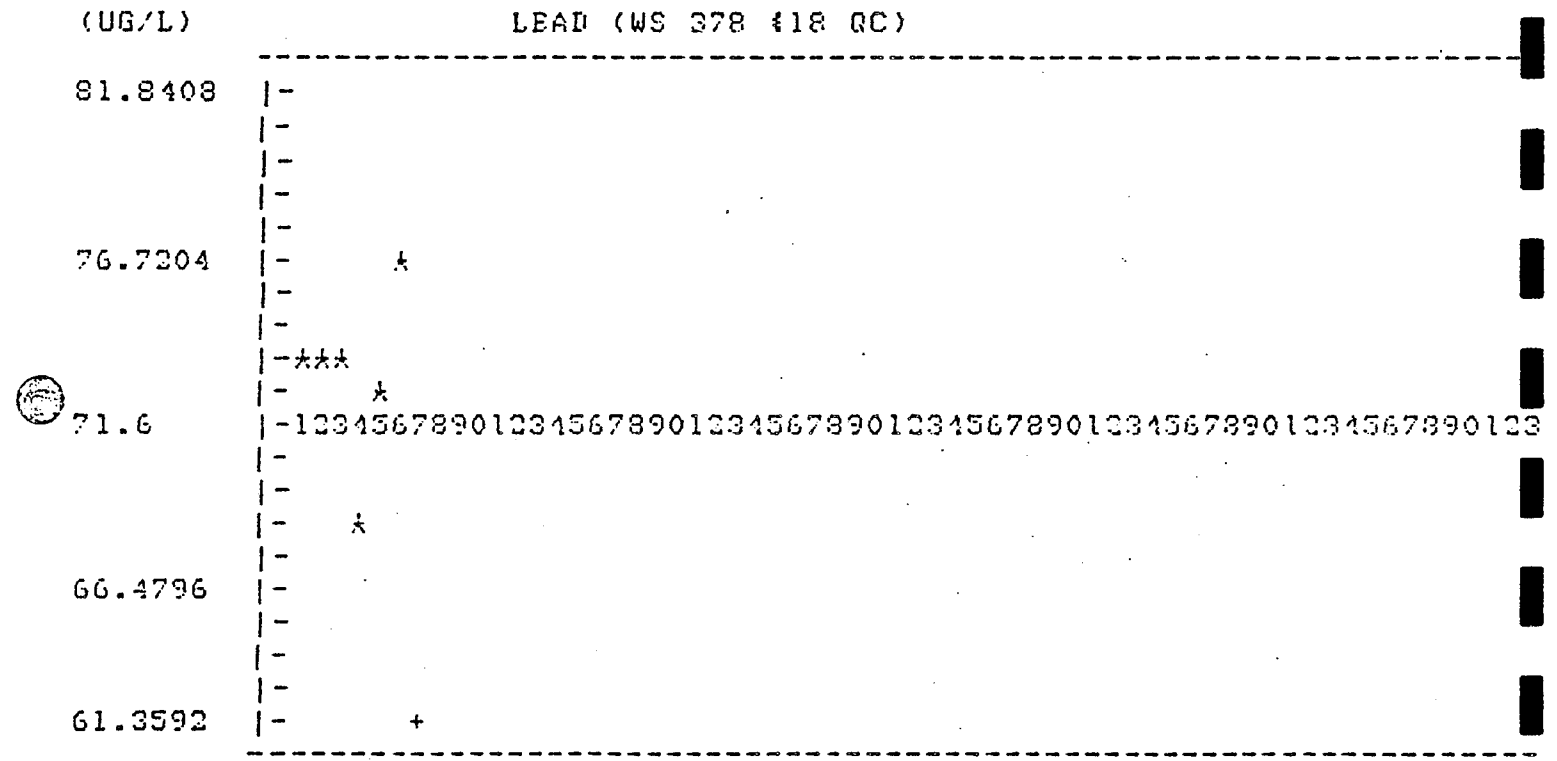


MEAN= 49.6 , STD. DEV.= 0.0 , C.C.= 0.0 , S.E.M.= 0.0
TRUE = 53.0 95% LIMITS = 45.4 - 60.6

DATA POINTS:

1	=	73.8
2	=	74.1
3	=	73.9
4	=	68.8
5	=	72.6
6	=	76.7
7	=	61.3

MEAN	=	71.6
STD. DEV.	=	5.1204
C.C..	=	.0715
S.E.M.	=	1.9353



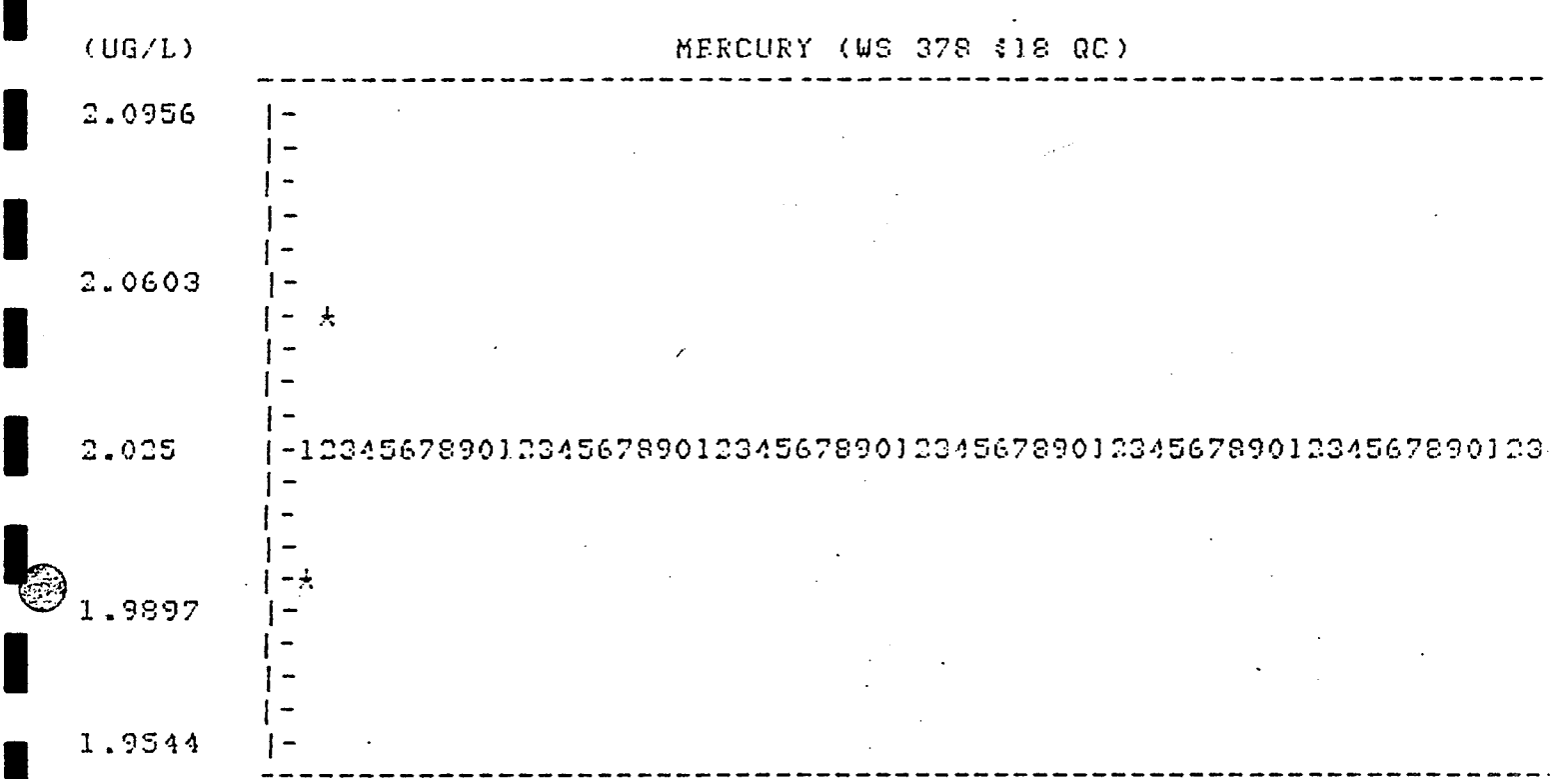
MEAN= 71.6 , STD. DEV.= 5.1204 , C.C.= .0715 , S.E.M.= 1.9353
TRUE = 72.0 95% LIMITS = 59.3 - 82.4

WSHG1 29-Jun-89 07:13 AM

DATA POINTS:

1 = 2
2 = 2.05

MEAN = 2.025
STD. DEV. = .0353
C.C. = .0174
S.E.M. = .0249



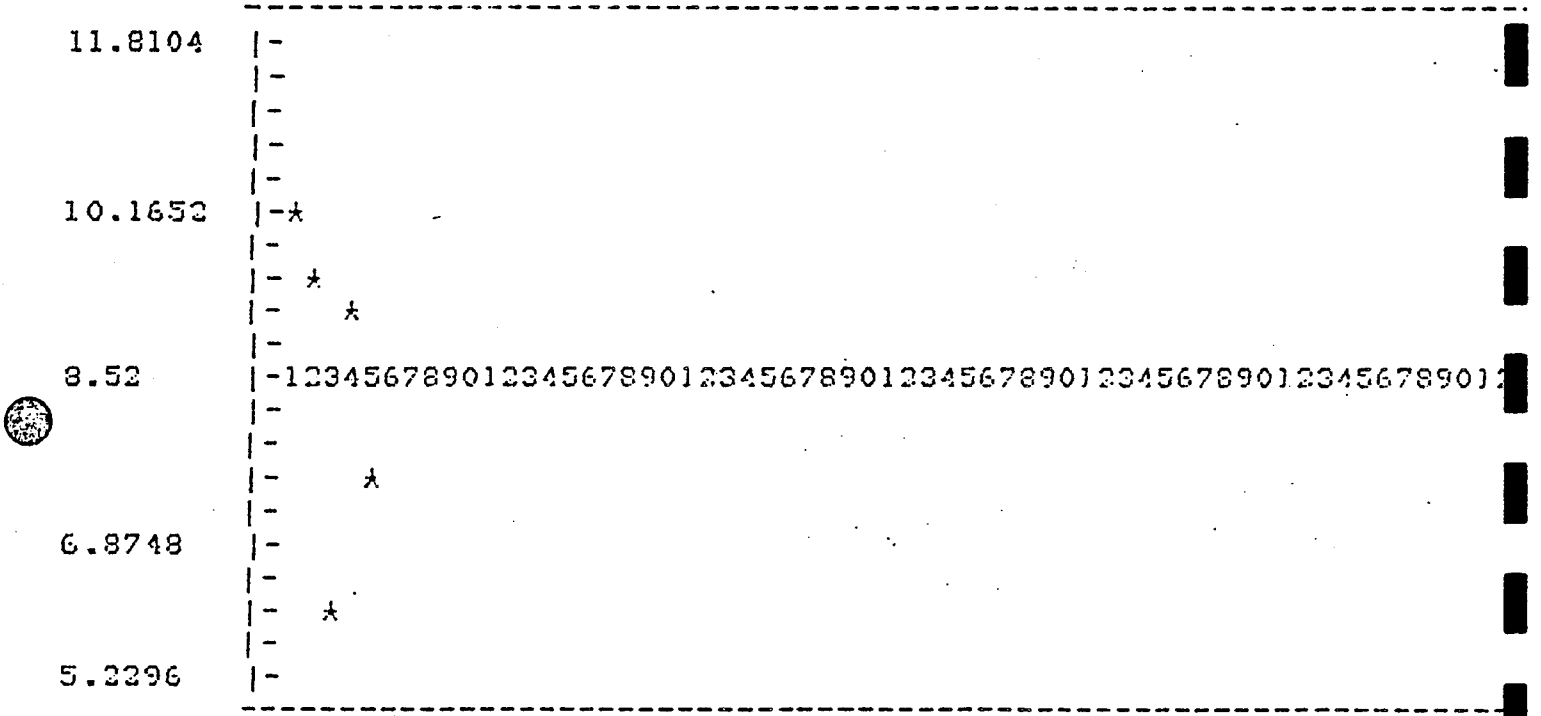
MEAN= 2.025 , STD. DEV.= .0353 , C.C.= .0174 , S.E.M.= .0249
TRUE = 3.0 95% LIMITS = 2.1 - 3.8

WSSE1 29-Jun-89 07:16 AM

DATA POINTS:

1	=	10.3
2	=	9.4
3	=	6.2
4	=	9.2
5	=	7.5

MEAN	=	8.52
STD. DEV.	=	1.6452
C.C.	=	.193
S.E.M.	=	.7357



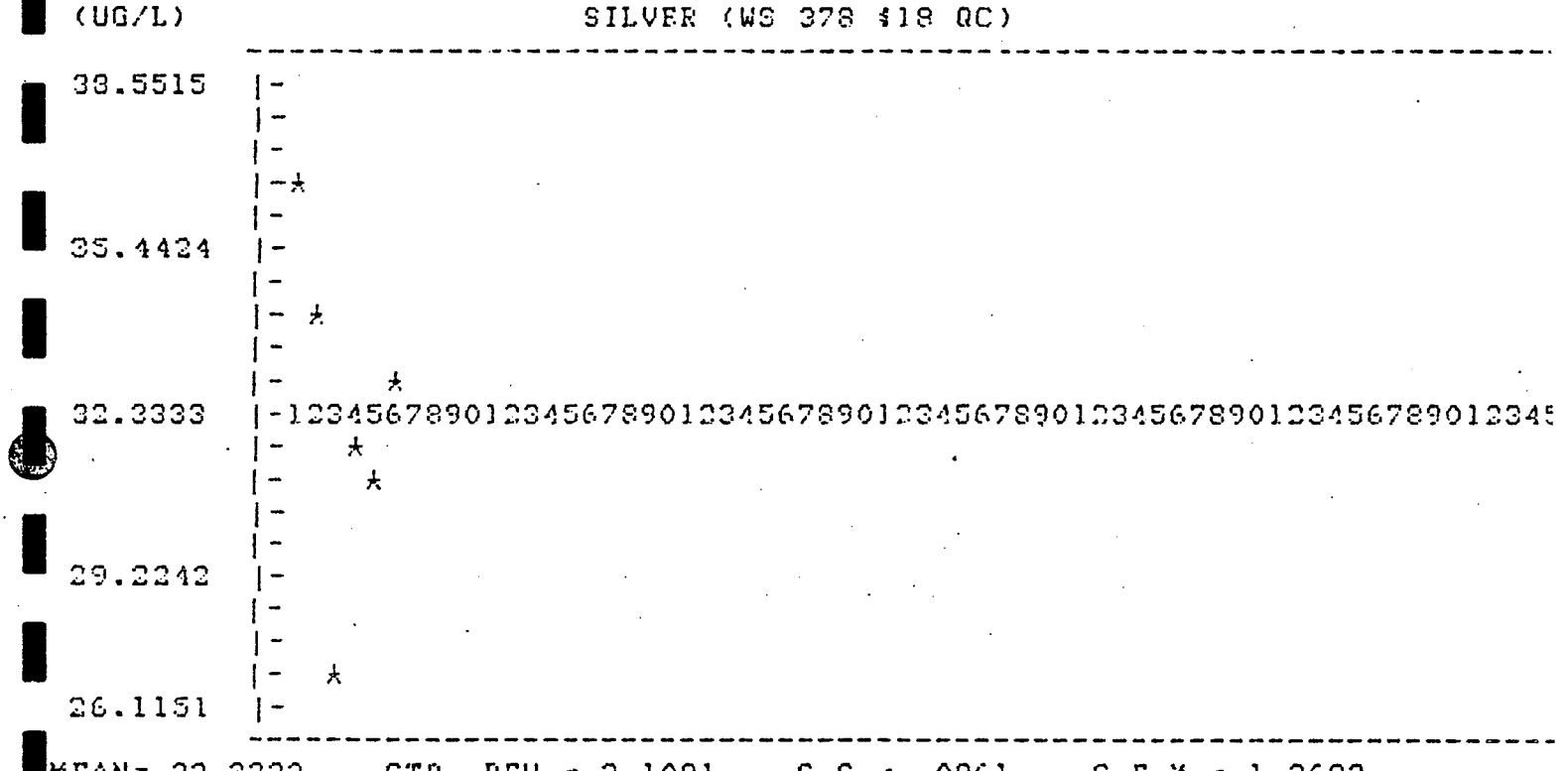
MEAN= 8.52 , STD. DEV.= 1.6452 , C.C.= .193 , S.E.M.= .7357
TRUE = 8.1 95% LIMITS = 5.78 - 10.2

WSAG1 29-Jun-89 07:18 AM

DATA POINTS:

1	=	36.5
2	=	34.5
3	=	27.5
4	=	31.5
5	=	31
6	=	33

MEAN	=	32.3333
STD. DEV.	=	3.1091
C.C.	=	.0961
S.E.M.	=	1.2692



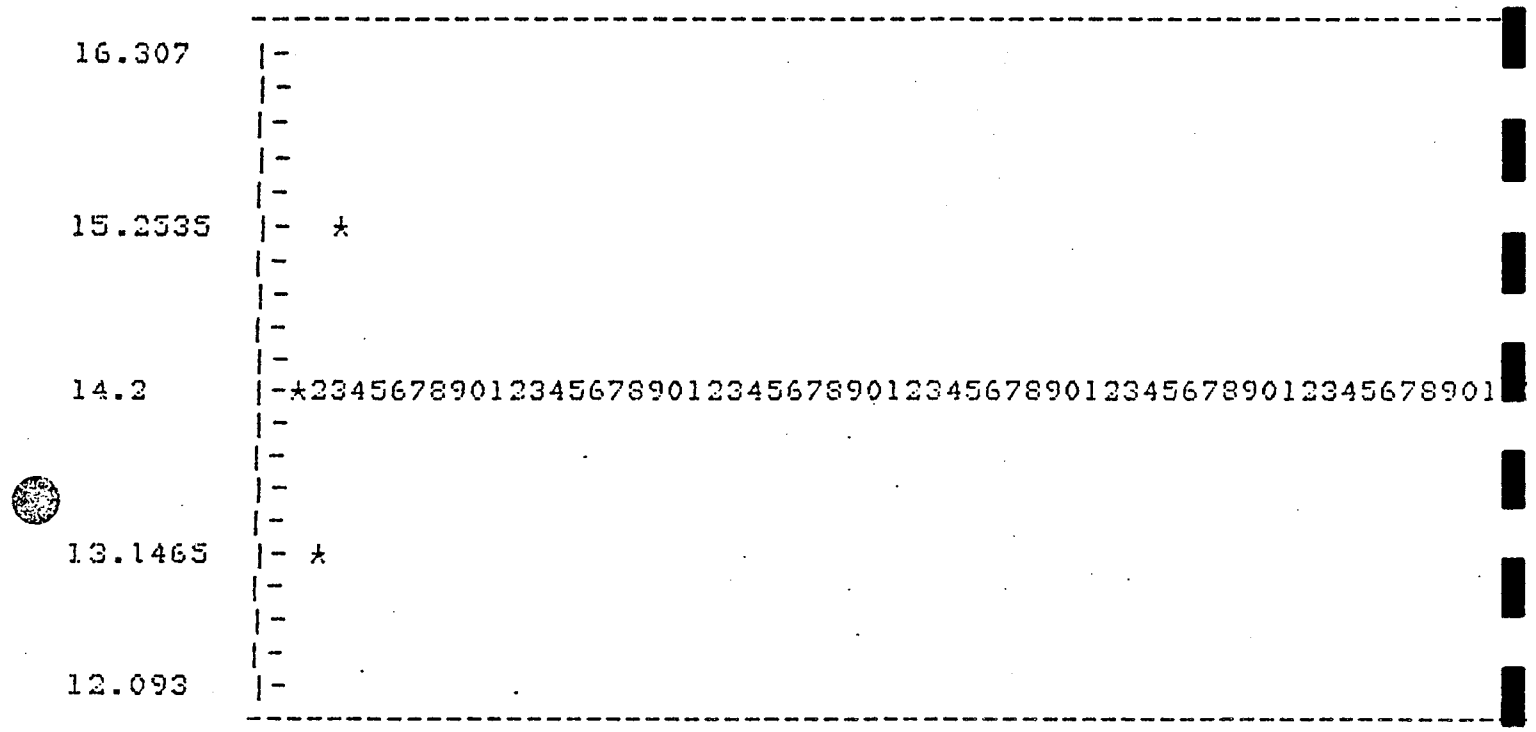
MEAN= 32.3333 , STD. DEV.= 3.1091 , C.C.= .0961 , S.E.M.= 1.2692
TRUE = 32.0 95% LIMITS = 27.1 - 36.9

HGSLU1 30-Jun-89 07:22 AM

DATA POINTS:

1	=	14.3
2	=	13.1
3	=	15.2

MEAN	=	14.2
STD. DEV.	=	1.0535
C.C.	=	.0741
S.E.M.	=	.6082



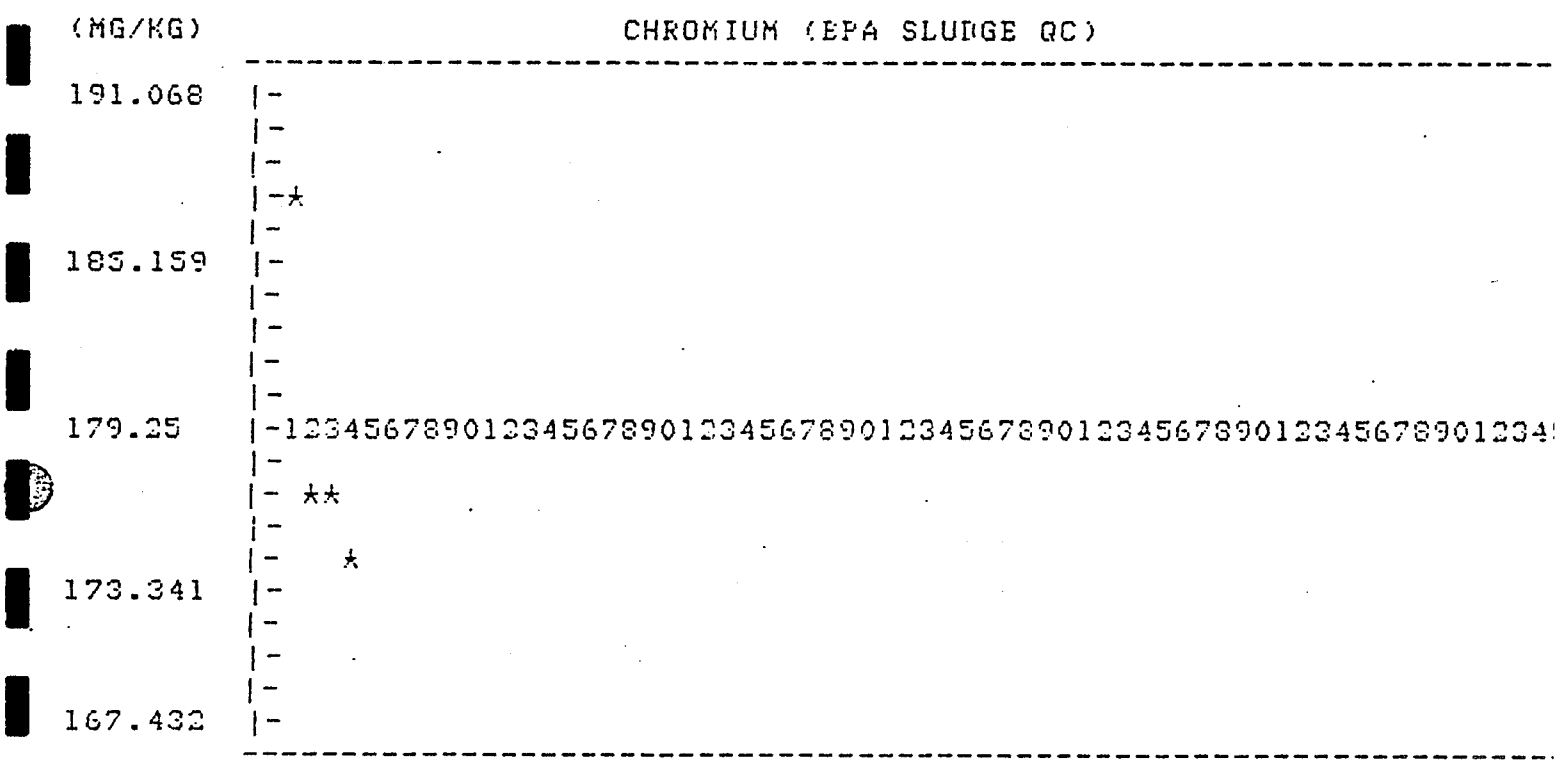
MEAN= 14.2 , STD. DEV.= 1.0535 , C.C.= .0741 , S.E.M.= .6082
TRUE = 16.3 95% LIMITS = 0 - 36.1

CRSLU1 30-Jun-89 08:22 AM

DATA POINTS:

1	=	188
2	=	177
3	=	177
4	=	175

MEAN	=	179.25
STD. DEV.	=	5.909
C.C.	=	.0329
S.E.M.	=	2.9545



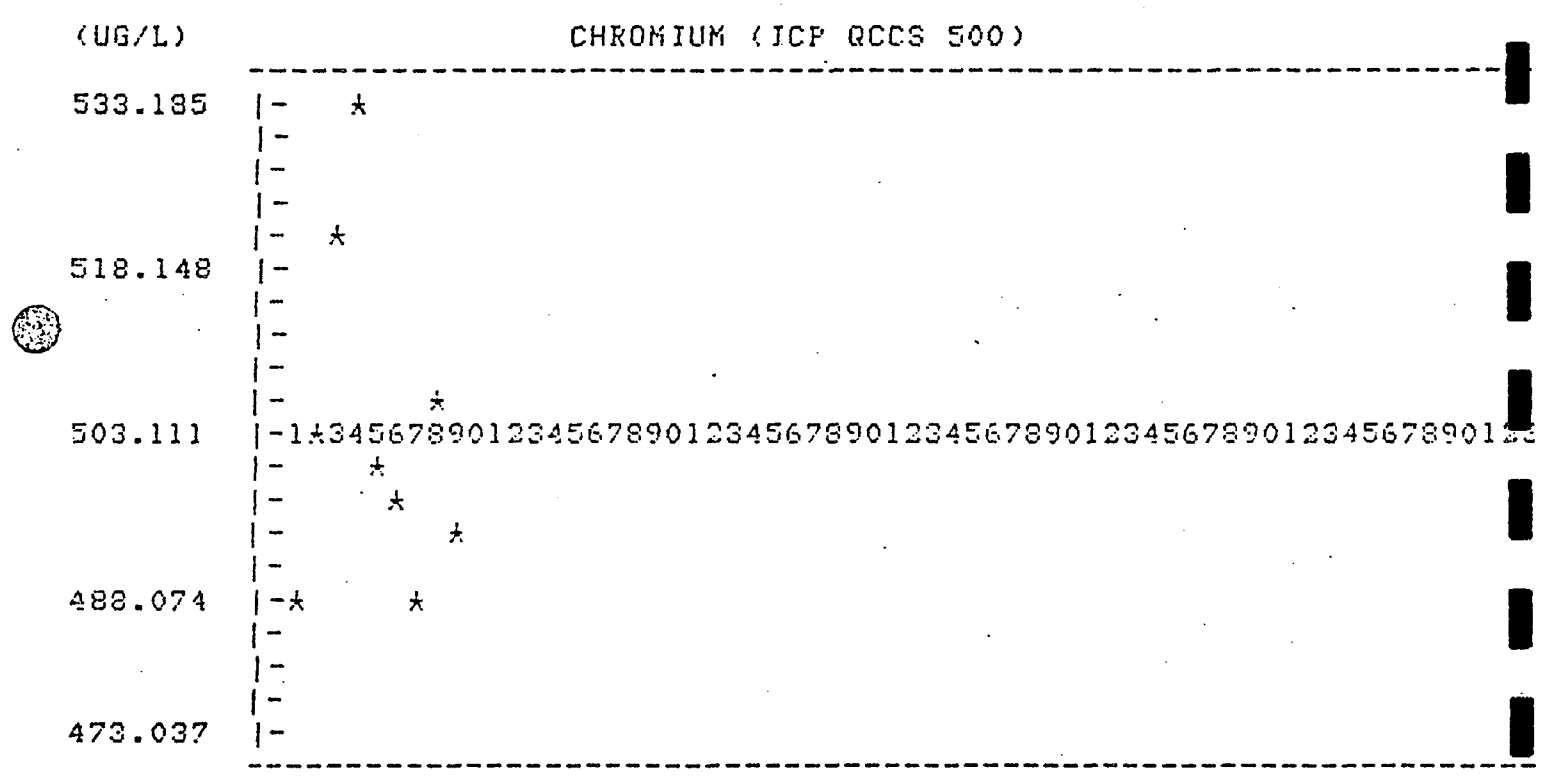
MEAN= 179.25 , STD. DEV.= 5.909 , C.C.= .0329 , S.E.M.= 2.9545
TRUE = 193 95% LIMITS = 150 - 246

CRQC 30-Jun-89 08:33 AM

DATA POINTS:

1	=	488
2	=	504
3	=	520
4	=	533
5	=	499
6	=	496
7	=	487
8	=	506
9	=	495

MEAN	=	503.111
STD. DEV.	=	13.0369
C.C.	=	.0298
S.E.M.	=	5.0123



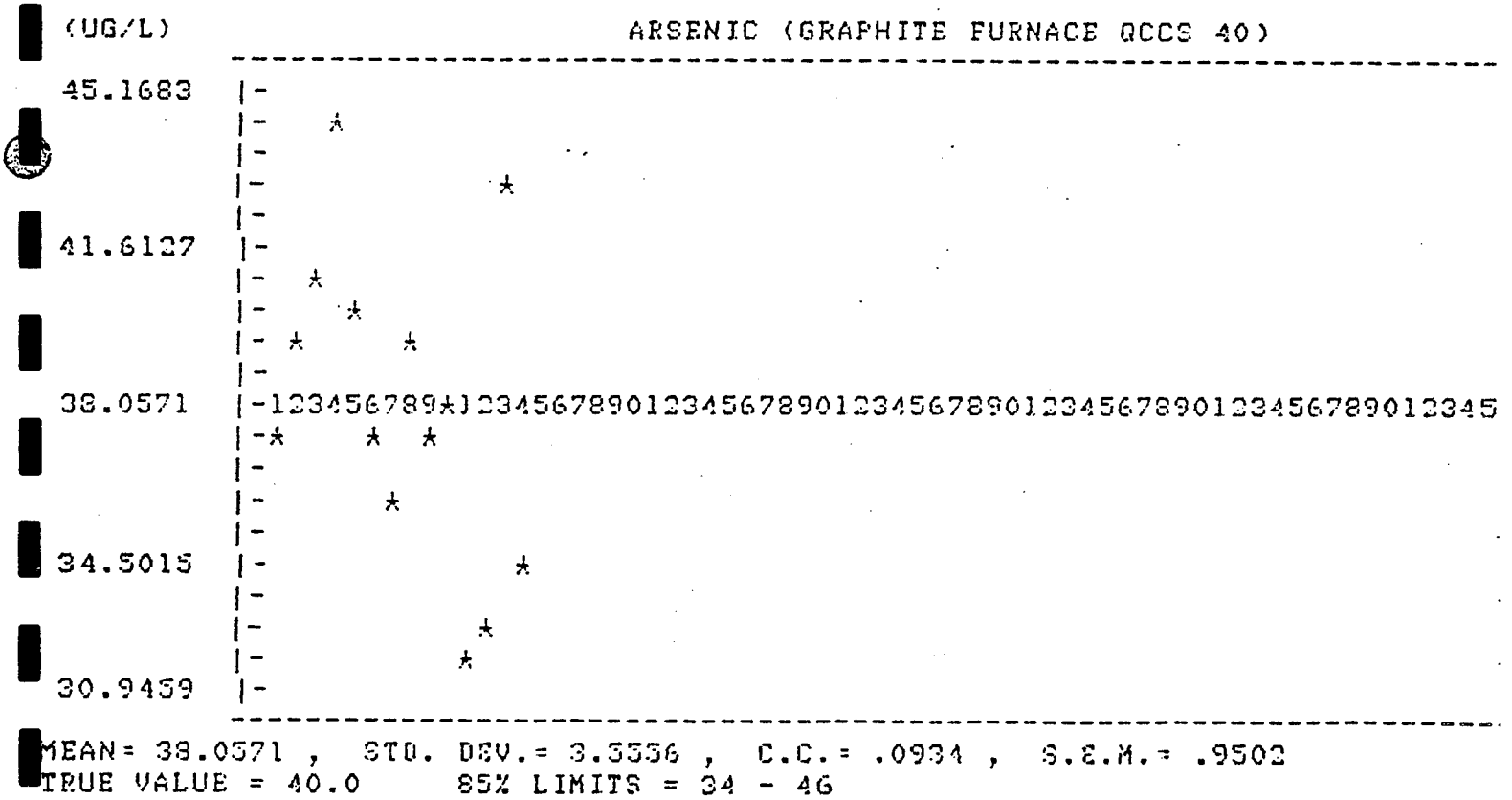
MEAN= 503.111 , STD. DEV.= 13.0369 , C.C.= .0298 , S.E.M.= 5.0123
TRUE = 500 85% LIMITS = 425 - 575

ASQC 29-Jun-89 08:56 AM

DATA POINTS:

1	=	37.3
2	=	39.7
3	=	41
4	=	44.6
5	=	40
6	=	37.2
7	=	35.6
8	=	39.6
9	=	37.2
10	=	38.2
11	=	32.3
12	=	32.8
13	=	42.8
14	=	34.5

MEAN	=	38.0571
STD. DEV.	=	3.5556
C.C.	=	.0934
S.E.M.	=	.9502



MEAN= 38.0571 , STD. DEV.= 3.5556 , C.C.= .0934 , S.E.M.= .9502
TRUE VALUE = 40.0 85% LIMITS = 34 - 46

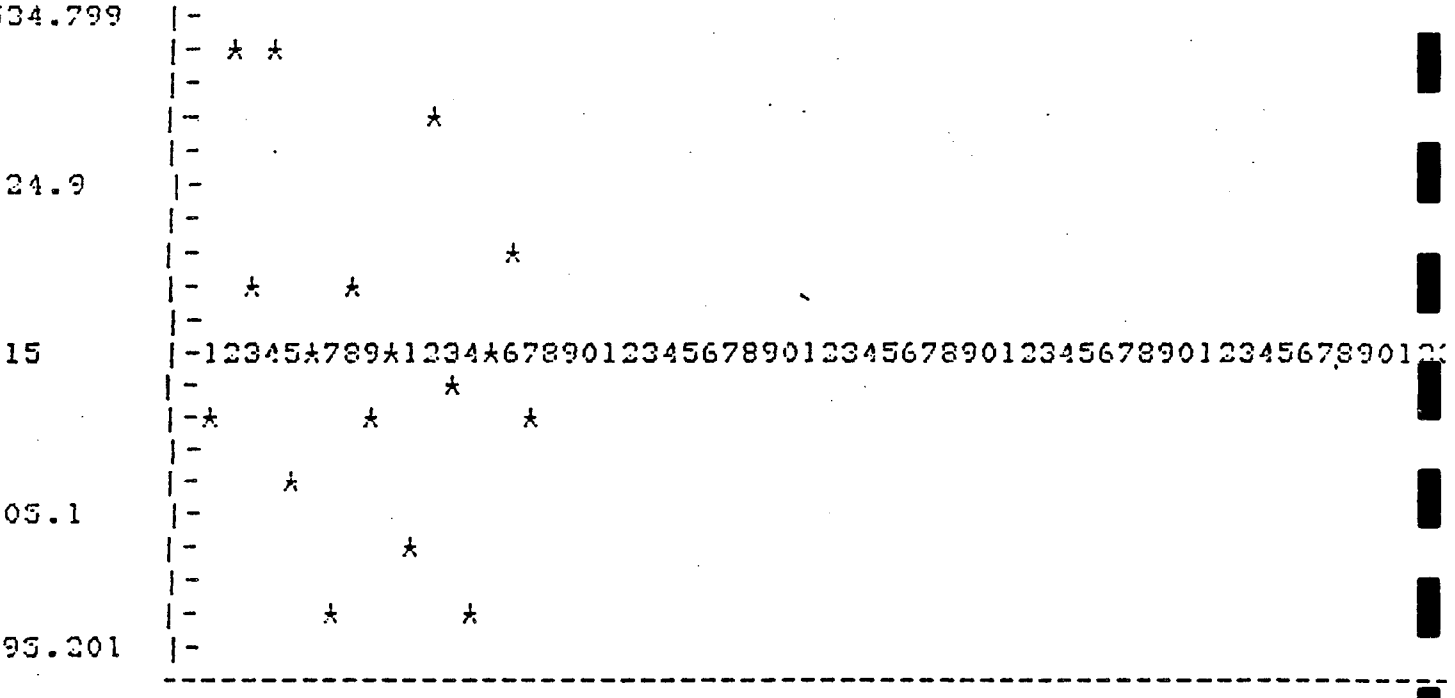
DAQC 29-Jun-89 10:59 AM

DATA POINTS:

1	=	511
2	=	533
3	=	518
4	=	533
5	=	508
6	=	515
7	=	499
8	=	519
9	=	512
10	=	514
11	=	504
12	=	528
13	=	513
14	=	500
15	=	515
16	=	521
17	=	512

MEAN	=	515
STD. DEV.	=	9.8996
C.C.	=	.0192
S.E.M.	=	2.401

(UG/L) BARIUM (ICP QCCS 500)



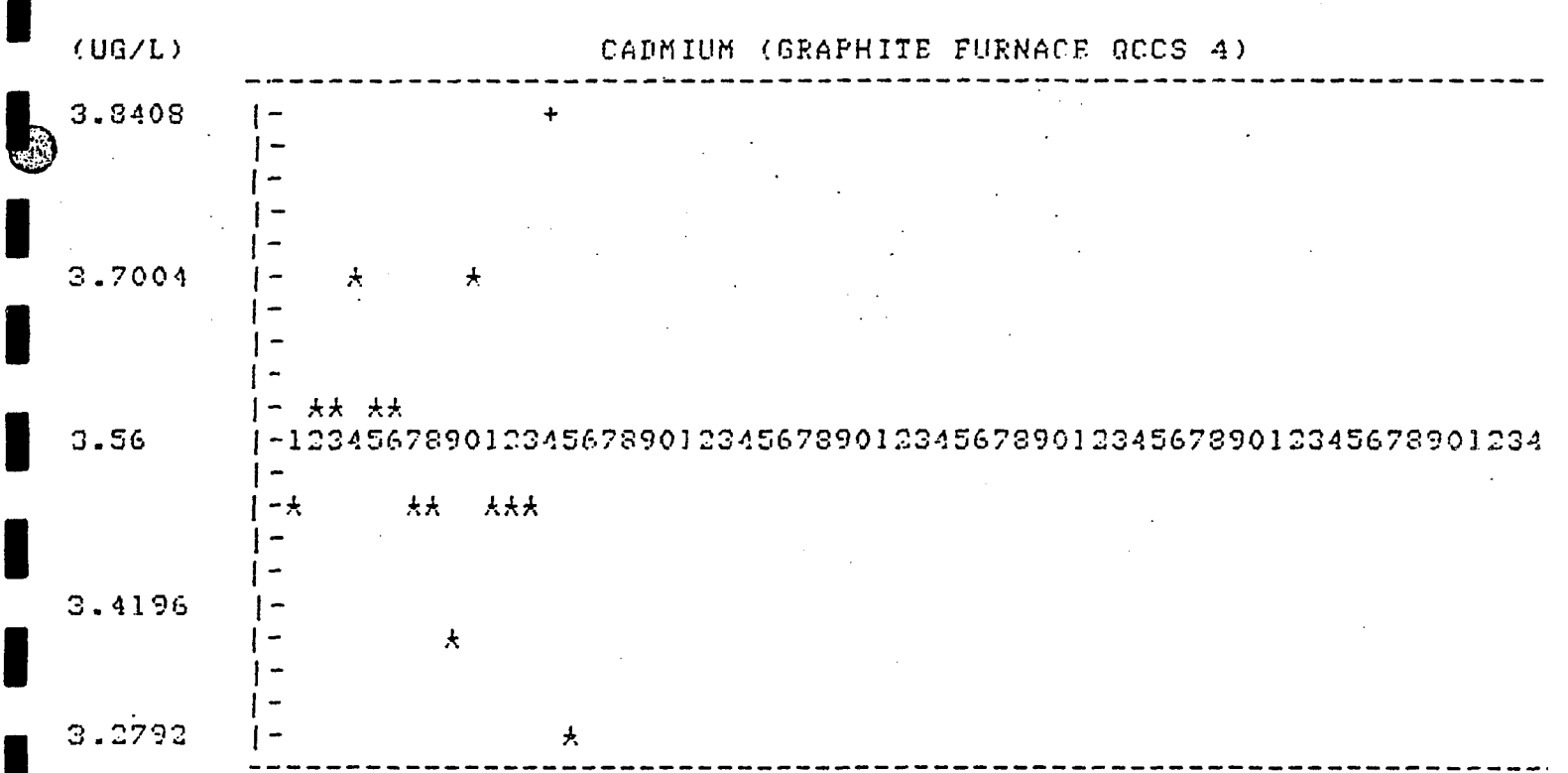
MEAN = 515 , STD. DEV. = 9.8996 , C.C. = .0192 , S.E.M. = 2.401
TRUE VALUE = 500 85% LIMITS = 425 - 575

CDQC 09-Jun-89 09:09 AM

DATA POINTS:

1	=	3.5
2	=	3.6
3	=	3.6
4	=	3.7
5	=	3.6
6	=	3.6
7	=	3.5
8	=	3.5
9	=	3.4
10	=	3.7
11	=	3.5
12	=	3.5
13	=	3.5
14	=	3.9
15	=	3.3

MEAN	=	3.56
STD. DEV.	=	.1404
C.C.	=	.0394
S.E.M.	=	.0362



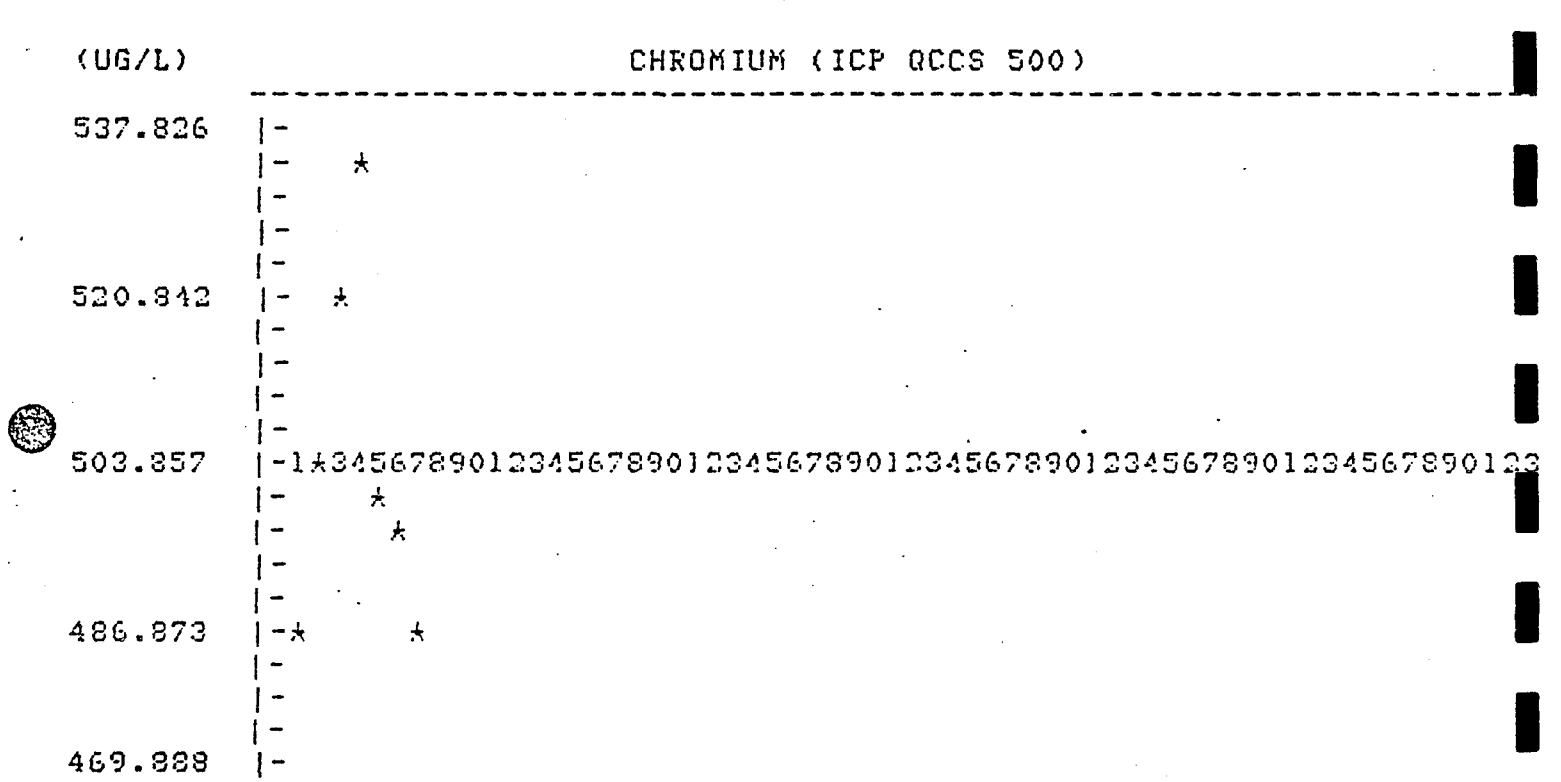
MEAN= 3.56 , STD. DEV.= .1404 , C.C.= .0394 , S.E.M.= .0362
TRUE = 4.0 85% LIMITS = 3.4 - 4.6

CRQC 09-Jun-89 09:12 AM

DATA POINTS:

1	=	488
2	=	504
3	=	520
4	=	533
5	=	499
6	=	496
7	=	487

MEAN	=	503.857
STD. DEV.	=	16.9845
C.C.	=	.0337
S.E.M.	=	6.4195



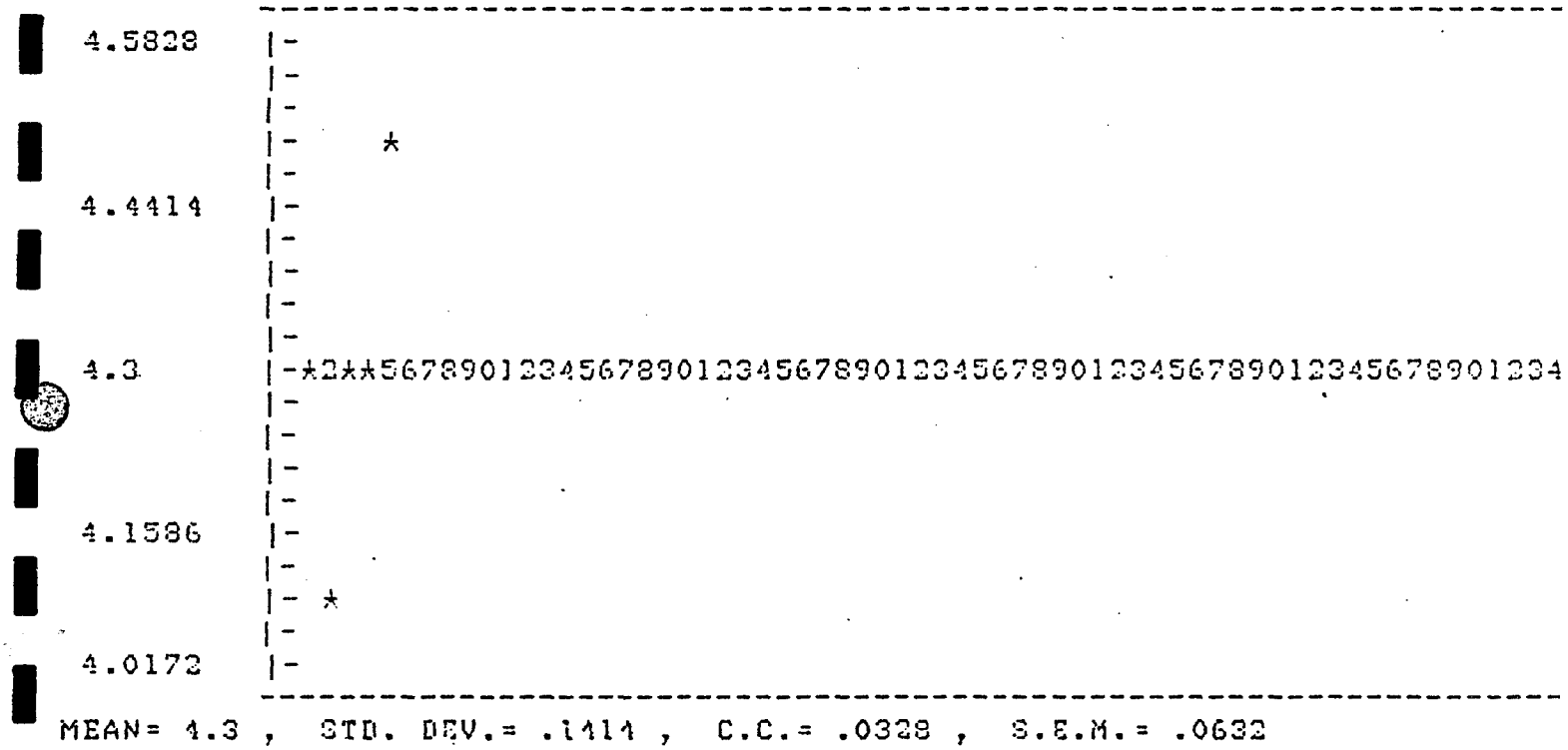
MEAN= 503.857 , STD. DEV.= 16.9845 , C.C.= .0337 , S.E.M.= 6.4195
TRUE = 500 85% LIMITS = 425 - 575

CRQC1 29-Jun-89 09:13 AM

DATA POINTS:

1	=	4.3
2	=	4.1
3	=	4.3
4	=	4.3
5	=	4.5

MEAN	=	4.3
STD. DEV.	=	.1414
C.C.	=	.0328
S.E.M.	=	.0632



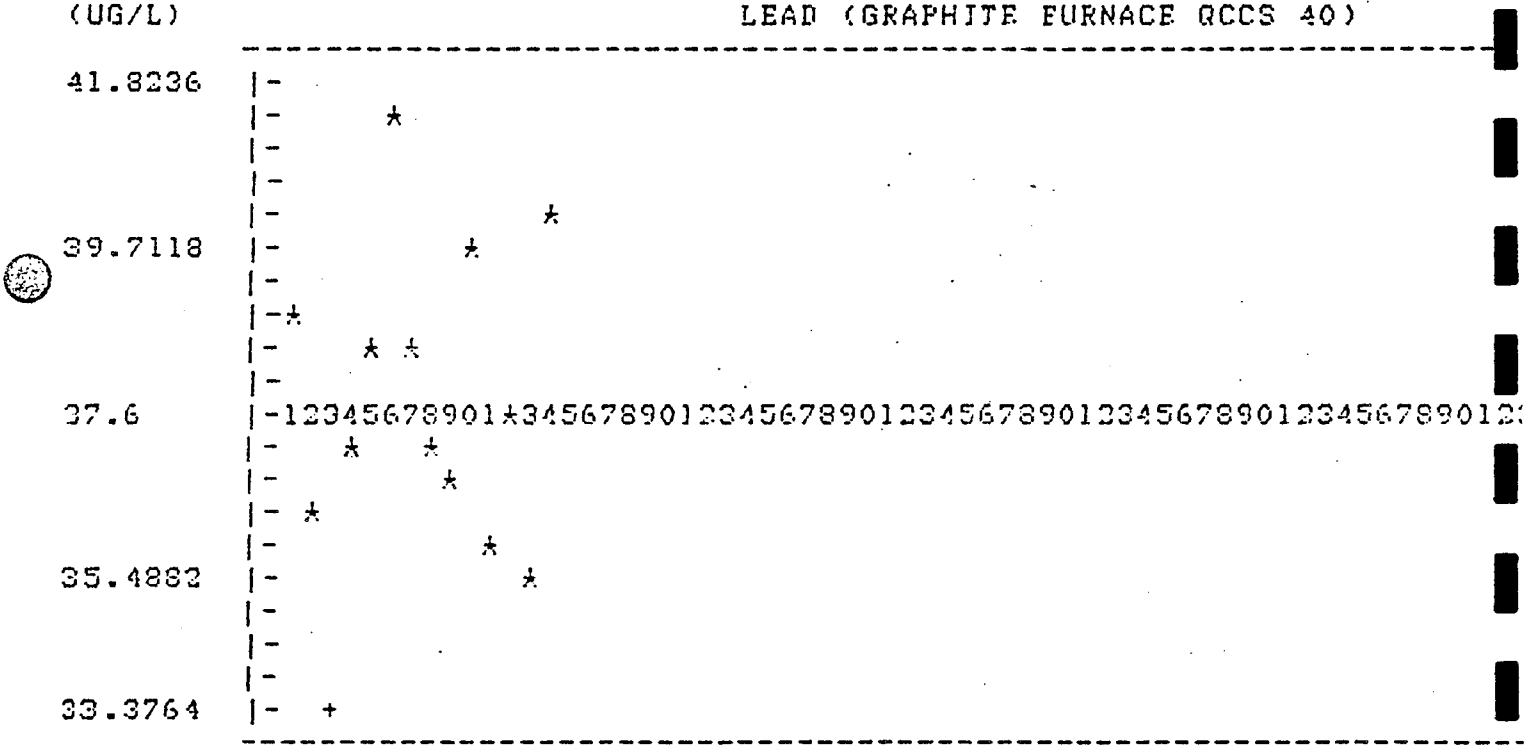
MEAN= 4.3 , STD. DEV.= .1414 , C.C.= .0328 , S.E.M.= .0632
TRUE = 4.0 85% LIMITS = 3.4 - 4.6

FBQC 29-Jun-89 09:03 AM

DATA POINTS:

1	=	38.8
2	=	36.2
3	=	33.5
4	=	37
5	=	38.6
6	=	41.5
7	=	38.4
8	=	37
9	=	36.7
10	=	39.5
11	=	35.7
12	=	37.8
13	=	35.4
14	=	40.3

MEAN	=	37.6
STD. DEV.	=	2.1118
C.C.	=	.0561
S.E.M.	=	.5644



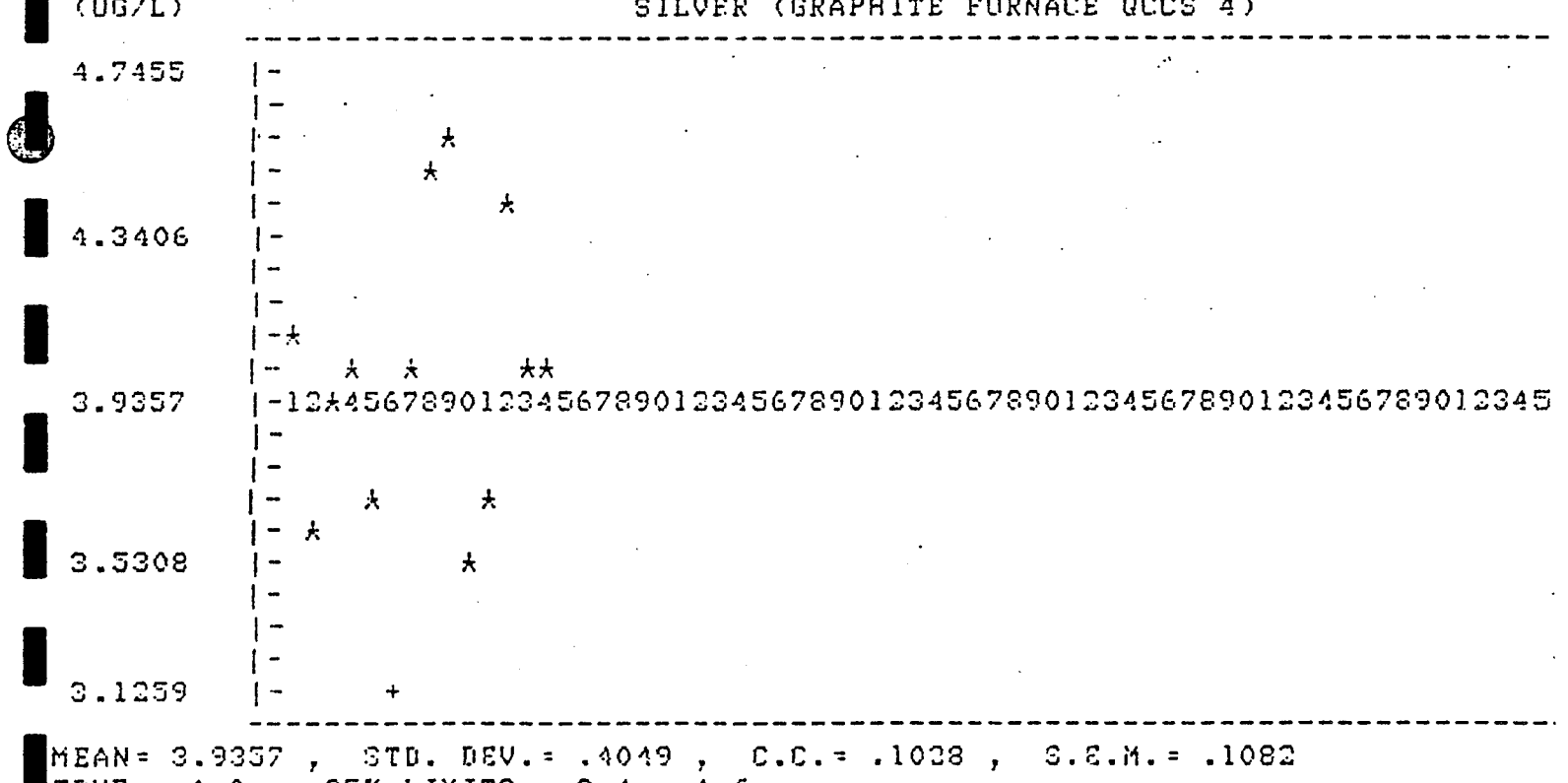
MEAN= 37.6 , STD. DEV.= 2.1118 , C.C.= .0561 , S.E.M.= .5644
TRUE = 40.0 85% LIMITS = 34 - 46

AGQC 29-Jun-89 09:18 AM

DATA POINTS:

1	=	4.1
2	=	3.6
3	=	3.9
4	=	4
5	=	3.7
6	=	3.1
7	=	4
8	=	4.5
9	=	4.6
10	=	3.5
11	=	3.7
12	=	4.4
13	=	4
14	=	4

MEAN	=	3.9357
STD. DEV.	=	.4049
C.C.	=	.1028
S.E.M.	=	.1082

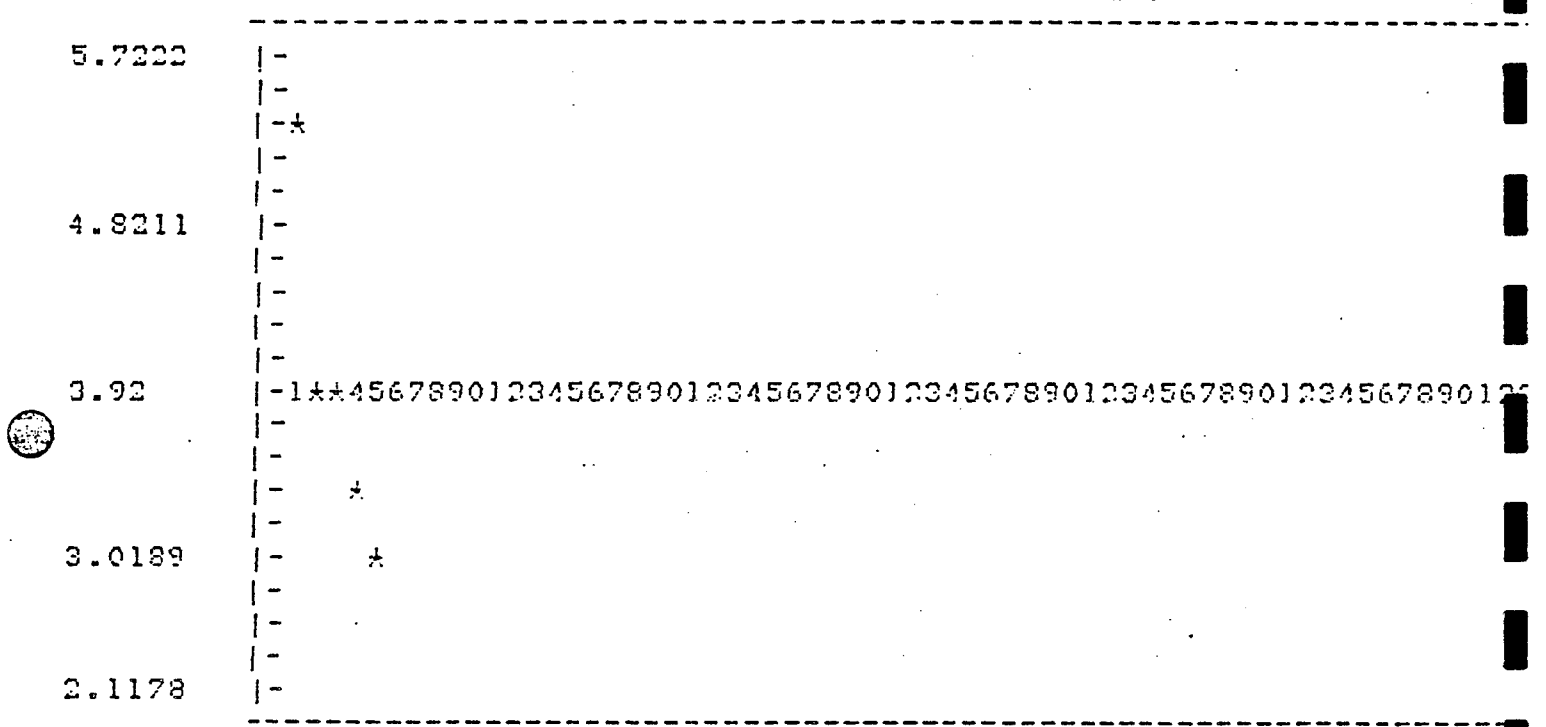


MEAN= 3.9357 , STD. DEV.= .4049 , C.C.= .1028 , S.E.M.= .1082
TRUE = 4.0 85% LIMITS = 3.4 - 4.6

DATA POINTS:

1	=	5.4
2	=	3.9
3	=	3.9
4	=	3.3
5	=	3.1

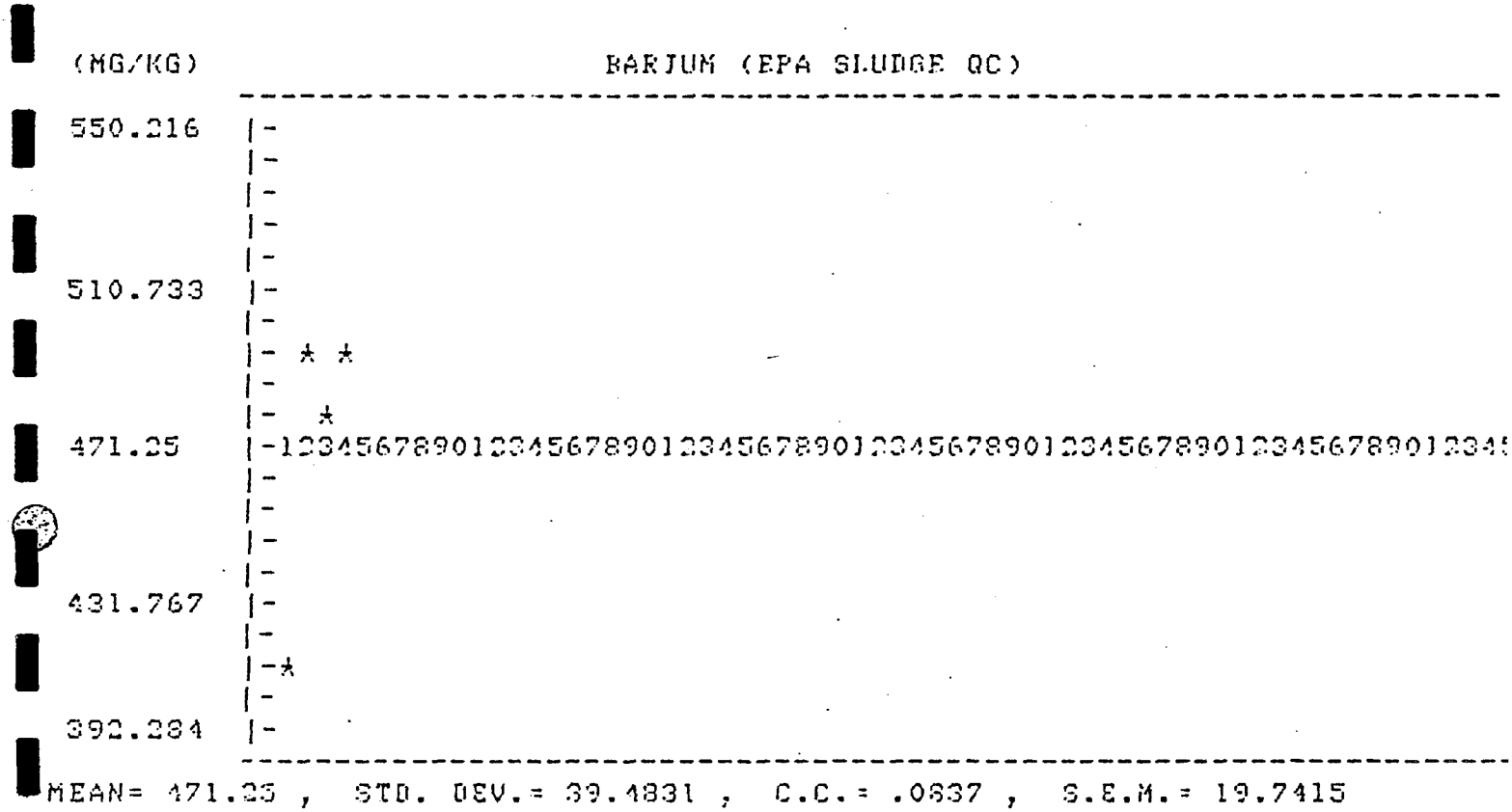
MEAN	=	3.92
STD. DEV.	=	.9011
C.C.	=	.2298
S.E.M.	=	.4029



DATA POINTS:

1	=	413
2	=	498
3	=	481
4	=	493

MEAN	=	471.25
STD. DEV.	=	39.4831
C.C.	=	.0837
S.E.M.	=	19.7415

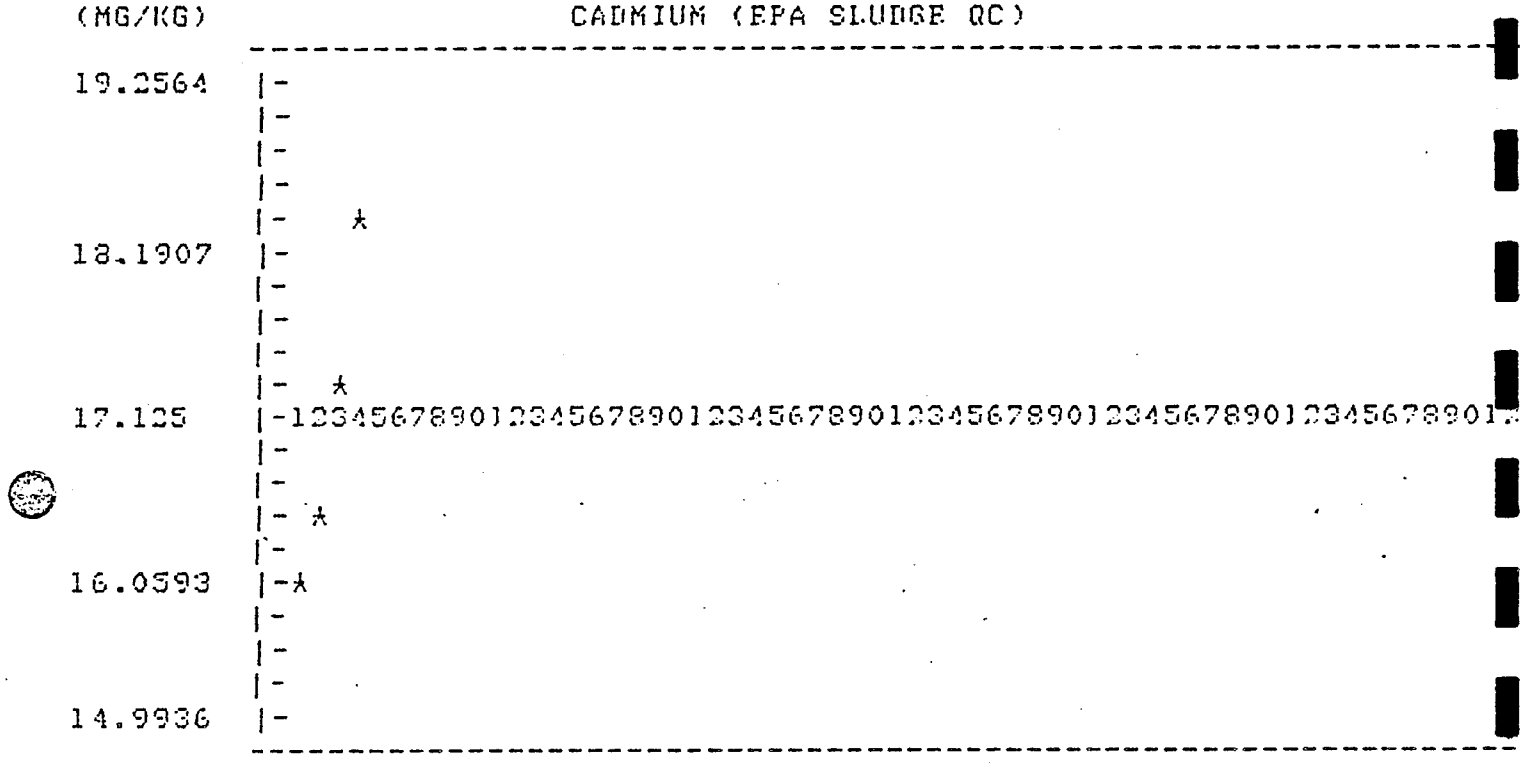


MEAN= 471.25 , STD. DEV.= 39.4831 , C.C.= .0837 , S.E.M.= 19.7415
NO TRUE VALUE DATA GIVEN WITH SAMPLE

DATA POINTS:

1	=	16.1
2	=	16.5
3	=	17.4
4	=	18.5

MEAN	=	17.125
STD. DEV.	=	1.0657
C.C.	=	.0622
S.E.M.	=	.5328

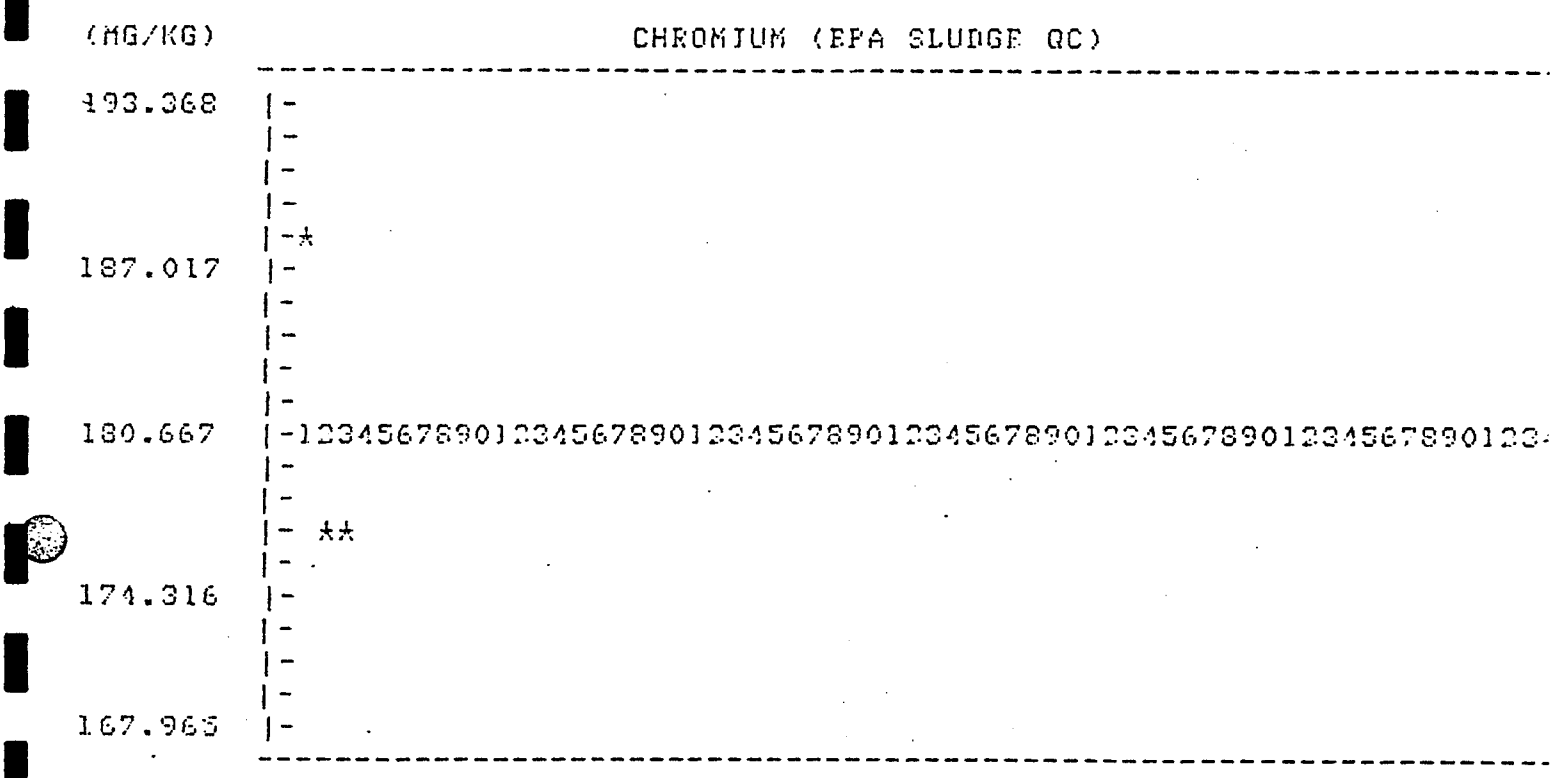


MEAN= 17.125 , STD. DEV.= 1.0657 , C.C.= .0622 , S.E.M.= .5328
TRUE = 19.1 95% LIMITS = 10.5 - 27.8

DATA POINTS:

1	=	188
2	=	177
3	=	177

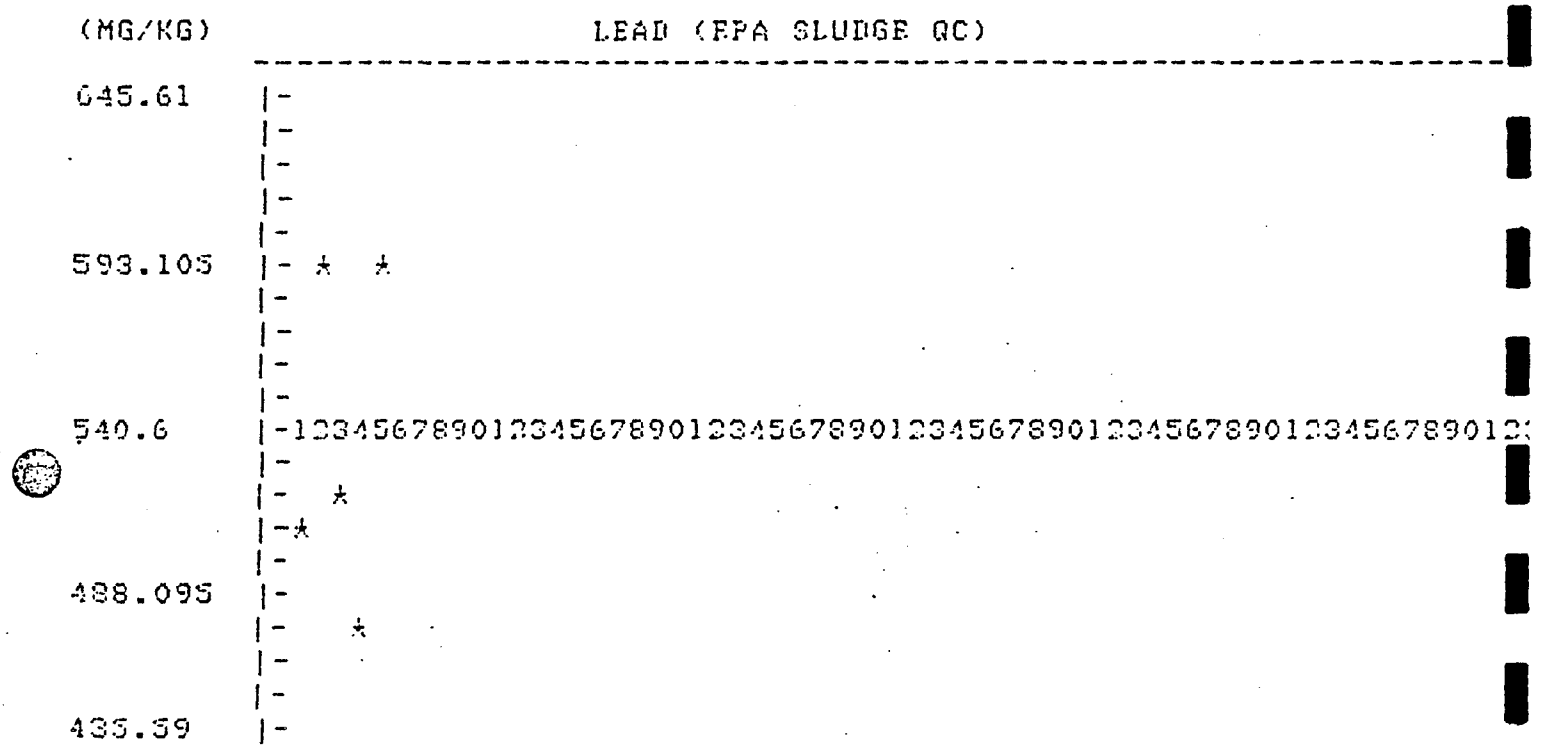
MEAN	=	180.667
STD. DEV.	=	6.3508
C.C.	=	.0351
S.E.M.	=	3.6666



DATA POINTS:

1	=	512
2	=	598
3	=	518
4	=	481
5	=	594

MEAN	=	540.6
STD. DEV..	=	53.5052
C.C.	=	.0971
S.E.M.	=	23.481

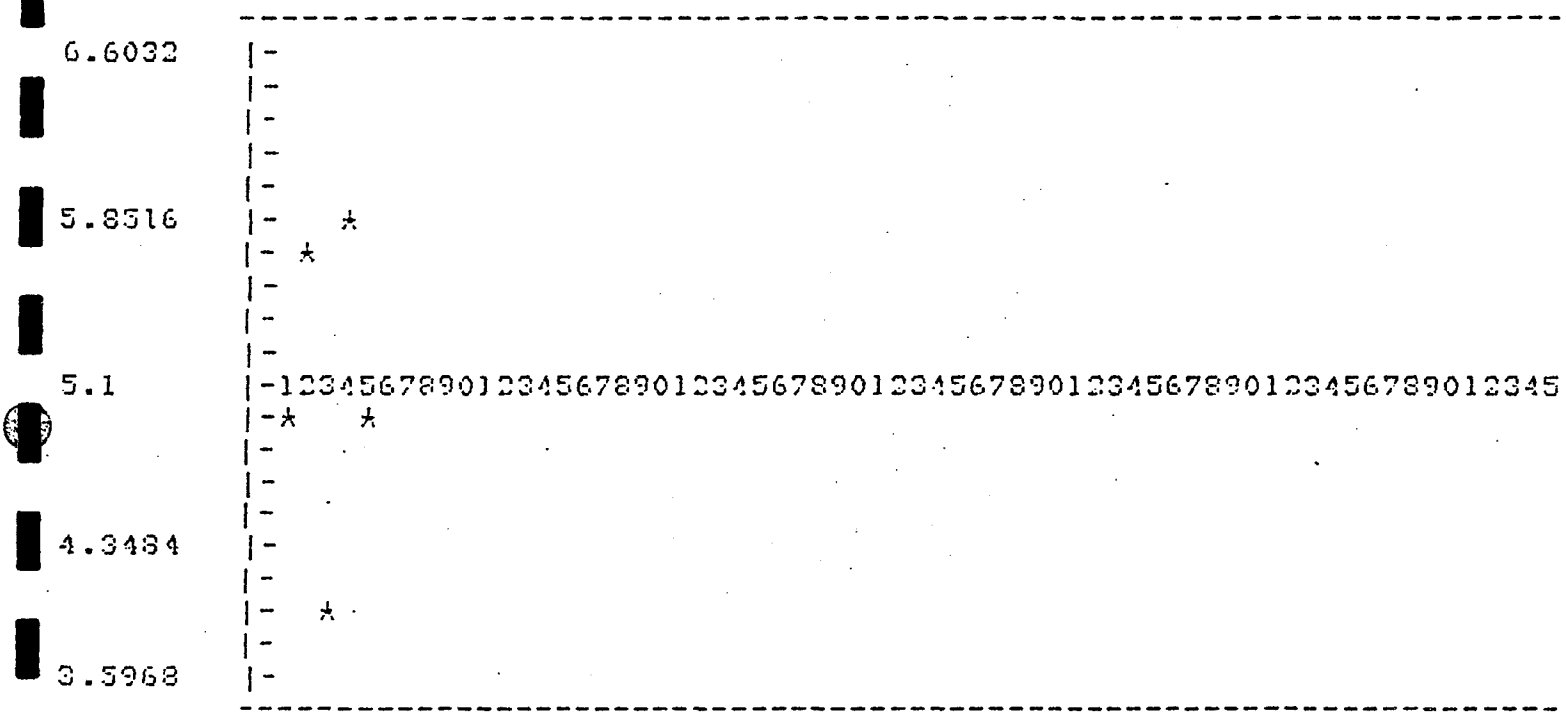


MEAN= 540.6 , STD. DEV.= 53.5052 , C.C.= .0971 , S.E.M.= 23.481
TRUE = 526 95% LIMITS = 372 - 680

DATA POINTS:

1	=	5
2	=	5.7
3	=	4
4	=	5.9
5	=	4.9

MEAN	=	5.1
STD. DEV.	=	.7516
C.C.	=	.1473
S.E.M.	=	.3361

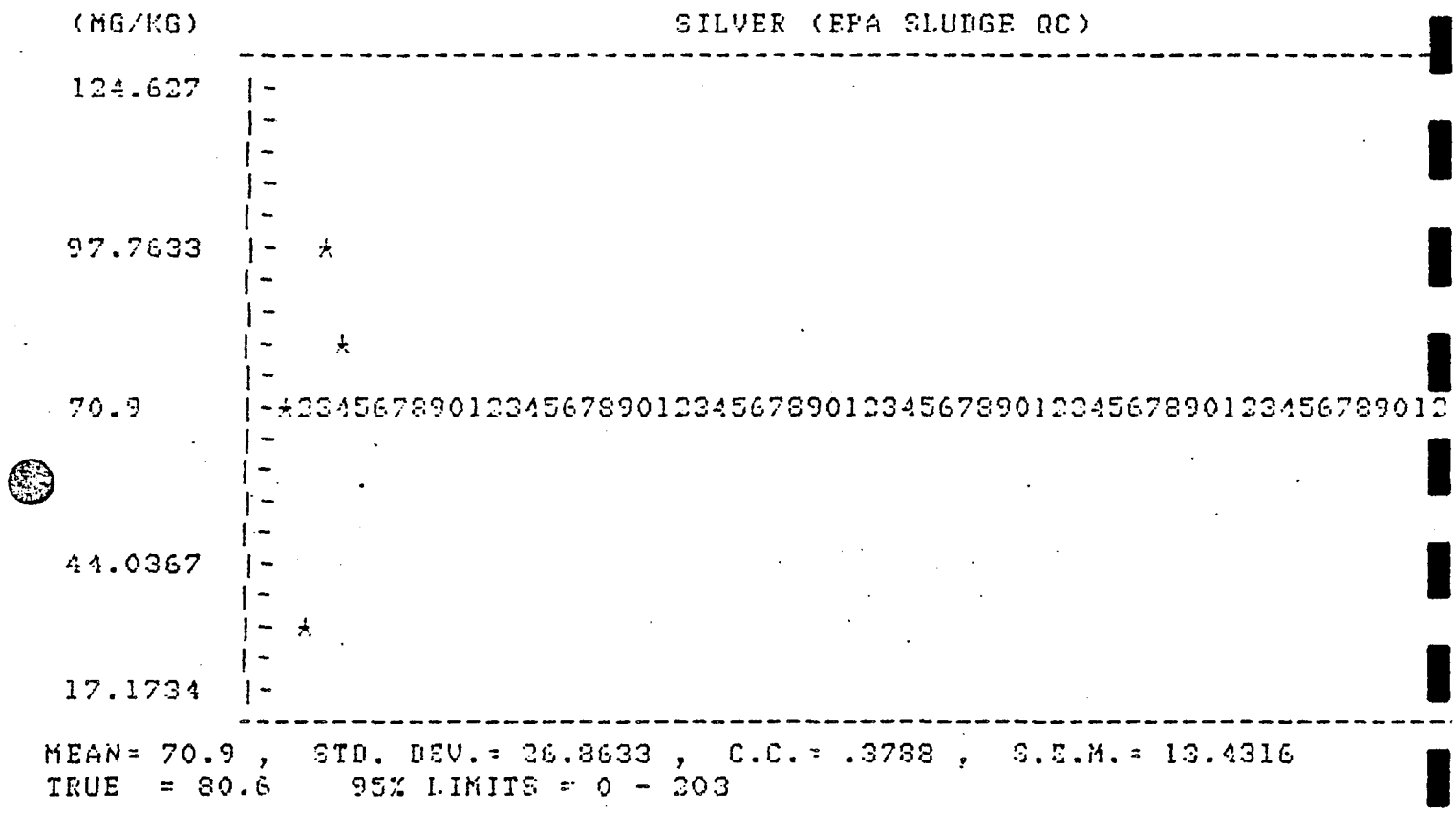


MEAN= 5.1 , STD. DEV.= .7516 , C.C.= .1473 , S.E.M.= .3361
NO TRUE VALUE DATA GIVEN

DATA POINTS:

1	=	69.6
2	=	34
3	=	96
4	=	84

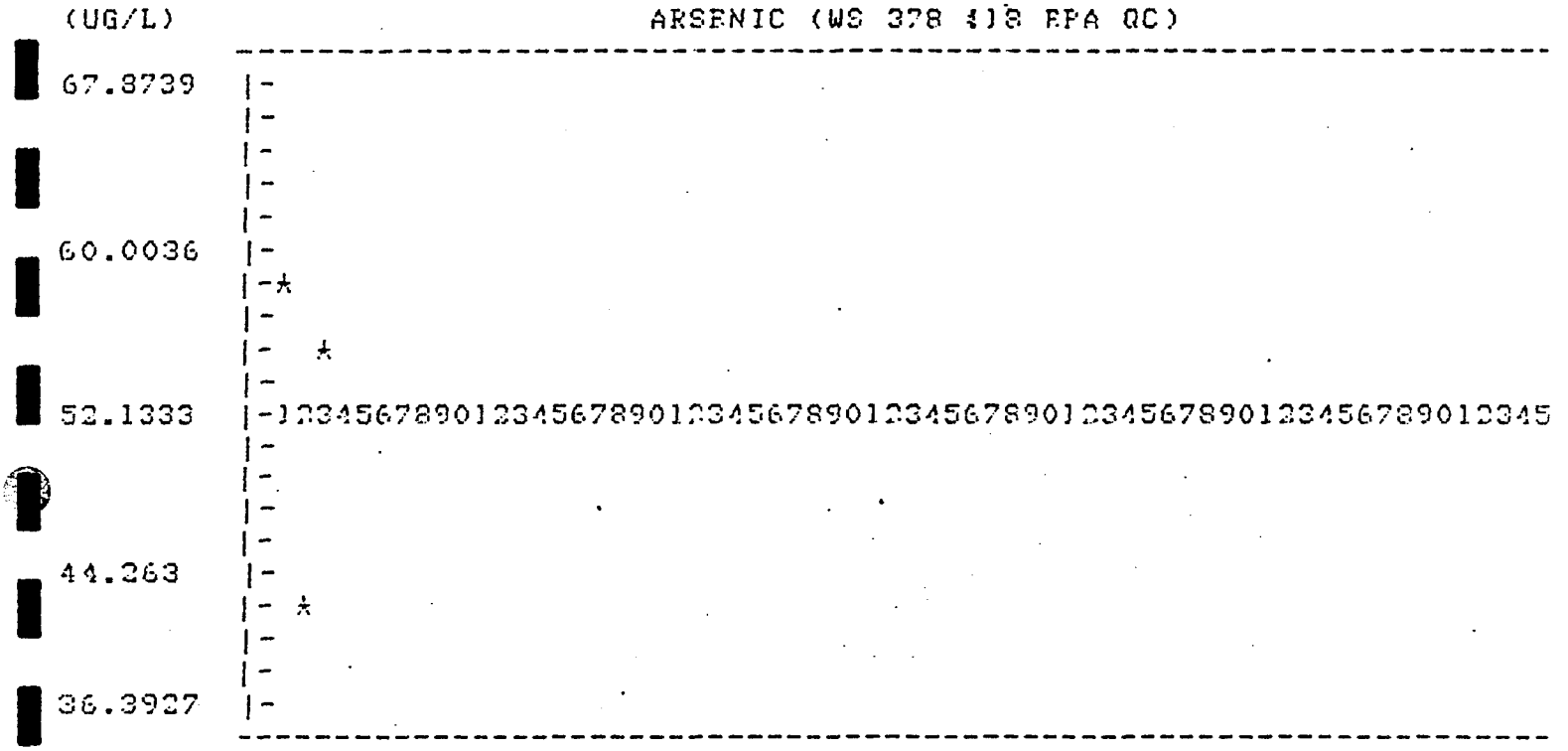
MEAN	=	70.9
STD. DEV.	=	26.8633
C.C.	=	.3788
S.E.M.	=	13.4316



MEAN= 70.9 , STD. DEV.= 26.8633 , C.C.= .3788 , S.E.M.= 13.4316
TRUE = 80.6 95% LIMITS = 0 - 203

DATA POINTS:

```
1     =    58.4
2     =    43.3
3     =    54.7
-----------------------
MEAN        =    52.1333
STD. DEV.   =    7.8703
C.C.        =    .1509
S.E.M.      =    4.5439
```



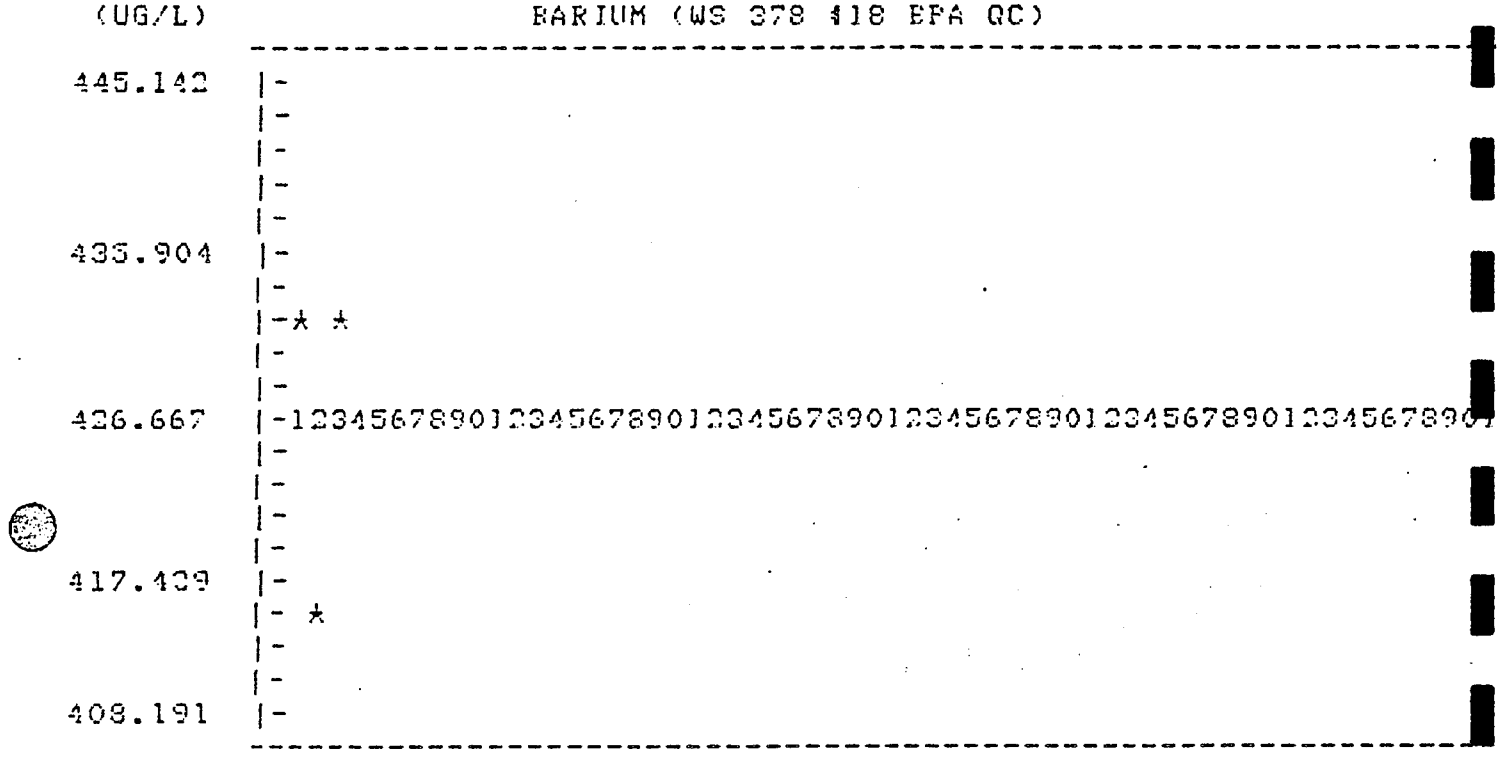

```
MEAN= 52.1333 ,  STD. DEV.= 7.8703 ,  C.C.= .1509 ,  S.E.M.= 4.5439
TRUE = 51.0  95% LIMITS = 41.6 - 58.7
```

WSBA1 29-Jun-89 06:55 AM

DATA POINTS:

1	=	432
2	=	416
3	=	432

MEAN	=	426.667
STD. DEV.	=	9.2376
C.C.	=	.0216
S.E.M.	=	5.3333



MEAN= 426.667 , STD. DEV.= 9.2376 , C.C.= .0216 , S.E.M.= 5.3333
TRUE = 389 95% LIMITS = 330 - 443

DATA POINTS:

1	=	5.2
2	=	5.2
3	=	5

MEAN	=	5.1333
STD. DEV.	=	.1154
C.C.	=	.0224
S.E.M.	=	.0666

(UG/L) CADMIUM (WS 378 #18 EPA QC)

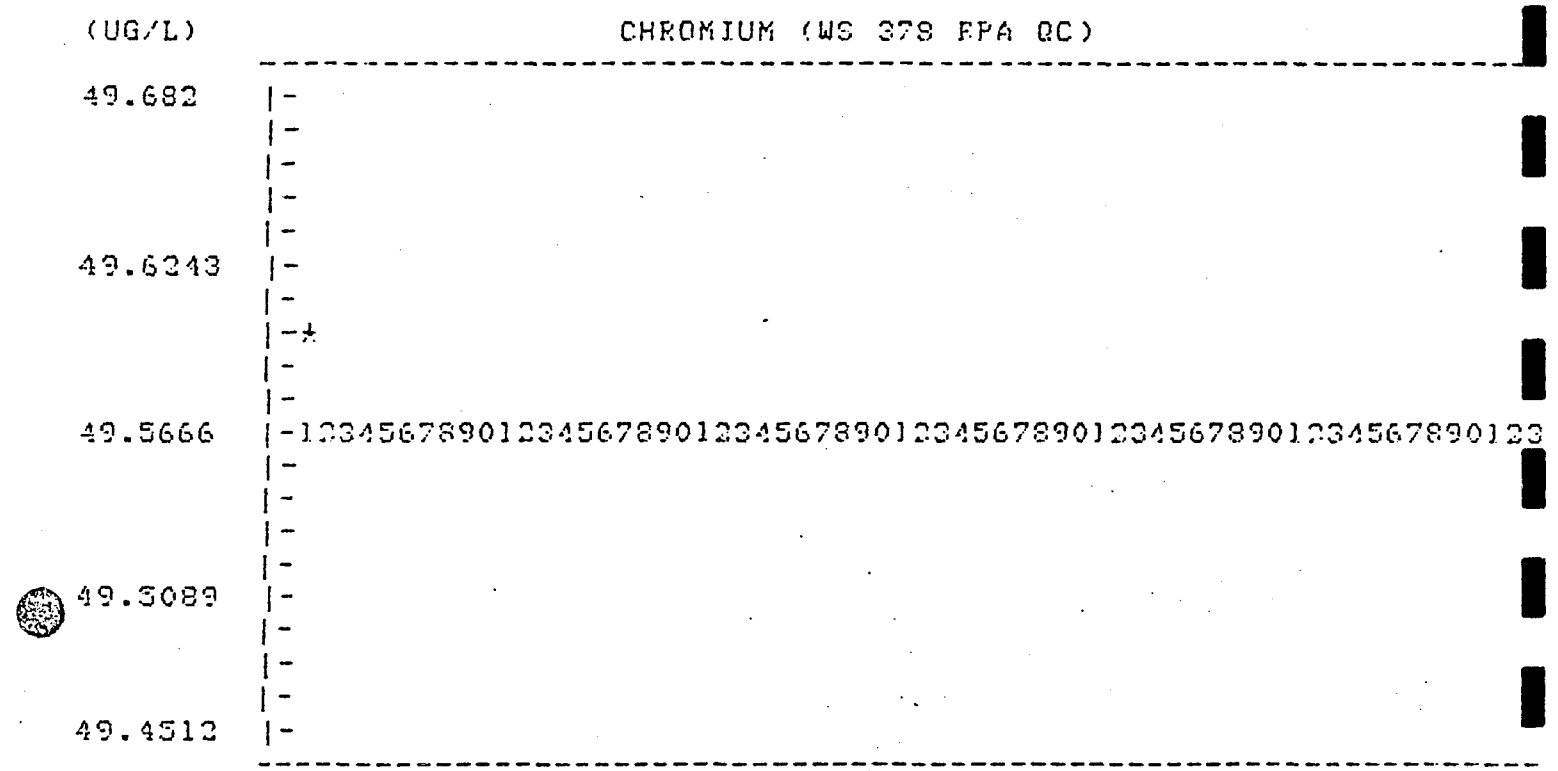
```
5.3641 |-
       |-
       |-
       |-
       |-
5.2487 |-
       |-
       |-**
       |-
       |-
5.1333 |-1234567890123456789012345678901234567890123456789012345678901234567890123456789012345
       |-
       |-
       |-
       |-
5.0179 |-
       |-   *
       |-
       |-
4.9025 |-
```

MEAN= 5.1333 , STD. DEV.= .1154 , C.C.= .0224 , S.E.M.= .0666
TRUE = 5.8 95% LIMITS = 4.44 - 6.42

DATA POINTS:

1 = 49.6

MEAN	= 49.6
STD. DEV.	= 0.0
C.C.	= 0.0
S.E.M.	= 0.0



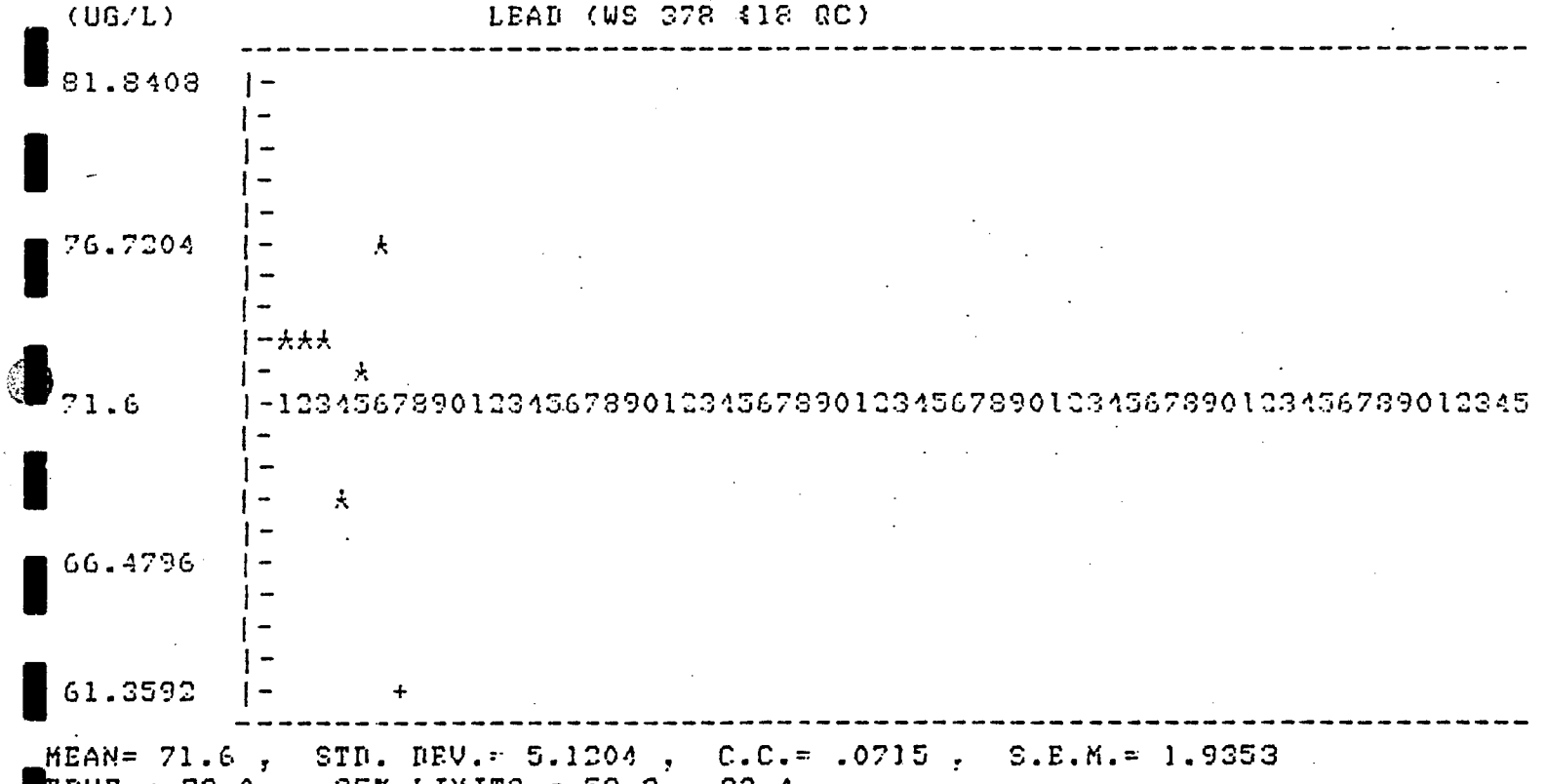
MEAN= 49.6 , STD. DEV.= 0.0 , C.C.= 0.0 , S.E.M.= 0.0
TRUE = 53.0 95% LIMITS = 45.4 - 60.6

WSPB1 29-Jun-89 07:08 AM

DATA POINTS:

1	=	73.8
2	=	74.1
3	=	73.9
4	=	68.8
5	=	72.6
6	=	76.7
7	=	61.3

MEAN	=	71.6
STD. DEV.	=	5.1204
C.C.	=	.0715
S.E.M.	=	1.9353



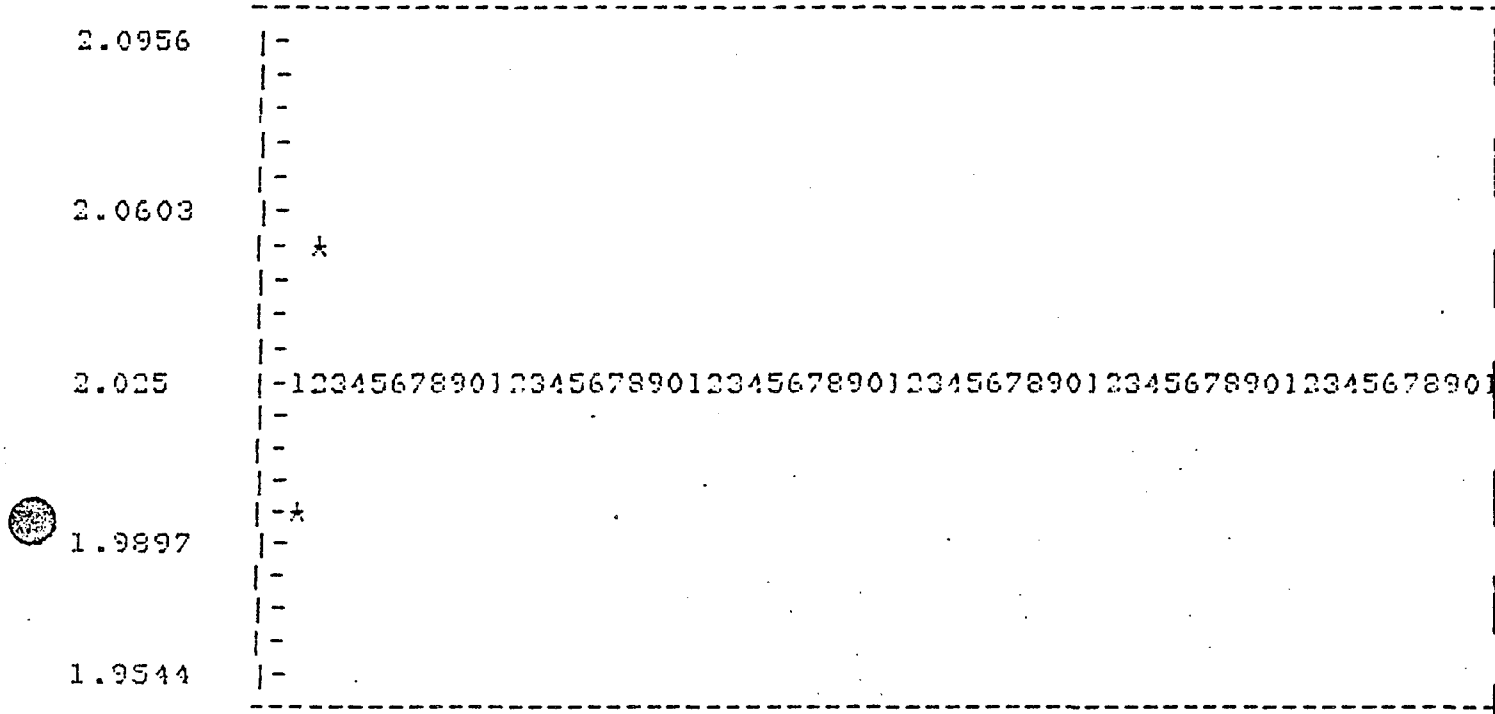
MEAN= 71.6 , STD. DEV.= 5.1204 , C.C.= .0715 , S.E.M.= 1.9353
TRUE = 72.0 95% LIMITS = 59.3 - 82.4

WSHG1 29-Jun-89 07:13 AM

DATA POINTS:

1 = 2
2 = 2.05

MEAN = 2.025
STD. DEV. = .0353
C.C. = .0174
S.E.M. = .0249

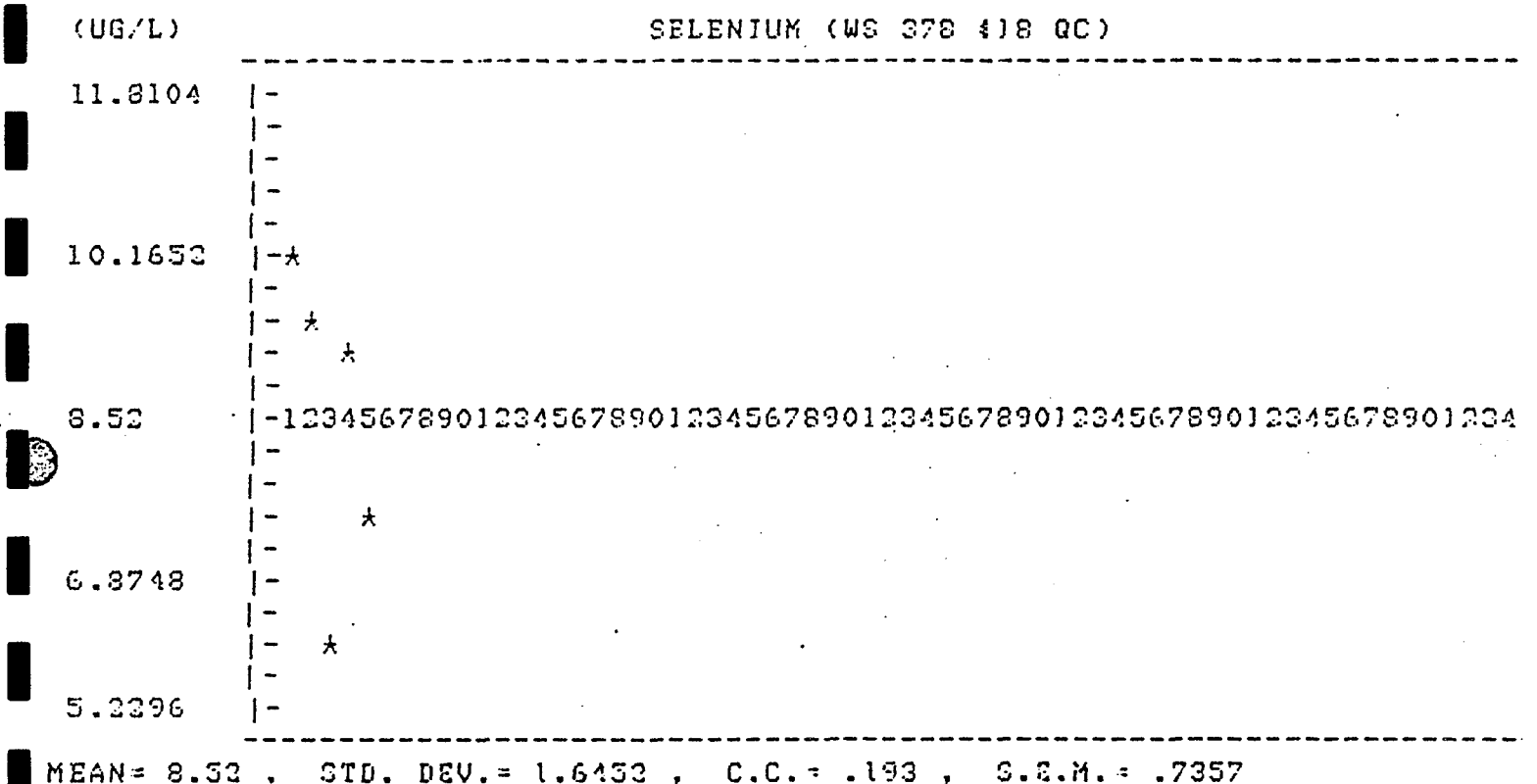


MEAN= 2.025 , STD. DEV.= .0353 , C.C.= .0174 , S.E.M.= .0249
TRUE = 3.0 95% LIMITS = 2.1 - 3.8

DATA POINTS:

1	=	10.3
2	=	9.4
3	=	6.2
4	=	9.2
5	=	7.5

MEAN	=	8.52
STD. DEV.	=	1.6452
C.C.	=	.193
S.E.M.	=	.7357



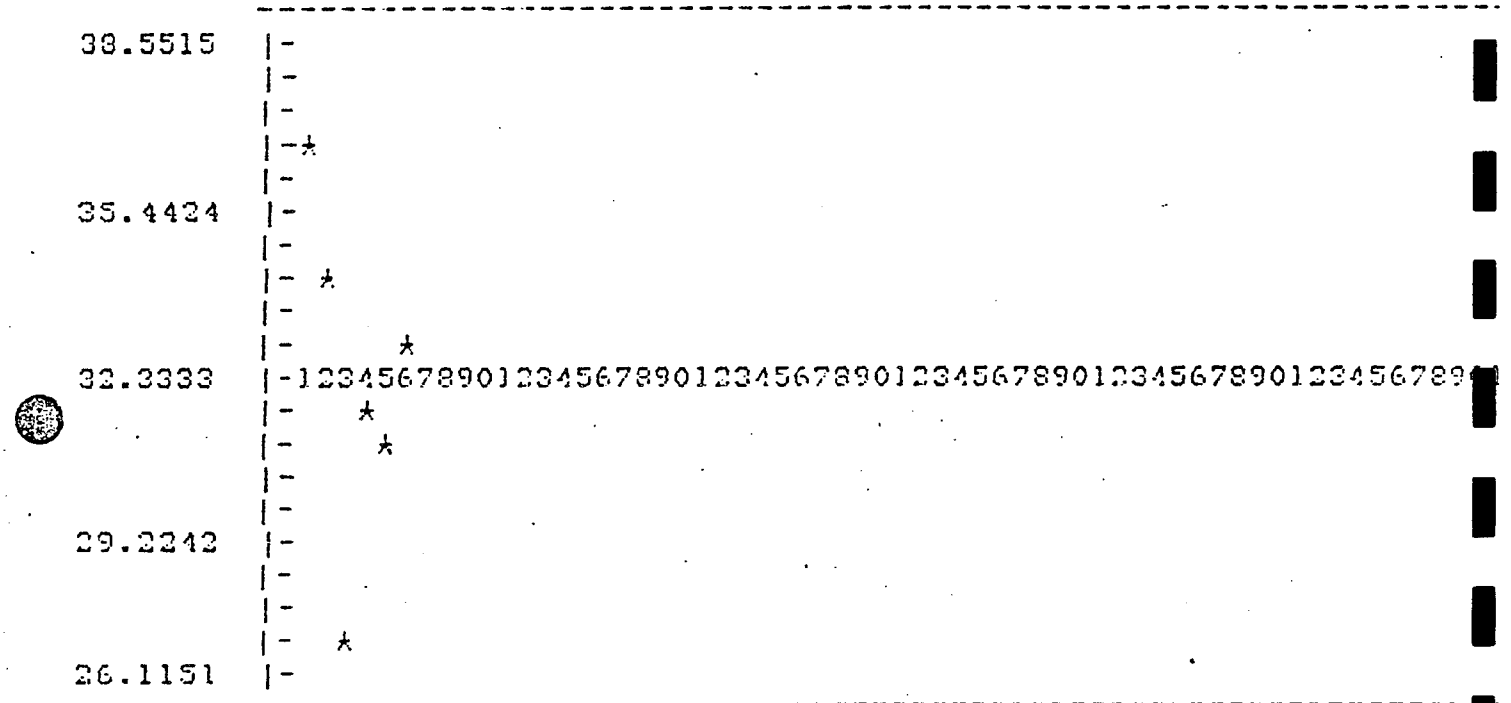
MEAN= 8.52 , STD. DEV.= 1.6452 , C.C.= .193 , S.E.M.= .7357
TRUE = 8.1 95% LIMITS = 5.78 - 10.2

WSAG1 29-Jun-89 07:18 AM

DATA POINTS:

1	=	36.5
2	=	34.5
3	=	27.5
4	=	31.5
5	=	31
6	=	33

MEAN	=	32.3333
STD. DEV.	=	3.1091
C.C.	=	.0961
S.E.M.	=	1.2692

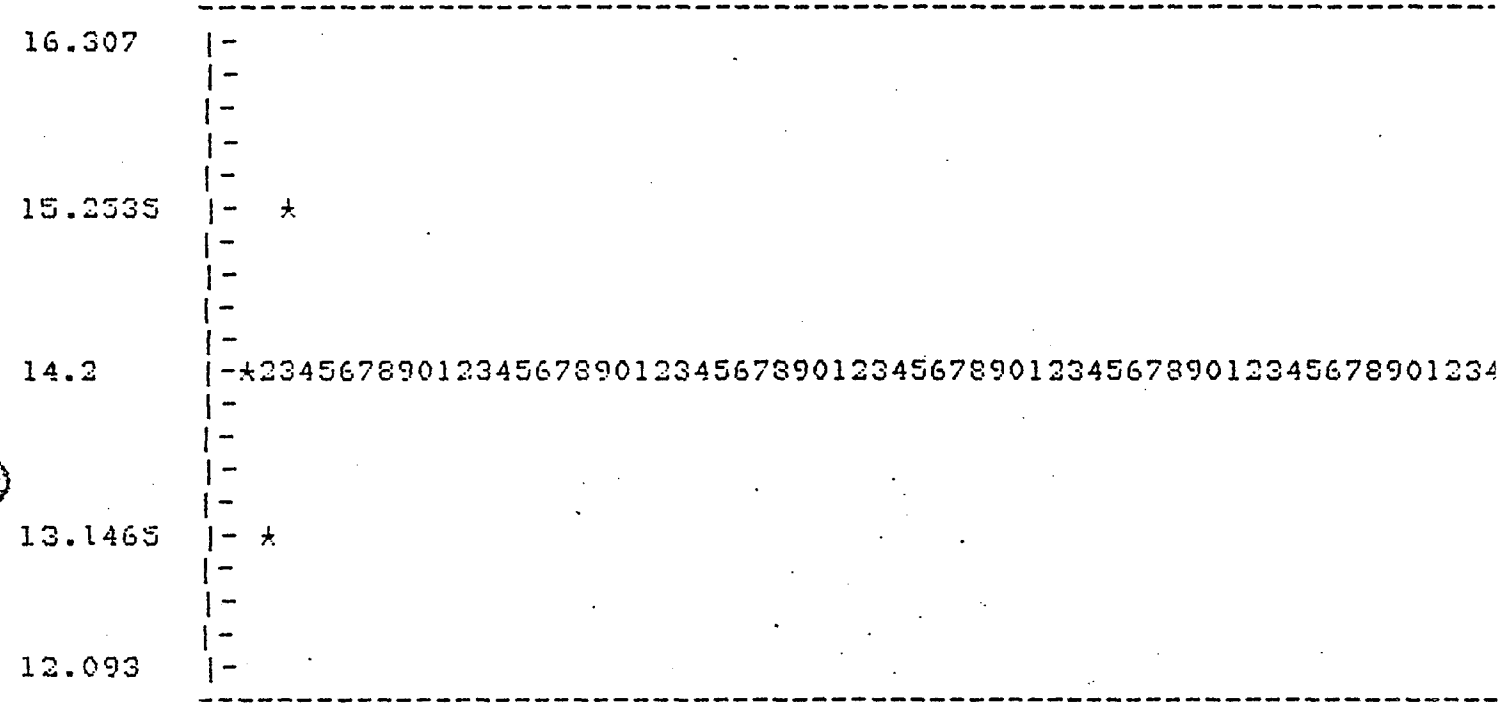


MEAN= 32.3333 , STD. DEV.= 3.1091 , C.C.= .0961 , S.E.M.= 1.2692
TRUE = 32.0 95% LIMITS = 27.1 - 36.9

DATA POINTS:

1	=	14.3
2	=	13.1
3	=	15.2

MEAN	=	14.2
STD. DEV.	=	1.0535
C.C.	=	.0741
S.E.M.	=	.6082



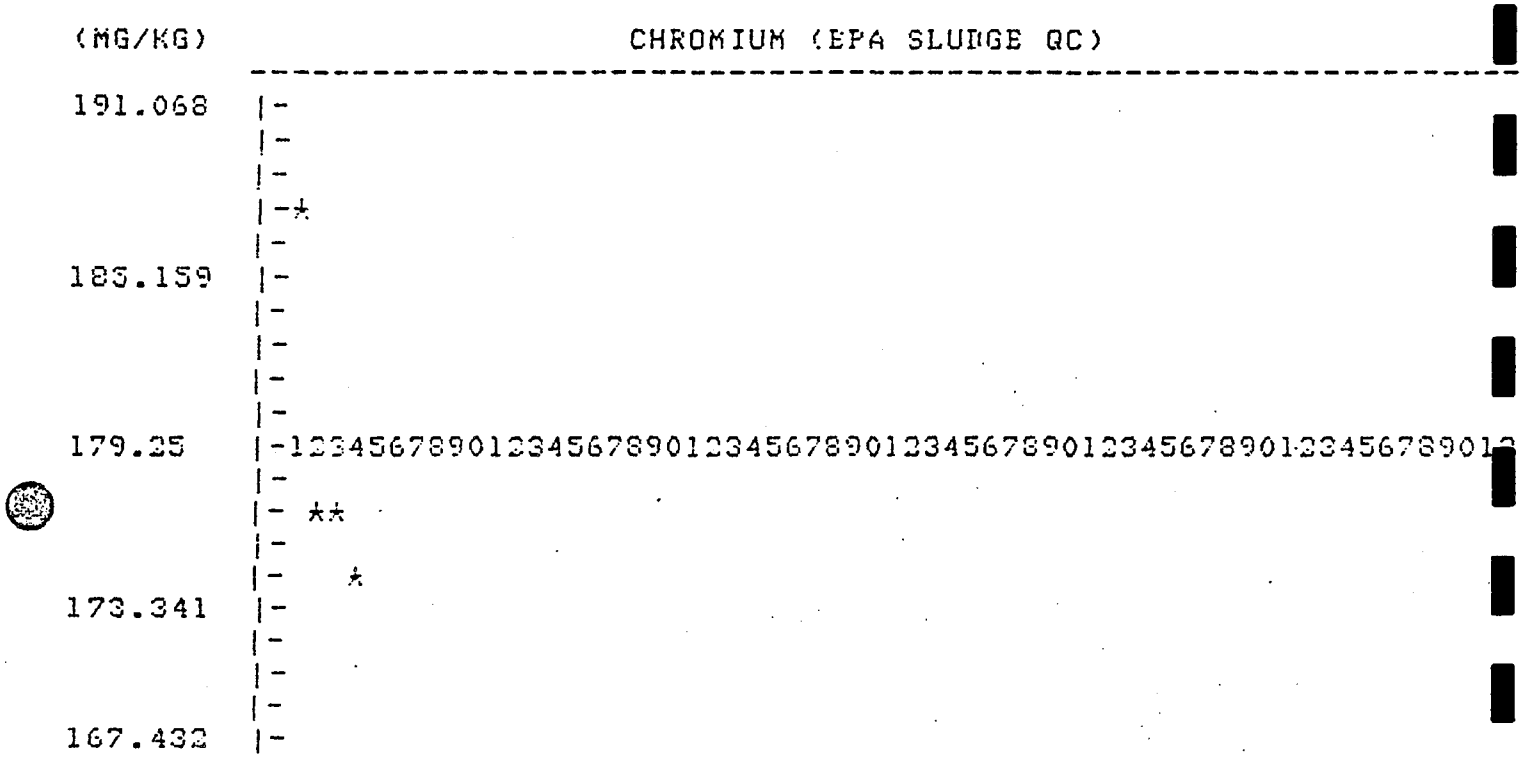
MEAN= 14.2 , STD. DEV.= 1.0535 , C.C.= .0741 , S.E.M.= .6082
TRUE = 16.3 95% LIMITS = 0 - 36.1

CRSLU1 30-Jun-89 08:22 AM

DATA POINTS:

1	=	188
2	=	177
3	=	177
4	=	175

MEAN	=	179.25
STD. DEV.	=	5.909
C.C.	=	.0329
S.E.M.	=	2.9545

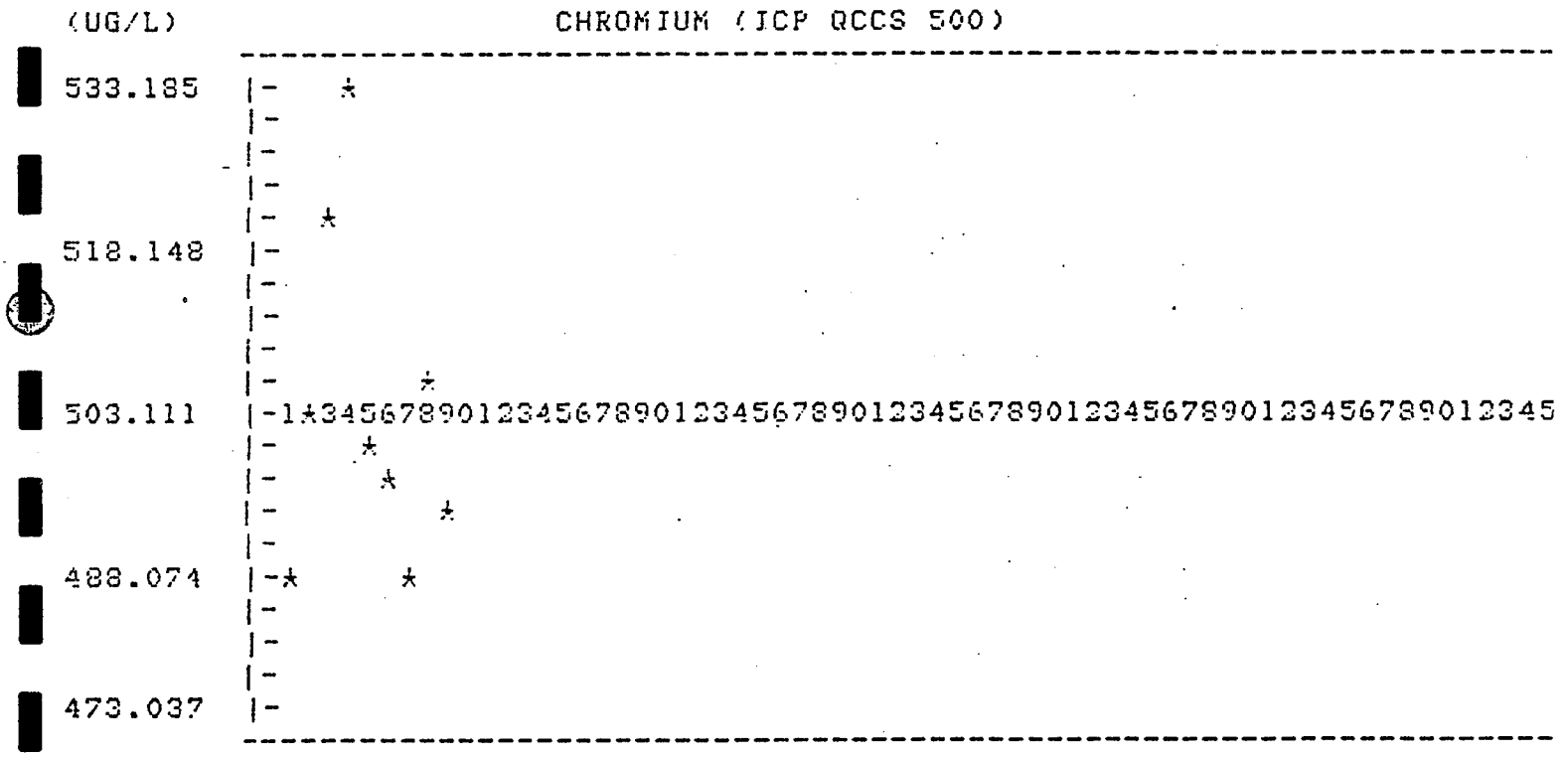


CRQC 30-Jun-89 08:33 AM

DATA POINTS:

1	=	488
2	=	504
3	=	520
4	=	533
5	=	499
6	=	496
7	=	487
8	=	506
9	=	495

MEAN	=	503.111
STD. DEV.	=	15.0369
C.C.	=	.0298
S.E.M.	=	5.0123



MEAN= 503.111 , STD. DEV.= 15.0369 , C.C.= .0298 , S.E.M.= 5.0123
TRUE = 500 85% LIMITS = 425 - 575

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Harris Environmental Tech. Contract: ----------

Lab Code: ------- Case No. -------- SAS No.: ------ SDG No.: ------

Initial Calibration Source: As Below

Continuing Calibration Source: As Below

Concentration Units: mg/L

Initial Continuing Calibrat. Source	Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M	Calibration Source
	Aluminum										
	Antimony										
	Arsenic										
	Barium										
	Beryllium										
	Cadmium										
	Calcium										
	Chromium										
	Cobalt										
	Copper										
	Iron										
Work 1C	Lead	0.08	0.081	101	0.04	0.0388	97	0.0362	91	F	QCCS1
	Magnesium										
	Manganese										
	Mercury										
	Nickel										
	Potassium										
	Selenium										
Work 2B	Silver	0.01	0.0102	102	0.004	0.0039	98	0.0040	100	F	QCCS3
	Sodium										
	Thallium										
	Vanadium										
	Zinc										
	Cyanide										

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Harris Environmental Tech. Contract: ----------

Lab Code: ------- Case No. -------- SAS No.: ------ SDG No.: ------

Initial Calibration Source: As Below

Continuing Calibration Source: As Below

Concentration Units: mg/L

Initial Continuing Calibrat. Source	Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M	Calibration Source
	Aluminum										
	Antimony										
	Arsenic										
ICP 2A	Barium	2.0	2.006	100	0.500	0.521	104	0.512	102	P	QCCS5
	Beryllium										
	Cadmium										
	Calcium										
	Chromium				0.004	0.0043	108			F	QCCS2
	Cobalt										
	Copper										
	Iron										
Work 1B	Lead	0.10	0.0998	100	0.04	0.037	93	0.0386	97	F	QCCS1
	Magnesium										
	Manganese										
	Mercury										
	Nickel										
	Potassium										
	Selenium	SID Additions			0.04	0.0455	114	0.0477	118	F	QCCS1
Work 2B	Silver	0.10	0.100	100	0.004	0.0041	103	0.0036	90	F	QCCS3
	Sodium										
	Thallium										
	Vanadium										
	Zinc										
	Cyanide										

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Harris Environmental Tech. Contract: ----------

Lab Code: ------- Case No. -------- SAS No.: ----- SDG No.: ------

Initial Calibration Source: As Below

Continuing Calibration Source: As Below

Concentration Units: mg/L

Initial Continuing Calibrat. Source	Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M	Calibration Source
	Aluminum										
	Antimony										
	Arsenic	SID Additions			0.04	0.0373	93	0.0397	99	F	QCCS1
ICP 2A	Barium	2.0	1.981	99	0.500	0.528	106	0.515	103	P	QCCS5
	Beryllium										
	Cadmium				0.004	0.0036	90	0.0035	88	F	QCCS2
	Calcium										
MTL 1	Chromium	2.0	1.985	99	0.500	0.506	101	0.495	99	P	QCCS7
	Cobalt										
	Copper										
	Iron										
Work 1B	Lead	0.1	0.0964	96	0.04	0.0415	104	0.0384	96	F	QCCS1
	Magnesium										
	Manganese										
	Mercury										
	Nickel										
	Potassium										
Work 1B	Selenium	0.10	0.0968	97	0.04	0.0396	99	0.0389	97	F	QCCS1
Work 2C	Silver	0.008	0.008	100	0.004	0.0037	93	0.004	100	F	QCCS3
	Sodium										
	Thallium										
	Vanadium										
	Zinc										
	Cyanide										

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Harris Environmental Tech. Contract: ----------

Lab Code: -------- Case No. -------- SAS No.: ----- SDG No.: ------

Initial Calibration Source: As Below

Continuing Calibration Source: As Below

Concentration Units: mg/L

Initial Continuing Calibrat. Source	Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M	Calibration Source
	Aluminum									NR	
	Antimony									NR	
Work 1C	Arsenic	0.08	0.078	97.5	0.04	0.0428	107	0.0345	86	F	QQCS1
ICP 2A	Barium	2.0	1.981	99.0	0.500	0.515	103	0.519	104	P	QQCS5
	Beryllium									NR	
	Cadmium				0.004	0.0033	83			F	QQCS2
	Calcium									NR	
MTL 1	Chromium	2.0	2.052	103.0	0.500	0.530	106	0.499	100	P	QQCS7
	Cobalt									NR	
	Copper									NR	
	Iron									NR	
Work 1B	Lead	0.1	0.0973	97.0	0.04	0.0403	101			F	QQCS1
	Magnesium									NR	
	Manganese									NR	
Work 4A	Mercury	0.02	0.0197	99.0	0.005	0.0052	104	0.00499	100	CV	WORK4C
	Nickel									NR	
	Potassium									NR	
Work 1B	Selenium	0.10	0.104	104.0	0.04	0.0448	112	0.0365	91	F	QQCS1
Work 2B	Silver	0.01	0.0097	97.0	0.004	0.004	100	0.004	100	F	QQCS3
	Sodium									NR	
	Thallium									NR	
	Vanadium									NR	
	Zinc									NR	
	Cyanide									NR	

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Form II (PART 1) - IN

7/88

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Harris Environmental Tech. Contract: ----------

Lab Code: ------ Case No. -------- SAS No.: ------ SDG No.: ------

Initial Calibration Source: As Below

Continuing Calibration Source: As Below

Concentration Units: mg/L

Initial Continuing Calibrat. Source	Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M	Calibration Source
	Aluminum										
	Antimony										
Work 1C	Arsenic	0.08	0.0804	101	0.04	0.0372	93	0.0382	96	F	QCCS1
ICP 2A	Barium	2.0	2.005	100	0.500	0.511	102	0.518	104	P	QCCS5
	Beryllium										
	Cadmium				0.004	0.0036	90			F	QCCS2
	Calcium										
MTL 1	Chromium	2.0	2.067	103	0.500	0.488	98	0.520	104	P	QCCS7
	Cobalt										
	Copper										
	Iron										
Work 1B	Lead	0.1	0.103	103	0.04	0.0378	95	0.0354	89	F	QCCS1
	Magnesium										
	Manganese										
Work 4A	Mercury	0.02	0.020	100	0.005	0.0046	92	0.0051	102	CV	WORK4C
	Nickel										
	Potassium										
Work 1B	Selenium	0.08	0.081	101	0.04	0.046	115	0.037	93	F	QCCS1
Work 2C	Silver	0.008	0.0079	99	0.004	0.0045	113	0.0046	115	F	QCCS3
	Sodium										
	Thallium										
	Vanadium										
	Zinc										
	Cyanide										

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Harris Environmental Tech. Contract: ----------

Lab Code: ------- Case No. -------- SAS No.: ------ SDG No.: ------

Initial Calibration Source: As Below

Continuing Calibration Source: As Below

Concentration Units: mg/L

Initial Continuing Calibrat. Source	Analyte	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(1)	Found	%R(1)	M	Calibration Source
	Aluminum										
	Antimony										
	Arsenic	SID Additions			0.04	0.04	100	0.0396	99	F	QCCS1.
ICP 2A	Barium	2.0	1.930	97	0.500	0.512	102	0.504	101	P	QCCS5
	Beryllium										
	Cadmium				0.004	0.0036	90	0.0036	90	F	QCCS2
	Calcium										
MTL 1	Chromium	2.0	2.018	101	0.500	0.496	99	0.487	97	P	QCCS7
	Cobalt										
	Copper										
	Iron										
Work 1B	Lead	0.10	0.0953	95	0.04	0.037	93	0.0396	99	F	QCCS1
	Magnesium										
	Manganese										
	Mercury										
	Nickel										
	Potassium										
	Selenium	SID Additions			0.04	0.0388	97	0.0455	114	F	QCCS1
Work 2C	Silver	0.008	0.0077	96	0.004	0.0037	93	0.0044	110	F	QCCS3
	Sodium										
	Thallium										
	Vanadium										
	Zinc										
	Cyanide										

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 1F

ICP CRDL Standard Source: ICP 2D

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
					Initial			Final
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic	0.02	0.0211	106					
Barium				0.10	0.092	92	0.086	86
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	0.02	0.0177	89					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	0.02	0.017	85					
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

FORM II (PART 2) - IN

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U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 2F

ICP CRDL Standard Source: MTL 4

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium				0.10	0.115	115	0.117	117
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver	0.002	0.002	100					
Sodium								
Thallium								
Vanadium								
Zinc								

FORM II (PART 2) - IN

7/88

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work IF

ICP CRDL Standard Source: ICP 2D

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic								
Barium				0.10	0.089	89	0.089	89
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	0.02	0.0195	98					
Magnesium								
Manganese								
Mercury	0.001	0.0010	100					
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 2F

ICP CRDL Standard Source: MTL 4

Concentration Units: ~~ug/L~~ XXXX mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic	0.02	0.018	90					
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium				0.10	0.122	122	0.129	129
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver	0.002	0.0019	95					
Sodium								
Thallium								
Vanadium								
Zinc								

FORM II (PART 2) - IN

7/88

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 1F

ICP CRDL Standard Source: ICP 2D

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic								
Barium				0.10	0.094	94	0.086	86
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	0.02	0.0179	90					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	0.02	0.0178	89					
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 2F

ICP CRDL Standard Source: MTL 4

Concentration Units: ~~ug/L~~ mg/L

	CRDL Standard for AA			CRDL Standard for ICP				
					Initial			Final
Analyte	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium				0.10	0.108	108	0.117	117
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver	0.002	0.0018	90					
Sodium								
Thallium								
Vanadium								
Zinc								

FORM II (PART 2) - IN

7/88

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------- SDG No.: -------

AA CRDL Standard Source: Work 1F

ICP CRDL Standard Source: ICP 2D

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic								
Barium				0.10	0.086	86	0.082	82
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	0.02	0.018	90					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------- SDG No.: -------

AA CRDL Standard Source: Work 2F

ICP CRDL Standard Source: MTL 4

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium				0.10	0.124	124	0.120	120
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver	0.002	0.0017	85					
Sodium								
Thallium								
Vanadium								
Zinc								

FORM II (PART 2) - IN

7/88

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 1F

ICP CRDL Standard Source: ICP 2D

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Aluminum								
Antimony								
Arsenic								
Barium				0.10	0.086	86	0.082	82
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	0.02	0.018	90					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

FORM II (PART 2) - IN

7/88

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 2F

ICP CRDL Standard Source: MTL 4

Concentration Units: ~~ug/L~~ mg/L

	CRDL Standard for AA			CRDL Standard for ICP				
					Initial		Final	
Analyte	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium				0.10	0.124	124	0.120	120
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver	0.002	0.0017	85					
Sodium								
Thallium								
Vanadium								
Zinc								

FORM II (PART 2) - IN

7/88

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 1F

ICP CRDL Standard Source: ICP 2D

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
					Initial			Final
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic								
Barium				0.10	0.094	94	0.092	92
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead	0.02	0.0193	97					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------- SDG No.: -------

AA CRDL Standard Source: Work 2F

ICP CRDL Standard Source: ICP 2D

Concentration Units: ~~ug/L~~ XXXX mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum								
Antimony								
Arsenic								
Barium				0.10	0.094	94	.092	92
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver	0.002	0.002	100					
Sodium								
Thallium								
Vanadium								
Zinc								

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

AA CRDL Standard Source: Work 2F

ICP CRDL Standard Source: _____

Concentration Units: ~~ug/L~~ mg/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver	0.002	0.0018	90					
Sodium								
Thallium								
Vanadium								
Zinc								

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Instrument ID: 7001VO Calibration Date(s): 6/16/89 6/16/89

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

Min $\overline{RRF}$ for SPCC(#) = .300 (0.250 for Bromoform) Max %RSD for CCC(*) =

LAB FILE ID: RRF020= A1555 RRF050= A1556
RRF100= A1557 RRF150= A1558 RRF200= A1559

COMPOUND	RRF020	RRF050	RRF100	RRF150	RRF200	$\overline{RRF}$	
Chloromethane	1.483	1.276	1.347	1.319	1.250	1.335	
Bromomethane	.817	.643	.642	.633	.599	.667	
Vinyl Chloride *	1.056	.921	.926	.633	.522	.812	
Chloroethane	.540	.504	.532	.525	.510	.522	
Methylene Chloride	.938	.899	.867	1.093	1.086	.977	
Acetone	.938	.534	.404	.443	.439	.552	
Carbon Disulfide	5.092	4.185	3.695	3.784	3.751	4.101	
1,1-Dichloroethene *	1.310	1.125	1.032	1.062	1.056	1.117	
1,1-Dichloroethane #	2.998	2.591	2.290	2.305	2.292	2.495	
1,2-Dichloroethene (total)	1.442	1.281	1.150	1.188	1.192	1.251	
Chloroform *	2.951	2.537	2.262	2.302	2.327	2.476	
1,2-Dichloroethane	1.941	1.677	1.511	1.558	1.562	1.650	1
2-Butanone	.943	.749	.576	.587	.553	.682	2
1,1,1-Trichloroethane	2.249	1.934	1.753	1.779	1.797	1.902	1
Carbon Tetrachloride	2.289	2.033	1.831	1.906	1.911	1.994	
Vinyl Acetate	3.674	3.180	2.702	2.349	2.281	2.837	2
Bromodichloromethane	3.319	2.872	2.595	2.660	2.654	2.820	1
1,2-Dichloropropane *	.646	.575	.507	.519	.533	.556	1
cis-1,3-Dichloropropene	1.043	.934	.828	.865	.881	.910	
Trichloroethene	.572	.523	.483	.509	.519	.521	
Dibromochloromethane	.879	.824	.739	.758	.773	.795	
1,1,2-Trichloroethane	.446	.416	.364	.366	.366	.392	
Benzene	1.273	1.081	.948	.968	.980	1.050	1
trans-1,3-Dichloropropene	.462	.431	.382	.388	.396	.412	
Bromoform #	.881	.867	.846	.886	.923	.881	
4-Methyl-2-Pentanone	.646	.526	.456	.451	.456	.507	1
2-Hexanone	.564	.475	.362	.383	.382	.433	1
Tetrachloroethene	.699	.629	.591	.613	.613	.629	
1,1,2,2-Tetrachloroethane #	.981	.888	.798	.783	.761	.842	1
Toluene *	.855	.743	.673	.688	.713	.734	
Chlorobenzene #	1.066	.963	.868	.894	.916	.941	
Ethylbenzene *	.483	.440	.398	.405	.422	.430	
Styrene	1.042	.951	.865	.907	.942	.941	
Xylene (total)	.605	.551	.507	.524	.543	.546	
Toluene-d8	1.161	1.078	1.095	1.054	1.097	1.097	
Bromofluorobenzene	1.060	1.000	1.053	1.037	1.081	1.046	
1,2-Dichloroethane-d4	1.461	1.361	1.454	1.466	1.557	1.460	

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0824 DFTPP Injection Date: 6/22/89

Instrument ID.: 7002VO DFTPP Injection Time: 0:31

m/e	ION ABUNDANCE CRITERIA	% RELAT ABUNDA
51	30.0 - 60.0% of mass 198	33.3
68	Less than 2.0% of mass 69	.0 (
69	Mass 69 relative abundance	44.4
70	Less than 2.0% of mass 69	.0 (
127	40.0 - 60.0% of mass 198	41.7
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	23.8
365	Greater than 1.00% of mass 198	3.1
441	Present, but less than mass 443	14.8
442	Greater than 40.0% of mass 198	83.2
443	17.0 - 23.0% of mass 442	17.1 (20

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDA

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZE
1	SSTD160		B0825	6/22/89	0:5
2	SSTD120		B0826	6/22/89	1:39
3	SSTD080		B0827	6/22/89	2:2
4	SSTD050		B0828	6/22/89	3:0
5	SSTD020		B0829	6/22/89	3:55
6	BLANK5		B0830	6/22/89	4:4
7	2-SW-4		B0831	6/22/89	5:2
8	2-SW-5		B0832	6/22/89	6:1
9	2-SW-6		B0833	6/22/89	6:55
10	2-SW-8		B0834	6/22/89	7:4
11	BLANK2		B0835	6/22/89	8:2
12	2-SW-1		B0836	6/22/89	9:11
13	2-SW-2		B0837	6/22/89	9:5
14	2-SW-3		B0838	6/22/89	10:4
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Lab File ID: B0841 DFTPP Injection Date: 6/22/89

Instrument ID.: 7002VO DFTPP Injection Time: 15:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	41.1
68	Less than 2.0% of mass 69	.0 (.(
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	.0 (.(
127	40.0 - 60.0% of mass 198	40.2
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	22.3
365	Greater than 1.00% of mass 198	2.4
441	Present, but less than mass 443	11.4
442	Greater than 40.0% of mass 198	71.1
443	17.0 - 23.0% of mass 442	12.9 (18.1

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD160		B0842	6/22/89	15:42
2	SSTD120		B0843	6/22/89	16:28
3	SSTD080		B0844	6/22/89	17:13
4	SSTD050		B0845	6/22/89	17:59
5	SSTD020		B0846	6/22/89	18:44
6	2-SW-7		B0847	6/22/89	19:30
7	BLANK3		B0848	6/22/89	20:15
8	6BH1SS1		B0849	6/22/89	21:01
9	6BH1SS2		B0850	6/22/89	21:56
10	6BH1SS3		B0851	6/22/89	22:42
11	2-SD-4		B0852	6/22/89	23:27
12	2-SD-5		B0853	6/23/89	0:12
13	2-SD-6		B0854	6/23/89	0:58
14	BLANK6		B0855	6/23/89	1:43
15	3BH2SS1		B0856	6/23/89	2:28
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Lab File ID: B0859 DFTPP Injection Date: 6/23/89

Instrument ID.: 7002V0 DFTPP Injection Time: 4:38

m/e	ION ABUNDANCE CRITERIA	% RELAT ABUNDA
51	30.0 - 60.0% of mass 198	34.8
68	Less than 2.0% of mass 69	.0_(
69	Mass 69 relative abundance	44.4
70	Less than 2.0% of mass 69	.0_(
127	40.0 - 60.0% of mass 198	40.2
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.9
365	Greater than 1.00% of mass 198	2.7
441	Present, but less than mass 443	12.0
442	Greater than 40.0% of mass 198	72.1
443	17.0 - 23.0% of mass 442	13.7_(19

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDA

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZE
1	SSTD160		B0860	6/23/89	5:0
2	SSTD120		B0861	6/23/89	5:45
3	SSTD080		B0862	6/23/89	6:3
4	SSTD050		B0863	6/23/89	7:1
5	SSTD020		B0864	6/23/89	8:01
6	3BH2SS2		B0865	6/23/89	8:46
7	3BH4SS1		B0866	6/23/89	9:3
8	3BH3SS1		B0867	6/23/89	10:1
9	3BH3SS2		B0868	6/23/89	11:02
10	3BH1SS1		B0869	6/23/89	11:4
11	3BH1SS2		B0870	6/23/89	12:3
12	2-SD-1		B0871	6/23/89	13:18
13	2-SD-3		B0872	6/23/89	14:0
14	2-SD-7		B0873	6/23/89	14:5
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0891 DFTPP Injection Date: 6/25/89

Instrument ID.: 7002VO DFTPP Injection Time: 16:38

m/e	ION ABUNDANCE CRITERIA	% RELATIV ABUNDANC
51	30.0 - 60.0% of mass 198	40.5
68	Less than 2.0% of mass 69	.0 (.
69	Mass 69 relative abundance	48.1
70	Less than 2.0% of mass 69	.0 (.
127	40.0 - 60.0% of mass 198	40.7
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	24.0
365	Greater than 1.00% of mass 198	2.6
441	Present, but less than mass 443	12.5
442	Greater than 40.0% of mass 198	75.4
443	17.0 - 23.0% of mass 442	14.1 (18.

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDAR

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD160		B0892	6/25/89	17:01
2	SSTD120		B0893	6/25/89	17:47
3	SSTD080		B0894	6/25/89	18:32
4	SSTD050		B0895	6/25/89	19:18
5	SSTD020		B0896	6/25/89	20:04
6	BLANK8		B0897	6/25/89	20:49
7	BLANK9		B0898	6/25/89	21:35
8	6MW1GW1		B0899	6/25/89	22:20
9	6TAPWTR		B0900	6/25/89	23:06
10	2MW1GW1		B0901	6/25/89	23:51
11	2RNSBLK		B0902	6/26/89	0:37
12	5BH1SS1		B0903	6/26/89	1:22
13	5BH1SS2		B0904	6/26/89	2:07
14	6BH1SMS		B0905	6/26/89	2:53
15	6BH1SMSD		B0906	6/26/89	3:38
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0922 DFTPP Injection Date: 7/ 2/89

Instrument ID.: 7002VO DFTPP Injection Time: 16:51

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.2
68	Less than 2.0% of mass 69	.0 (.0
69	Mass 69 relative abundance	47.3
70	Less than 2.0% of mass 69	.0 (.0)
127	40.0 - 60.0% of mass 198	43.7
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.3
441	Present, but less than mass 443	9.7
442	Greater than 40.0% of mass 198	52.5
443	17.0 - 23.0% of mass 442	10.2 (19.4)

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	STD160		B0923	7/ 2/89	17:15
2	SSTD120		B0924	7/ 2/89	18:00
3	SSTD080		B0925	7/ 2/89	18:46
4	SSTD050		B0926	7/ 2/89	19:32
5	SSTD020		B0927	7/ 2/89	20:18
6	BLANK12		B0928	7/ 2/89	21:04
7	1M206GW1		B0929	7/ 2/89	21:50
8	1M218GW1		B0930	7/ 2/89	22:35
9	BLANK7		B0931	7/ 2/89	23:21
10	1RNSBLK		B0932	7/ 3/89	0:06
11	1FLDBLK		B0933	7/ 3/89	0:52
12	2-SW-6MS		B0934	7/ 3/89	1:37
13	2-SW-6MSD		B0935	7/ 3/89	2:23
14					
15					
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21					
22					

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0938 DFTPP Injection Date: 7/ 3/89

Instrument ID.: 7002VO DFTPP Injection Time: 4:32

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.2
68	Less than 2.0% of mass 69	.0 (.0)1
69	Mass 69 relative abundance	47.6
70	Less than 2.0% of mass 69	.0 (.0)1
127	40.0 - 60.0% of mass 198	43.3
197	Less than 1.0% of mass 198	.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.8
365	Greater than 1.00% of mass 198	2.6
441	Present, but less than mass 443	10.4
442	Greater than 40.0% of mass 198	54.5
443	17.0 - 23.0% of mass 442	10.9 (20.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD160		B0939	7/ 3/89	4:55
2	SSTD120		B0940	7/ 3/89	5:40
3	SSTD080		B0941	7/ 3/89	6:26
4	SSTD050		B0942	7/ 3/89	7:11
5	SSTD020		B0943	7/ 3/89	7:56
6	BLNK10		B0944	7/ 3/89	8:42
7	BLNK11		B0945	7/ 3/89	9:27
8	5MW1GW1		B0946	7/ 3/89	10:13
9	5RNSBLK		B0947	7/ 3/89	10:58
10	3MW1GW1		B0948	7/ 3/89	11:44
11					
12					
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14					
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16					
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19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Lab File ID: A1570 BFB Injection Date: 6/19/89

Instrument ID.: 7001VO BFB Injection Time: 20:23

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.7
75	30.0 - 60.0% of mass 95	40.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	.0(1)
174	Greater than 50.0% of mass 95	90.6
175	5.0 - 9.0% of mass 174	6.4(1) 7
176	Greater than 95.0%, but less than 101.0% of mass 174	88.4(2) 9
177	5.0 - 9.0% of mass 176	6.4(2) 7

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDA

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050		A1571	6/19/89	21:4
2	VBLK01		A1572	6/19/89	22:3
3	2-SW-1		A1573	6/19/89	23:43
4	2-SW-MS		A1574	6/20/89	0:2
5	2-SW-MSD		A1575	6/20/89	1:1
6	2-SW-2		A1576	6/20/89	1:57
7	2-SW-3		A1577	6/20/89	2:4
8	2-SW-7		A1578	6/20/89	3:2
9	2-SD-3		A1580	6/20/89	4:55
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19					
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21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: A1582 BFB Injection Date: 6/20/89

Instrument ID.: 7001VO BFB Injection Time: 14:55

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIV ABUNDANC
50	15.0 - 40.0% of mass 95	17.4
75	30.0 - 60.0% of mass 95	37.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	.8 (.
174	Greater than 50.0% of mass 95	91.4
175	5.0 - 9.0% of mass 174	6.9 (7.
176	Greater than 95.0%, but less than 101.0% of mass 174	86.8 (95.
177	5.0 - 9.0% of mass 176	6.4 (7.

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDAR!

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050		A1583	6/20/89	15:33
2	VBLK01		A1585	6/20/89	16:32
3	2-SD-1		A1586	6/20/89	17:17
4	2-SD-MS		A1587	6/20/89	18:15
5	2-SD-MSD		A1588	6/20/89	19:01
6	2-SD-7		A1589	6/20/89	19:45
7	6BH1SS1		A1590	6/20/89	21:13
8	2-SW-4		A1591	6/20/89	21:58
9	2-SW-5		A1592	6/20/89	22:43
10	2-SW-8		A1594	6/21/89	0:13
11	6BH1SS2		A1595	6/21/89	0:58
12	6BH1SS3		A1596	6/21/89	1:42
13					
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Lab File ID: A1598 BFB Injection Date: 6/21/8

Instrument ID.: 7001VO BFB Injection Time: 15:23

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PAC

m/e	ION ABUNDANCE CRITERIA	% RELAT ABUND
50	15.0 - 40.0% of mass 95	17.8
75	30.0 - 60.0% of mass 95	36.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.0
173	Less than 2.0% of mass 174	.0 (
174	Greater than 50.0% of mass 95	96.6
175	5.0 - 9.0% of mass 174	8.2 (
176	Greater than 95.0%, but less than 101.0% of mass 174	97.0 (10
177	5.0 - 9.0% of mass 176	6.4 (

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STAN

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALY
1	VSTD050		A1599	6/21/89	16:0
2	VBLK01		A1600	6/21/89	18:
3	2-SD-4		A1603	6/21/89	20:
4	2-SD-5		A1604	6/21/89	21:1
5	3BH3SS2		A1609	6/22/89	0:
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5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Lab File ID: A1611 BFB Injection Date: 6/22/89

Instrument ID.: 7001VO BFB Injection Time: 16:50

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATI ABUNDANC
50	15.0 - 40.0% of mass 95	17.2
75	30.0 - 60.0% of mass 95	37.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	.0 (.
174	Greater than 50.0% of mass 95	89.2
175	5.0 - 9.0% of mass 174	6.8 (7.
176	Greater than 95.0%, but less than 101.0% of mass 174	87.7 (98.
177	5.0 - 9.0% of mass 176	6.2 (7.

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDAR

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050		A1612	6/22/89	17:22
2	VBLK01		A1613	6/22/89	18:07
3	TB 6/19		A1614	6/22/89	18:51
4	2-SW-6		A1615	6/22/89	19:36
5	2-SD-6		A1616	6/22/89	20:21
6	3BH1SS1		A1620	6/23/89	0:10
7	3BH1SS3		A1622	6/23/89	1:40
8	3BH2SS2		A1623	6/23/89	2:24
9	3BH2SS1		A1624	6/23/89	3:09
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6

Lab File ID: A1626 BFB Injection Date: 6/23/

Instrument ID.: 7001VO BFB Injection Time: 16:33

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PA

m/e	ION ABUNDANCE CRITERIA	% RELA ABUND
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	40.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	.8 (
174	Greater than 50.0% of mass 95	92.2
175	5.0 - 9.0% of mass 174	7.0 (
176	Greater than 95.0%, but less than 101.0% of mass 174	92.7 (1
177	5.0 - 9.0% of mass 176	7.4 (

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDA

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZE
1	VSTD050		A1627	6/23/89	17:
2	VBLK01		A1628	6/23/89	18:3
3	TB6/19-2		A1629	6/23/89	19:21
4	1RINSATE		A1630	6/23/89	20:
5	1FIELDBL		A1631	6/23/89	20:5
6	1M214GW1		A1632	6/23/89	21:36
7	1M216GW1		A1633	6/23/89	22:
8	1M206GW1		A1635	6/23/89	23:5
9	1M218GW1		A1636	6/24/89	0:34
10	1M210GW1		A1637	6/24/89	1:1
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Lab File ID: A1643 BFB Injection Date: 6/24/89

Instrument ID.: 7001VO BFB Injection Time: 16:11

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIV ABUNDANC
50	15.0 - 40.0% of mass 95	17.9
75	30.0 - 60.0% of mass 95	37.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	.0_(.
174	Greater than 50.0% of mass 95	95.9
175	5.0 - 9.0% of mass 174	7.1_(7.
176	Greater than 95.0%, but less than 101.0% of mass 174	96.4_(100.
177	5.0 - 9.0% of mass 176	6.9_(7.

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDAR

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050		A1644	6/24/89	16:44
2	VBLK01		A1645	6/24/89	17:29
3	S2TRPBLK		A1646	6/24/89	18:14
4	6TAP		A1648	6/24/89	19:44
5	6TAP MS		A1649	6/24/89	20:28
6	6TAP MSD		A1650	6/24/89	21:13
7	2MW1GW1		A1651	6/24/89	21:58
8	6MW1GW1		A1652	6/24/89	22:43
9	3BH4SS1		A1655	6/25/89	0:56
10	3BH3SS1		A1656	6/25/89	1:41
11	3BH1SS2		A1657	6/25/89	2:26
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Lab File ID: A1658 BFB Injection Date: 6/26/8

Instrument ID.: 7001VO BFB Injection Time: 6:05

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PAC

m/e	ION ABUNDANCE CRITERIA	% RELAT ABUNDA
50	15.0 - 40.0% of mass 95	16.6
75	30.0 - 60.0% of mass 95	37.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	.0 (
174	Greater than 50.0% of mass 95	95.8
175	5.0 - 9.0% of mass 174	6.8 (7
176	Greater than 95.0%, but less than 101.0% of mass 174	94.2 (9
177	5.0 - 9.0% of mass 176	6.7 (

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDA

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZE
1	VSTD050		A1659	6/26/89	6:4
2	VBLK01		A1661	6/26/89	8:0
3	TBLK6/24		A1662	6/26/89	8:54
4	5RBK6/24		A1663	6/26/89	9:3
5	5MW1GW1		A1664	6/26/89	10:2
6	1M1203G1		A1667	6/26/89	12:38
7	5BH1SS1		A1669	6/26/89	14:3
8	5BH1SS2		A1670	6/26/89	15:2
9	3MW1GW1		A1671	6/26/89	16:08
10	1M209GW1		A1672	6/26/89	16:53
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21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Lab File ID: A1673 BFB Injection Date: 6/29/89

Instrument ID.: 7001VO BFB Injection Time: 11:36

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIV ABUNDANC
50	15.0 - 40.0% of mass 95	18.4
75	30.0 - 60.0% of mass 95	39.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	.0 (.
174	Greater than 50.0% of mass 95	84.5
175	5.0 - 9.0% of mass 174	6.4 (7.
176	Greater than 95.0%, but less than 101.0% of mass 174	81.1 (96.
177	5.0 - 9.0% of mass 176	5.7 (7.

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARI

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050		A1674	6/29/89	12:11
2	VBLK01		A1676	6/29/89	13:41
3	1M204GW1		A1677	6/29/89	14:26
4	2RBK6/23		A1678	6/29/89	15:11
5					
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6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7002VO Calibration Date(s): 6/22/89 6/22/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) =

LAB FILE ID: RRF020= B0829 RRF050= B0828
RRF080= B0827 RRF120= B0826 RRF160= B0825

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$
Phenol *	1.391	1.414	1.392	1.408	1.408	1.403
bis(2-Chloroethyl)ether	1.273	1.205	1.170	1.097	1.125	1.174
2-Chlorophenol	1.248	1.258	1.265	1.205	1.260	1.247
1,3-Dichlorobenzene	1.469	1.422	1.391	1.360	1.293	1.387
1,4-Dichlorobenzene *	1.540	1.556	1.479	1.419	1.398	1.478
Benzyl alcohol	.633	.693	.716	.709	.758	.702
1,2-Dichlorobenzene	1.534	1.481	1.395	1.370	1.363	1.429
2-Methylphenol	1.061	.819	.841	.874	.969	.913
bis(2-Chloroisopropyl)ether	1.381	1.399	1.390	1.971	1.956	1.619
4-Methylphenol	1.008	1.035	.930	1.009	1.069	1.010
N-Nitroso-di-n-propylamine #	.970	1.004	1.168	1.019	1.025	1.037
Hexachloroethane	.512	.607	.587	.564	.576	.569
Nitrobenzene	.453	.459	.430	.437	.410	.438
Isophorone	.712	.733	.722	.746	.732	.729
2-Nitrophenol *	.188	.201	.202	.216	.208	.203
2,4-Dimethylphenol	.239	.255	.259	.264	.251	.254
Benzoic acid		.207	.219	.248	.272	.236
bis(2-Chloroethoxy)methane	.416	.430	.435	.425	.417	.425
2,4-Dichlorophenol *	.256	.284	.277	.260	.240	.264
1,2,4-Trichlorobenzene	.254	.367	.247	.251	.206	.265
Naphthalene	.963	.946	.896	.933	.878	.923
4-Chloroaniline	.095	.195	.259	.342	.340	.246
Hexachlorobutadiene *	.254	.245	.226	.224	.210	.232
4-Chloro-3-methylphenol *	.270	.284	.284	.289	.291	.283
2-Methylnaphthalene	.563	.564	.549	.563	.549	.557
Hexachlorocyclopentadiene #	.042	.110	.123	.172	.207	.131
2,4,6-Trichlorophenol *	.362	.393	.395	.400	.370	.384
2,4,5-Trichlorophenol		.416	.401	.408	.403	.407
2-Chloronaphthalene	1.108	1.097	1.083	1.066	1.011	1.073
2-Nitroaniline		.327	.319	.349	.343	.335
Dimethylphthalate	1.360	1.373	1.330	1.307	1.256	1.325
Acenaphthylene	1.720	1.679	1.629	1.641	1.584	1.651
2,6-Dinitrotoluene	.285	.302	.306	.308	.316	.303
3-Nitroaniline		.331	.319	.350	.343	.336
Acenaphthene *	1.105	1.051	1.038	1.000	.948	1.028
2,4-Dinitrophenol #		.077	.091	.122	.143	.108
4-Nitrophenol #		.127	.112	.115	.148	.125

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7002V0 Calibration Date(s): 6/22/89 6/22/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 3

LAB FILE ID: RRF020= B0829 RRF050= B0828
RRF080= B0827 RRF120= B0826 RRF160= B0825

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$	R
Dibenzofuran	1.415	1.359	1.238	1.276	1.245	1.306	
2,4-Dinitrotoluene	.341	.345	.346	.352	.363	.349	
Diethylphthalate	1.299	1.314	1.207	1.176	1.165	1.232	
4-Chlorophenyl-phenylether	.604	.558	.526	.527	.506	.544	
Fluorene	1.105	1.051	.985	.991	.953	1.017	
4-Nitroaniline		.085	.079	.097	.099	.090	1
4,6-Dinitro-2-methylphenol		.124	.138	.143	.136	.135	
N-Nitrosodiphenylamine *	.508	.489	.453	.452	.438	.468	
4-Bromophenyl-phenylether	.242	.255	.242	.242	.226	.241	
Hexachlorobenzene	.315	.328	.307	.295	.277	.304	
Pentachlorophenol *		.110	.119	.137	.147	.128	1
Phenanthrene	.987	.990	.914	.923	.894	.942	
Anthracene	.956	1.006	.920	.933	.901	.943	
Di-n-Butylphthalate	1.202	1.241	1.151	1.158	1.166	1.184	
Fluoranthene *	.817	.813	.748	.772	.785	.787	
Pyrene	2.007	2.101	2.218	1.973	1.893	2.038	
Butylbenzylphthalate	.770	.820	.819	.815	.819	.809	
3,3'-Dichlorobenzidine	.109	.081	.062	.086	.106	.089	2
Benzo(a)Anthracene	1.056	1.090	1.049	1.068	1.084	1.069	
Chrysene	1.032	1.008	.966	1.019	1.025	1.010	
Bis(2-Ethylhexyl)Phthalate	.874	.902	.901	.878	.914	.894	
Di-n-octylphthalate *	1.975	2.305	2.809	2.527	2.318	2.387	1
Benzo(b)fluoranthene	1.122	1.229	1.381	1.290	1.367	1.278	
Benzo(k)fluoranthene	1.122	1.229	1.381	1.290	1.367	1.278	
Benzo(a)Pyrene *	.948	1.014	1.022	.996	1.048	1.005	
Indeno(1,2,3-cd)Pyrene	.504	.548	.405	.517	.606	.516	1
Dibenzo(a,h)Anthracene	.488	.521	.381	.486	.595	.494	1
Benzo(g,h,i)Perylene	.500	.535	.355	.463	.563	.483	1
Nitrobenzene-d5	.340	.333	.333	.340	.344	.338	
2-Fluorobiphenyl	1.129	1.136	1.184	1.190	1.112	1.150	
Terphenyl-d14	1.373	1.442	1.491	1.358	1.359	1.405	
Phenol-d5	1.053	1.007	1.086	.971	1.204	1.064	
2-Fluorophenol	.891	.895	.947	.861	1.019	.922	
2,4,6-Tribromophenol	.118	.127	.135	.121	.141	.128	

(1) Cannot be separated from Diphenylamine

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Instrument ID: 7002V0 Calibration Date(s): 6/22/89 6/22/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) =

LAB FILE ID: RRF020= B0846 RRF050= B0845
RRF080= B0844 RRF120= B0843 RRF160= B0842

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$
Phenol *	1.417	1.498	1.492	1.411	1.492	1.462
bis(2-Chloroethyl)ether	1.261	1.225	1.220	1.136	1.189	1.206
2-Chlorophenol	1.236	1.299	1.269	1.225	1.244	1.255
1,3-Dichlorobenzene	1.458	1.409	1.417	1.383	1.316	1.397
1,4-Dichlorobenzene *	1.495	1.534	1.471	1.494	1.477	1.494
Benzyl alcohol	.641	.709	.718	.664	.741	.694
1,2-Dichlorobenzene	1.393	1.416	1.448	1.408	1.379	1.409
2-Methylphenol	.786	.850	.855	.801	.927	.844
bis(2-Chloroisopropyl)ether	1.403	1.231	1.302	1.280	1.295	1.302
4-Methylphenol	.989	.962	.938	.801	.927	.923
N-Nitroso-di-n-propylamine #	1.835	.987	.971	.952	.974	1.144
Hexachloroethane	.595	.654	.665	.656	.631	.640
Nitrobenzene	.480	.471	.459	.472	.471	.471
Isophorone	.706	.743	.718	.722	.701	.718
2-Nitrophenol *	.186	.199	.205	.199	.218	.201
2,4-Dimethylphenol	.226	.251	.250	.257	.252	.247
Benzoic acid		.204	.218	.213	.243	.220
bis(2-Chloroethoxy)methane	.426	.442	.427	.441	.424	.432
2,4-Dichlorophenol *	.267	.290	.280	.284	.260	.276
1,2,4-Trichlorobenzene	.366	.365	.363	.369	.341	.361
Naphthalene	.950	.940	.888	.914	.870	.912
4-Chloroaniline	.063	.150	.115	.123	.250	.140
Hexachlorobutadiene *	.260	.252	.236	.247	.227	.244
4-Chloro-3-methylphenol *	.257	.279	.273	.263	.266	.268
2-Methylnaphthalene	.548	.554	.534	.527	.525	.537
Hexachlorocyclopentadiene #	.056	.126	.127	.186	.231	.145
2,4,6-Trichlorophenol *	.365	.399	.388	.398	.396	.389
2,4,5-Trichlorophenol		.422	.414	.409	.396	.410
2-Chloronaphthalene	1.128	1.109	1.085	1.077	1.046	1.089
2-Nitroaniline		.303	.308	.292	.328	.308
Dimethylphthalate	1.318	1.362	1.273	1.253	1.207	1.283
Acenaphthylene	1.675	1.715	1.636	1.600	1.566	1.638
2,6-Dinitrotoluene	.258	.293	.281	.282	.275	.278
3-Nitroaniline		.303	.308	.292	.328	.308
Acenaphthene *	1.115	1.080	1.037	1.029	.956	1.043
2,4-Dinitrophenol #		.064	.087	.077	.108	.084
4-Nitrophenol #		.081	.110	.093	.125	.102

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Instrument ID: 7002V0 Calibration Date(s): 6/22/89 6/22/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 30

LAB FILE ID: RRF020= B0846 RRF050= B0845
RRF080= B0844 RRF120= B0843 RRF160= B0842

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$	% RS
Dibenzofuran	1.342	1.318	1.294	1.258	1.239	1.290	3
2,4-Dinitrotoluene	.275	.319	.320	.310	.296	.304	6
Diethylphthalate	1.213	1.243	1.207	1.134	1.061	1.172	6
4-Chlorophenyl-phenylether	.546	.551	.522	.516	.486	.524	5
Fluorene	1.026	1.038	.993	.947	.919	.985	5
4-Nitroaniline		.033	.043	.041	.053	.042	19
4,6-Dinitro-2-methylphenol		.111	.126	.122	.145	.126	11
N-Nitrosodiphenylamine *	.483	.440	.373	.403	.369	.414	11
4-Bromophenyl-phenylether	.246	.254	.237	.244	.244	.245	2
Hexachlorobenzene	.323	.316	.301	.305	.296	.308	3
Pentachlorophenol *		.118	.133	.124	.144	.130	8
Phenanthrene	.963	.982	.928	.927	.913	.943	3
Anthracene	.900	.945	.914	.929	.910	.919	1
Di-n-Butylphthalate	1.139	1.197	1.166	1.114	1.079	1.139	4
Fluoranthene *	.731	.810	.820	.782	.723	.773	5
Pyrene	1.868	1.816	1.585	1.670	1.795	1.747	6
Butylbenzylphthalate	.721	.766	.706	.747	.751	.738	3
3,3'-Dichlorobenzidine		.052	.082	.074	.091	.075	22
Benzo(a)Anthracene	1.024	1.078	1.021	1.053	1.050	1.045	2
Chrysene	.999	1.009	.972	1.025	.973	.995	2
Bis(2-Ethylhexyl)Phthalate	.935	.986	.933	.945	.929	.946	2
Di-n-octylphthalate *	1.966	2.304	2.318	2.213	2.310	2.222	6
Benzo(b)fluoranthene	1.216	1.242	1.376	1.186	1.338	1.272	6
Benzo(k)fluoranthene	1.260	1.266	1.244	1.287	1.296	1.271	1
Benzo(a)Pyrene *	.909	1.009	1.015	1.021	1.074	1.006	6
Indeno(1,2,3-cd)Pyrene	.429	.542	.594	.608	.697	.574	17
Dibenzo(a,h)Anthracene	.307	.489	.570	.560	.640	.513	24
Benzo(g,h,i)Perylene	.380	.504	.581	.559	.656	.536	19
Nitrobenzene-d5	.353	.348	.344	.363	.353	.352	2
2-Fluorobiphenyl	1.212	1.222	1.180	1.238	1.217	1.214	1
Terphenyl-d14	1.322	1.214	1.106	1.156	1.238	1.207	6
Phenol-d5	1.060	1.089	1.138	1.000	1.171	1.092	6
2-Fluorophenol	.947	.924	.980	.871	1.074	.959	7
2,4,6-Tribromophenol	.124	.129	.132	.124	.141	.130	5

(1) Cannot be separated from Diphenylamine

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Instrument ID: 7002V0 Calibration Date(s): 6/23/89 6/23/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) =

LAB FILE ID: RRF020= B0864 RRF050= B0863
RRF080= B0862 RRF120= B0861 RRF160= B0860

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$
Phenol *	1.469	1.442	1.436	1.417	1.440	1.441
bis(2-Chloroethyl)ether	1.255	1.197	1.211	1.165	1.268	1.219
2-Chlorophenol	1.242	1.266	1.300	1.252	1.202	1.252
1,3-Dichlorobenzene	1.515	1.399	1.405	1.375	1.264	1.392
1,4-Dichlorobenzene *	1.625	1.518	1.461	1.432	1.444	1.496
Benzyl alcohol	.675	.707	.738	.740	.735	.719
1,2-Dichlorobenzene	1.623	1.435	1.417	1.389	1.344	1.441
2-Methylphenol	1.107	1.083	.850	.910	.902	.970
bis(2-Chloroisopropyl)ether	1.496	1.376	1.338	1.988	1.844	1.608
4-Methylphenol	1.022	1.012	1.038	1.047	1.039	1.032
N-Nitroso-di-n-propylamine #	.898	1.065	1.187	1.062	.986	1.040
Hexachloroethane	.379	.461	.472	.506	.502	.464
Nitrobenzene	.455	.457	.454	.443	.467	.455
Isophorone	.710	.730	.724	.722	.720	.721
2-Nitrophenol *	.189	.203	.222	.215	.220	.210
2,4-Dimethylphenol	.226	.259	.260	.260	.261	.253
Benzoic acid		.203	.213	.245	.263	.231
bis(2-Chloroethoxy)methane	.406	.442	.452	.455	.445	.440
2,4-Dichlorophenol *	.274	.294	.283	.264	.253	.274
1,2,4-Trichlorobenzene	.374	.370	.362	.353	.347	.361
Naphthalene	.968	.941	.909	.932	.949	.940
4-Chloroaniline	.119	.212	.240	.324	.339	.247
Hexachlorobutadiene *	.253	.248	.237	.229	.226	.238
4-Chloro-3-methylphenol *	.262	.289	.280	.284	.294	.282
2-Methylnaphthalene	.576	.569	.553	.571	.558	.566
Hexachlorocyclopentadiene #		.025	.026	.065	.090	.052
2,4,6-Trichlorophenol *	.389	.412	.399	.408	.391	.400
2,4,5-Trichlorophenol		.402	.406	.429	.407	.411
2-Chloronaphthalene	1.158	1.126	1.088	1.085	1.057	1.103
2-Nitroaniline		.346	.322	.355	.346	.342
Dimethylphthalate	1.398	1.378	1.307	1.325	1.294	1.340
Acenaphthylene	1.745	1.684	1.638	1.634	1.547	1.649
2,6-Dinitrotoluene	.283	.306	.297	.312	.300	.300
3-Nitroaniline		.347	.322	.356	.346	.343
Acenaphthene *	1.111	1.078	1.028	1.003	.985	1.041
2,4-Dinitrophenol #		.085	.084	.126	.123	.105
4-Nitrophenol #		.114	.111	.135	.144	.126

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Instrument ID: 7002V0 Calibration Date(s): 6/23/89 6/23/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 3

LAB FILE ID: RRF020= B0864 RRF050= B0863
RRF080= B0862 RRF120= B0861 RRF160= B0860

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	RRF	R
Dibenzofuran	1.456	1.375	1.298	1.311	1.265	1.341	
2,4-Dinitrotoluene	.335	.379	.333	.368	.343	.352	
Diethylphthalate	1.362	1.347	1.195	1.183	1.109	1.239	
4-Chlorophenyl-phenylether	.615	.587	.531	.547	.505	.557	
Fluorene	1.138	1.099	.978	1.001	.931	1.029	
4-Nitroaniline		.084	.061	.080	.082	.077	1
4,6-Dinitro-2-methylphenol		.117	.124	.141	.142	.131	
N-Nitrosodiphenylamine *	.514	.433	.401	.372	.377	.420	1
4-Bromophenyl-phenylether	.250	.252	.245	.232	.230	.242	
Hexachlorobenzene	.327	.311	.301	.292	.284	.303	
Pentachlorophenol *		.112	.114	.134	.146	.127	1
Phenanthrene	.975	.947	.903	.889	.873	.917	
Anthracene	.919	.937	.888	.887	.858	.898	
Di-n-Butylphthalate	1.249	1.304	1.156	1.127	1.141	1.195	
Fluoranthene *	.840	.872	.770	.802	.785	.814	
Pyrene	1.929	1.691	1.871	1.772	1.742	1.801	
Butylbenzylphthalate	.832	.801	.812	.784	.782	.802	
3,3'-Dichlorobenzidine	.110	.110	.098	.123	.077	.103	1
Benzo(a)Anthracene	1.017	1.078	1.073	1.076	1.037	1.056	
Chrysene	.980	1.016	1.018	1.016	1.000	1.006	
Bis(2-Ethylhexyl)Phthalate	.992	.982	1.002	.949	.959	.977	
Di-n-octylphthalate *	2.737	2.235	2.822	2.552	2.660	2.601	
Benzo(b)fluoranthene	1.232	1.201	1.441	1.438	1.580	1.379	1
Benzo(k)fluoranthene	1.410	1.287	1.441	1.382	1.181	1.340	
Benzo(a)Pyrene *	.946	1.026	1.108	1.124	1.117	1.064	
Indeno(1,2,3-cd)Pyrene	.486	.748	.576	.683	.691	.637	1
Dibenzo(a,h)Anthracene	.359	.711	.572	.639	.652	.587	2
Benzo(g,h,i)Perylene	.332	.748	.581	.627	.650	.587	2
Nitrobenzene-d5	.327	.340	.334	.338	.352	.338	
2-Fluorobiphenyl	1.196	1.168	1.214	1.197	1.194	1.194	
Terphenyl-d14	1.396	1.231	1.361	1.316	1.234	1.308	
Phenol-d5	1.089	1.027	1.113	1.013	1.111	1.070	
2-Fluorophenol	.910	.869	.975	.890	1.011	.931	
2,4,6-Tribromophenol	.118	.124	.133	.126	.143	.129	

(1) Cannot be separated from Diphenylamine

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7002V0 Calibration Date(s): 6/25/89 6/25/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*)

LAB FILE ID: RRF020= B0896 RRF050= B0895
RRF080= B0894 RRF120= B0893 RRF160= B0892

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$
Phenol *	1.412	1.405	1.390	1.354	1.399	1.392
bis(2-Chloroethyl)ether	1.564	1.201	1.158	1.183	1.084	1.238
2-Chlorophenol	1.269	1.271	1.212	1.222	1.214	1.238
1,3-Dichlorobenzene	1.493	1.442	1.361	1.298	1.244	1.368
1,4-Dichlorobenzene *	1.557	1.474	1.450	1.412	1.426	1.464
Benzyl alcohol	.688	.706	.709	.733	.717	.711
1,2-Dichlorobenzene	1.536	1.460	1.395	1.357	1.366	1.423
2-Methylphenol	.842	.837	.846	.913	.908	.869
bis(2-Chloroisopropyl)ether	1.335	1.895	1.320	1.853	1.801	1.641
4-Methylphenol	1.038	1.023	.990	1.017	1.014	1.016
N-Nitroso-di-n-propylamine #	.980	1.023	1.132	.998	.954	1.017
Hexachloroethane	.474	.531	.540	.532	.545	.525
Nitrobenzene	.443	.459	.452	.463	.387	.441
Isophorone	.690	.716	.710	.733	.722	.714
2-Nitrophenol *	.179	.208	.207	.221	.220	.207
2,4-Dimethylphenol	.252	.265	.260	.274	.267	.264
Benzoic acid		.168	.188	.227	.225	.202
bis(2-Chloroethoxy)methane	.417	.441	.431	.454	.423	.433
2,4-Dichlorophenol *	.281	.292	.295	.279	.266	.283
1,2,4-Trichlorobenzene	.377	.232	.364	.355	.258	.317
Naphthalene	.936	.959	.903	.908	.922	.926
4-Chloroaniline	.115	.188	.253	.299	.316	.234
Hexachlorobutadiene *	.263	.260	.240	.233	.231	.245
4-Chloro-3-methylphenol *	.255	.271	.270	.282	.283	.272
2-Methylnaphthalene	.587	.579	.554	.576	.548	.569
Hexachlorocyclopentadiene #	.044	.101	.127	.190	.182	.129
2,4,6-Trichlorophenol *	.363	.385	.384	.376	.387	.379
2,4,5-Trichlorophenol		.391	.371	.395	.378	.384
2-Chloronaphthalene	1.084	1.125	1.080	1.054	.995	1.067
2-Nitroaniline		.330	.330	.358	.338	.339
Dimethylphthalate	1.345	1.371	1.351	1.336	1.283	1.337
Acenaphthylene	1.759	1.704	1.685	1.652	1.571	1.674
2,6-Dinitrotoluene	.275	.297	.294	.311	.316	.299
3-Nitroaniline		.329	.330	.358	.339	.339
Acenaphthene *	1.148	1.095	1.033	.994	.939	1.042
2,4-Dinitrophenol #		.046	.067	.103	.092	.077
4-Nitrophenol #		.116	.127	.150	.119	.128

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7002V0 Calibration Date(s): 6/25/89 6/25/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 3

LAB FILE ID: RRF020= B0896 RRF050= B0895
RRF080= B0894 RRF120= B0893 RRF160= B0892

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$	R
Dibenzofuran	1.444	1.380	1.373	1.320	1.266	1.357	
2,4-Dinitrotoluene	.330	.363	.361	.377	.334	.353	
Diethylphthalate	1.327	1.322	1.262	1.226	1.154	1.258	
4-Chlorophenyl-phenylether	.580	.593	.567	.545	.501	.557	
Fluorene	1.098	1.087	1.047	1.016	.938	1.037	
4-Nitroaniline	.072	.084	.082	.106	.079	.085	1
4,6-Dinitro-2-methylphenol		.081	.097	.118	.117	.103	1
N-Nitrosodiphenylamine *	.494	.441	.420	.414	.426	.439	
4-Bromophenyl-phenylether	.237	.249	.242	.224	.232	.237	
Hexachlorobenzene	.313	.301	.300	.280	.279	.295	
Pentachlorophenol *		.082	.093	.118	.113	.101	1
Phenanthrene	.999	.963	.935	.897	.902	.939	
Anthracene	.982	.940	.948	.923	.906	.940	
Di-n-Butylphthalate	1.257	1.252	1.213	1.211	1.116	1.210	
Fluoranthene *	.859	.825	.805	.814	.735	.808	
Pyrene	2.241	2.153	2.157	1.748	1.930	2.046	
Butylbenzylphthalate	.886	.896	.940	.803	.876	.880	
3,3'-Dichlorobenzidine	.049	.075	.075	.054	.048	.060	2
Benzo(a)Anthracene	1.044	1.069	1.024	1.038	1.100	1.055	
Chrysene	.952	1.027	.980	.997	1.033	.998	
Bis(2-Ethylhexyl)Phthalate	1.171	1.172	1.181	1.032	1.060	1.123	
Di-n-octylphthalate *	2.894	3.016	3.435	2.157	2.305	2.761	1
Benzo(b)fluoranthene	1.213	1.302	1.394	1.142	1.186	1.247	
Benzo(k)fluoranthene	1.296	1.244	1.239	1.151	1.112	1.209	
Benzo(a)Pyrene *	.887	1.002	1.003	1.004	.999	.979	
Indeno(1,2,3-cd)Pyrene	.397	.598	.482	.757	.757	.598	2
Dibenzo(a,h)Anthracene	.337	.560	.437	.711	.706	.550	2
Benzo(g,h,i)Perylene	.388	.619	.457	.755	.764	.596	2
Nitrobenzene-d5	.336	.344	.334	.345	.347	.341	1
2-Fluorobiphenyl	1.182	1.160	1.156	1.156	1.166	1.164	
Terphenyl-d14	1.601	1.523	1.610	1.286	1.384	1.481	9
Phenol-d5	1.082	1.040	1.090	.985	1.115	1.062	4
2-Fluorophenol	.928	.851	.913	.822	.979	.898	7
2,4,6-Tribromophenol	.106	.112	.118	.113	.132	.116	8

(1) Cannot be separated from Diphenylamine

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7002V0 Calibration Date(s): 7/ 2/89 7/ 2/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 30.0

LAB FILE ID: RRF020= B0927 RRF050= B0926
RRF080= B0925 RRF120= B0924 RRF60 = B0923

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF60	$\overline{RRF}$	%RSD
Phenol *	1.319	1.449	1.450	1.477	1.455	1.430	4.4
bis(2-Chloroethyl)ether	1.093	1.053	.993	1.438	.881	1.092	19.2
2-Chlorophenol	1.199	1.249	1.306	1.249	1.309	1.262	3.7
1,3-Dichlorobenzene	1.370	1.370	1.362	1.345	1.298	1.349	2.3
1,4-Dichlorobenzene *	1.653	1.667	1.657	1.642	1.640	1.652	[illegible]
Benzyl alcohol	.575	.680	.704	.735	.737	.686	9.7
1,2-Dichlorobenzene	1.500	1.481	1.466	1.490	1.461	1.480	1.1
2-Methylphenol	.681	.765	.774	.817	.870	.781	8.[illegible]
bis(2-Chloroisopropyl)ether	.976	.943	1.078	.910	.909	.963	7.[illegible]
4-Methylphenol	.866	.986	1.014	1.023	1.018	.981	6.7
N-Nitroso-di-n-propylamine #	.769	1.157	1.050	.965	.910	.970	15.[illegible]
Hexachloroethane	.740	.725	.696	.707	.693	.712	2.[illegible]
Nitrobenzene	.434	.470	.362	.326	.329	.384	16.8
Isophorone	.670	.711	.685	.677	.660	.681	2.9
2-Nitrophenol *	.171	.204	.200	.216	.208	.200	8.[illegible]
2,4-Dimethylphenol	.235	.255	.259	.259	.249	.251	3.[illegible]
Benzoic acid		.175	.199	.195	.211	.195	7.6
bis(2-Chloroethoxy)methane	.400	.428	.418	.438	.423	.421	3.[illegible]
2,4-Dichlorophenol *	.258	.279	.286	.281	.265	.273	4.[illegible]
1,2,4-Trichlorobenzene	.371	.372	.359	.350	.338	.358	4.0
Naphthalene	.926	.945	.913	.889	.876	.910	3.[illegible]
4-Chloroaniline	.114	.196	.196	.223	.245	.195	25.[illegible]
Hexachlorobutadiene *	.256	.255	.233	.226	.217	.237	7.4
4-Chloro-3-methylphenol *	.189	.239	.251	.251	.256	.237	11.2
2-Methylnaphthalene	.488	.535	.518	.514	.511	.513	3.[illegible]
Hexachlorocyclopentadiene #	.203	.316	.325	.360	.375	.316	21.4
2,4,6-Trichlorophenol *	.363	.397	.394	.392	.385	.386	3.5
2,4,5-Trichlorophenol		.381	.396	.402	.393	.393	2.[illegible]
2-Chloronaphthalene	1.105	1.144	1.096	1.105	1.081	1.106	2.[illegible]
2-Nitroaniline		.277	.313	.301	.312	.301	5.6
Dimethylphthalate	1.215	1.288	1.269	1.211	1.213	1.239	3.[illegible]
Acenaphthylene	1.596	1.686	1.634	1.577	1.584	1.615	2.[illegible]
2,6-Dinitrotoluene	.225	.273	.276	.275	.271	.264	8.3
3-Nitroaniline		.277	.313	.301	.312	.301	5.[illegible]
Acenaphthene *	1.058	1.094	1.066	1.034	1.027	1.056	2.[illegible]
2,4-Dinitrophenol #		.081	.116	.101	.112	.103	15.2
4-Nitrophenol #		.089	.133	.106	.112	.110	16.3

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7002VO Calibration Date(s): 7/ 2/89 7/ 2/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 30.0

LAB FILE ID: RRF020= B0927 RRF050= B0926
RRF080= B0925 RRF120= B0924 RRF60 = B0923

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF60	$\overline{RRF}$	% RSD
Dibenzofuran	1.208	1.253	1.261	1.198	1.194	1.223	2.6
2,4-Dinitrotoluene	.239	.280	.310	.287	.279	.279	9.2
Diethylphthalate	1.115	1.171	1.177	1.063	1.070	1.119	4.8
4-Chlorophenyl-phenylether	.467	.480	.488	.459	.454	.470	3.0
Fluorene	.919	.954	.972	.887	.885	.923	4.3
4-Nitroaniline		.048	.066	.048	.053	.054	16.2
4,6-Dinitro-2-methylphenol		.129	.133	.136	.144	.135	4.8
N-Nitrosodiphenylamine *	.476	.432	.350	.328	.313	.380	18.7
4-Bromophenyl-phenylether	.216	.228	.217	.230	.222	.223	2.8
Hexachlorobenzene	.277	.289	.255	.271	.262	.271	4.9
Pentachlorophenol *		.130	.141	.133	.139	.136	3.7
Phenanthrene	.932	.961	.916	.904	.917	.926	2.4
Anthracene	.890	.956	.913	.916	.917	.918	2.6
Di-n-Butylphthalate	1.069	1.120	1.175	1.017	1.015	1.079	6.4
Fluoranthene *	.758	.780	.815	.680	.680	.743	8.2
Pyrene	1.624	1.672	1.540	1.732	1.616	1.637	4.3
Butylbenzylphthalate	.648	.686	.759	.731	.694	.704	6.1
3,3'-Dichlorobenzidine		.108	.119	.106	.127	.115	8.4
Benzo(a)Anthracene	1.029	1.087	1.102	1.062	1.036	1.063	3.0
Chrysene	.987	1.024	1.037	1.032	.989	1.014	2.4
Bis(2-Ethylhexyl)Phthalate	.817	.955	1.063	.908	.903	.929	9.7
Di-n-octylphthalate *	1.274	1.626	2.092	1.681	1.733	1.681	17.3
Benzo(b)fluoranthene	1.001	1.153	1.174	1.084	1.201	1.122	7.2
Benzo(k)fluoranthene	1.060	1.066	1.060	1.084	1.201	1.094	5.5
Benzo(a)Pyrene *	.878	.969	1.001	.998	1.002	.970	5.5
Indeno(1,2,3-cd)Pyrene	.581	.801	.599	.787	.807	.715	16.0
Dibenzo(a,h)Anthracene	.539	.747	.542	.730	.761	.664	17.0
Benzo(g,h,i)Perylene	.637	.815	.599	.806	.807	.733	14.4
Nitrobenzene-d5	.336	.347	.335	.338	.337	.338	1.4
2-Fluorobiphenyl	1.258	1.258	1.194	1.247	1.232	1.238	2.1
Terphenyl-d14	1.060	.996	.970	1.042	1.002	1.014	3.6
Phenol-d5	1.011	1.035	1.128	.999	1.131	1.061	6.0
2-Fluorophenol	.904	.302	.944	.813	.968	.886	8.5
2,4,6-Tribromophenol	.101	.106	.110	.103	.114	.107	4.9

(1) Cannot be separated from Diphenylamine

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7002VO Calibration Date(s): 7/ 3/89 7/ 3/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 30.

LAB FILE ID: RRF020= B0943 RRF050= B0942
RRF080= B0941 RRF120= B0940 RRF160= B0939

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$	RS
Phenol *	1.485	1.394	1.397	1.287	1.438	1.400	5
bis(2-Chloroethyl)ether	1.105	.990	1.030	1.225	1.415	1.153	14
2-Chlorophenol	1.383	1.287	1.328	1.116	1.301	1.283	7.
1,3-Dichlorobenzene	1.547	1.364	1.354	1.195	1.060	1.304	14.
1,4-Dichlorobenzene *	1.668	1.664	1.641	1.420	1.629	1.604	6
Benzyl alcohol	.657	.648	.702	.643	.733	.677	5
1,2-Dichlorobenzene	1.695	1.471	1.480	1.293	1.431	1.474	9.
2-Methylphenol	.728	.681	.757	.748	.858	.754	8
bis(2-Chloroisopropyl)ether	1.048	.975	1.036	.880	.925	.973	7
4-Methylphenol	.978	.941	.989	.910	1.025	.968	4.
N-Nitroso-di-n-propylamine #	.804	.809	1.025	.869	.941	.890	10
Hexachloroethane	.837	.725	.709	.594	.680	.709	12
Nitrobenzene	.295	.456	.350	.326	.336	.353	17.
Isophorone	.694	.704	.690	.628	.680	.679	4.
2-Nitrophenol *	.168	.195	.204	.198	.210	.195	8
2,4-Dimethylphenol	.228	.254	.252	.238	.253	.245	4.
Benzoic acid		.180	.211	.208	.227	.206	9.
bis(2-Chloroethoxy)methane	.379	.417	.423	.397	.432	.410	5
2,4-Dichlorophenol *	.247	.285	.285	.250	.264	.267	6
1,2,4-Trichlorobenzene	.363	.368	.358	.319	.337	.349	5.
Naphthalene	.924	.949	.913	.831	.919	.907	4
4-Chloroaniline	.160	.124	.182	.237	.248	.190	27
Hexachlorobutadiene *	.271	.259	.234	.203	.213	.236	12.
4-Chloro-3-methylphenol *	.194	.248	.264	.245	.261	.242	11
2-Methylnaphthalene	.516	.547	.539	.505	.520	.525	3
Hexachlorocyclopentadiene #	.153	.244	.285	.290	.355	.265	28.
2,4,6-Trichlorophenol *	.340	.381	.373	.354	.397	.369	6.
2,4,5-Trichlorophenol		.385	.399	.374	.399	.389	3
2-Chloronaphthalene	1.071	1.089	1.035	.967	1.091	1.050	4
2-Nitroaniline		.292	.315	.309	.329	.311	5.
Dimethylphthalate	1.228	1.319	1.310	1.177	1.263	1.259	4
Acenaphthylene	1.601	1.681	1.599	1.389	1.653	1.585	7
2,6-Dinitrotoluene	.239	.283	.286	.286	.306	.280	8.
3-Nitroaniline		.292	.315	.309	.329	.311	5
Acenaphthene *	1.122	1.118	1.064	.959	1.041	1.061	6
2,4-Dinitrophenol #		.110	.132	.141	.130	.129	10.
4-Nitrophenol #		.108	.129	.151	.123	.128	14.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Instrument ID: 7002VO Calibration Date(s): 7/ 3/89 7/ 3/89

Min $\overline{RRF}$ for SPCC(#) = .050 Max %RSD for CCC(*) = 30.0

LAB FILE ID: RRF020= B0943 RRF050= B0942
RRF080= B0941 RRF120= B0940 RRF160= B0939

COMPOUND	RRF020	RRF050	RRF080	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	1.292	1.330	1.290	1.193	1.260	1.273	4.0
2,4-Dinitrotoluene	.286	.331	.346	.326	.308	.319	7.3
Diethylphthalate	1.223	1.307	1.257	1.161	1.180	1.226	4.8
4-Chlorophenyl-phenylether	.518	.539	.514	.455	.490	.503	6.4
Fluorene	.994	1.024	1.002	.929	.942	.978	4.2
4-Nitroaniline		.061	.058	.089	.058	.066	22.9
4,6-Dinitro-2-methylphenol		.139	.144	.136	.147	.141	3.5
N-Nitrosodiphenylamine *	.446	.390	.339	.285	.313	.355	18.1*
4-Bromophenyl-phenylether	.198	.220	.210	.184	.227	.208	8.2
Hexachlorobenzene	.266	.277	.265	.229	.268	.261	7.1
Pentachlorophenol *		.147	.156	.146	.151	.150	3.2*
Phenanthrene	.946	.973	.942	.829	.919	.922	6.0
Anthracene	.903	.959	.926	.829	.919	.907	5.3
Di-n-Butylphthalate	1.271	1.317	1.292	1.193	1.087	1.232	7.6
Fluoranthene *	.874	.902	.830	.839	.714	.832	8.6*
Pyrene	1.836	1.764	1.908	1.389	1.893	1.758	12.2
Butylbenzylphthalate	.743	.792	.868	.735	.817	.791	6.9
3,3'-Dichlorobenzidine	.055	.087	.082	.090	.114	.086	24.6
Benzo(a)Anthracene	1.020	1.081	1.058	1.001	1.085	1.049	3.5
Chrysene	1.010	1.048	1.039	.909	1.048	1.011	5.9
Bis(2-Ethylhexyl)Phthalate	1.127	1.096	1.210	1.094	1.132	1.132	4.1
Di-n-octylphthalate *	1.782	2.014	2.637	2.251	2.223	2.181	14.5*
Benzo(b)fluoranthene	1.002	1.177	1.260	1.194	1.267	1.180	9.1
Benzo(k)fluoranthene	1.179	1.173	1.200	.979	1.089	1.124	8.2
Benzo(a)Pyrene *	.873	1.019	.995	.931	1.015	.967	6.5*
Indeno(1,2,3-cd)Pyrene	.483	.688	.572	.587	.747	.615	16.8
Dibenzo(a,h)Anthracene	.463	.619	.519	.520	.689	.562	16.1
Benzo(g,h,i)Perylene	.550	.713	.601	.587	.749	.640	13.4
Nitrobenzene-d5	.332	.333	.332	.332	.342	.334	1.4
2-Fluorobiphenyl	1.157	1.222	1.166	1.110	1.259	1.183	4.9
Terphenyl-d14	1.185	1.121	1.236	1.016	1.150	1.142	7.2
Phenol-d5	1.109	.990	1.117	.953	1.251	1.084	10.9
2-Fluorophenol	1.024	.806	1.001	.855	.941	.925	10.1
2,4,6-Tribromophenol	.098	.102	.112	.096	.122	.106	10.1

(1) Cannot be separated from Diphenylamine

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Technology Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0828 Date Analyzed: 6/22/89

Instrument ID: H5970BN Time Analyzed: 3:09

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	114868	7.15	410904	10.37	222118	14.72
	UPPER LIMIT	229736		821808		444236	
	LOWER LIMIT	57434		205452		111059	
	EPA SAMPLE NO.						
01	BLANK5	112713	7.15	417987	10.35	221565	14.70
02	2-SW-4	117244	7.13	416590	10.34	230915	14.70
03	2-SW-5	92554	7.12	366051	10.33	209357	14.70
04	2-SW-6	113576	7.13	410369	10.34	227873	14.71
05	2-SW-8	100129	7.13	373484	10.34	206310	14.70
06	BLANK2	98369	7.12	360401	10.34	215589	14.70
07	2-SW-1	95852	7.12	357587	10.34	201125	14.70
08	2-SW-2	92818	7.12	349344	10.34	191452	14.70
09	2-SW-3	96269	7.13	366052	10.34	206184	14.70
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Technology Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0828 Date Analyzed: 6/22/89

Instrument ID: H5970BN Time Analyzed: 3:09

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	275782	18.25	100373	24.71	47194	28.00
	UPPER LIMIT	551564		200746		94388	
	LOWER LIMIT	137891		50187		23597	
	EPA SAMPLE NO.						
01	BLANK5	287357	18.24	96868	24.70	40095	27.98
02	2-SW-4	318508	18.24	131824	24.70	73715	27.99
03	2-SW-5	291007	18.24	126396	24.70	68809	27.99
04	2-SW-6	313978	18.24	115349	24.70	49840	27.99
05	2-SW-8	294597	18.24	110841	24.70	47376	27.99
06	BLANK2	304324	18.24	118374	24.70	49640	27.99
07	2-SW-1	270679	18.24	97926	24.70	45437	27.98
08	2-SW-2	243989	18.23	84944	24.69	44869	27.99
09	2-SW-3	270301	18.24	89452	24.69	40574	27.98
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

page __ of __

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Tech. Contract: _____

Lab Code: HET Case No.: Eng. Sci. SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0845 Date Analyzed: 6/22/89

Instrument ID: H5970BN Time Analyzed: 17:59

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	87402	7.02	304145	10.25	152835	14.60
	UPPER LIMIT	174804		608290		305670	
	LOWER LIMIT	43701		152072		76417	
	EPA SAMPLE NO.						
01	2-SW-7	81981	7.00	298164	10.23	158138	14.58
02	BLANK3	97370	7.06	333680	10.23	163167	14.58
03	6BH1SS1	104624	7.07	372873	10.23	195221	14.58
04	6BH1SS2	107065	7.00	255860	10.22	156016	14.59
05	6BH1SS3	11395	7.00	382481	10.23	161081	14.59
06	2-SD-4	100535	7.07	351376	10.23	168377	14.59
07	2-SD-5	105962	7.07	366945	10.24	176940	14.61
08	2-SD-6	99251	7.08	348648	10.24	176362	14.61
09	BLANK6	95994	7.04	338880	10.22	172072	14.59
10	3BH2SS2	101925	7.03	349272	10.23	178937	14.58
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Tech. Contract: _____

Lab Code: HET Case No.: Eng. Sci. SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0845 Date Analyzed: 6/22/89

Instrument ID: H5970BN Time Analyzed: 17:59

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	179037	18.11	77409	24.57	42150	27.83
	UPPER LIMIT	358074		154818		84300	
	LOWER LIMIT	89515		38704		21075	
	EPA SAMPLE NO.						
01	2-SW-7	186434	18.10	86536	24.57	48666	27.82
02	BLANK3	172959	18.11	56219	24.56	29089	27.82
03	6BH1SS1	239042	18.12	122373	24.57	79802	27.85
04	6BH1SS2	220622	18.11	117039	24.57	75016	27.84
05	6BH1SS3	188492	18.10	75244	24.56	46600	27.82
06	2-SD-4	118976	18.13	85827	24.58	51860	27.85
07	2-SD-5	195730	18.13	75363	24.59	47469	27.87
08	2-SD-6	217068	18.14	94189	24.60	51679	27.87
09	BLANK6	204282	18.11	89623	24.57	53690	27.85
10	3BH2SS2	196219	18.11	77750	24.57	42062	27.83
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

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8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Technology Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0863 Date Analyzed: 6/23/89

Instrument ID: H5970BN Time Analyzed: 7:15

		IS1(DCB) AREA	#	RT	IS2(NPT) AREA	#	RT	IS3(ANT) AREA	#	RT
	12 HOUR STD	116231		7.03	416118		10.26	222007		14.61
	UPPER LIMIT	232462			832236			444014		
	LOWER LIMIT	58115			208059			111003		
	EPA SAMPLE NO.									
01	3-BH2-SS2	543864	*	6.99	232045		10.22	125307		14.57
02	3-BH4-SS1	89846		7.01	321748		10.23	159935		14.58
03	3-BH3-SS2	103316		6.99	279053		10.22	164278		14.59
04	3-BH1-SS1	103710		6.99	282768		10.23	148592		14.59
05	3-BH1-SS2	87183		7.00	291354		10.23	170825		14.59
06	2-SD-1	92640		7.06	347404		10.23	172869		14.60
07	2-SD-3	97686		7.08	356185		10.28	174767		14.64
08	2-SD-7	104036		7.05	375082		10.25	194103		14.61
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Technology Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0863 Date Analyzed: 6/23/89

Instrument ID: H5970BN Time Analyzed: 7:15

		IS4(PHN) AREA	#	RT	IS5(CRY) AREA	#	RT	IS6(PRY) AREA	#	RT
	12 HOUR STD	302548		18.14	150744		24.60	87127		27.87
	UPPER LIMIT	605096			301488			174254		
	LOWER LIMIT	151274			75372			43563		
	EPA SAMPLE NO.									
01	3-BH2-SS2	161411		18.11	78832		24.60	42632	*	27.83
02	3-BH4-SS1	173545		18.10	65765	*	24.56	35456	*	27.84
03	3-BH3-SS2	214096		18.11	99384		24.57	48514		27.84
04	3-BH1-SS1	178233		18.11	82207		24.57	51975		27.84
05	3-BH1-SS2	213116		18.11	77156		24.57	35527	*	27.83
06	2-SD-1	204811		18.12	89926		24.60	51344		27.87
07	2-SD-3	190000		18.16	69691	*	24.64	35444	*	27.91
08	2-SD-7	228970		18.15	86721		24.62	44963		27.89
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

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8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Tech. Contract: _____

Lab Code: HET Case No.: Eng. Sci. SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0895 Date Analyzed: 890625

Instrument ID: H5970BN Time Analyzed: 19:18

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	107610	6.91	378280	10.14	208301	14.48
	UPPER LIMIT	215220		756560		416602	
	LOWER LIMIT	53805		189140		104150	
	EPA SAMPLE NO.						
01	BLANK8	100581	6.89	425194	10.13	218618	14.47
02	BLANK9	96907	6.88	368629	10.10	202707	14.47
03	6MW1GW1	99662	6.88	385030	10.10	217324	14.47
04	6TAPWTR	103626	6.88	385249	10.10	214870	14.47
05	2MW1GW1	111912	6.88	409359	10.11	226640	14.47
06	2RNSBLK	103617	6.89	384182	10.11	222229	14.47
07	5BH1SS1	118734	6.91	317595	10.12	169766	14.46
08	5BH1SS2	192969	6.93	531948	10.15	291887	14.48
09	6BH1SS2MS	116209	6.89	410035	10.12	192875	14.47
10	6BH1SS1MSD	121982	6.93	436355	10.13	239392	14.47
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Tech. Contract: _____

Lab Code: HET Case No.: Eng. Sci. SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0895 Date Analyzed: 890625

Instrument ID: H5970BN Time Analyzed: 19:18

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	290211	18.00	108006	24.44	44028	27.67
	UPPER LIMIT	580422		216012		88056	
	LOWER LIMIT	145105		54003		22014	
	EPA SAMPLE NO.						
01	BLANK8	301810	17.98	110755	24.42	50019	27.66
02	BLANK9	278500	17.98	101676	24.42	54371	27.66
03	6MW1GW1	333040	17.99	137844	24.43	74834	27.67
04	6TAPWTR	308335	17.99	110166	24.43	56782	27.66
05	2MW1GW1	329949	17.99	126446	24.43	75802	27.67
06	2RNSBLK	314179	17.99	105099	24.43	55970	27.67
07	5BH1SS1	217211	17.97	85239	24.42	57801	27.67
08	5BH1SS2	411052	18.00	205134	24.45	153994 *	27.69
09	6BH1SS2	218840	17.98	83180	24.42	54993	27.67
10	6BH1SS1	338553	18.00	124349	24.43	66468	27.67
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

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8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Tech. Contract: _____

Lab Code: HET Case No.: Eng. Sci. SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0926 Date Analyzed: 890702

Instrument ID: H5970BN Time Analyzed: 19:32

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	88399	6.67	283661	9.91	125710	14.24
	UPPER LIMIT	176798		567322		251420	
	LOWER LIMIT	44199		141830		62855	
	EPA SAMPLE NO.						
01	1M206GW1	81113	6.64	289820	9.89	127236	14.24
02	1M218GW1	88125	6.65	300780	9.89	127231	14.23
03	Blank7	90035	6.66	306417	9.89	144115	14.23
04	1RNSBLK	95422	6.66	336243	9.89	160606	14.23
05	1FLDBLK	99680	6.65	350874	9.89	163682	14.23
06	2-SW-6MS	120887	6.68	379557	9.92	187157	14.25
07	2-SW-6MSD	116442	6.67	351034	9.91	159009	14.24
08	BLANK12	87426	6.66	296149	9.90	135676	14.24
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Tech. Contract: _____

Lab Code: HET Case No.: Eng. Sci. SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0926 Date Analyzed: 890702

Instrument ID: H5970BN Time Analyzed: 19:32

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	132662	17.74	60517	24.17	52539	27.38
	UPPER LIMIT	265324		121034		105078	
	LOWER LIMIT	66331		30258		26269	
	EPA SAMPLE NO.						
01	1M206GW1	152821	17.74	66813	24.16	59540	27.37
02	1M218GW1	140804	17.73	79908	24.16	73777	27.38
03	BLANK7	196428	17.73	122014*	24.17	73202	27.37
04	1RNSBLK	236416	17.74	171766*	24.18	99825	27.39
05	1FLDBLK	189523	17.73	72991	24.16	55645	27.37
06	2-SW-6MS	227210	17.75	122072*	24.17	107194*	27.39
07	2-SW-6MSD	168525	17.74	71855	24.16	58586	27.37
08	BLANK12	184037	17.74	130648*	24.18	126015*	27.41
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

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8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Technology Contract: ----------

Lab Code: ------- Case No.: ------ SAS No.: ------- SDG No.: -------

Lab File ID (Standard): B0942 Date Analyzed: 7/3/89

Instrument ID: H5970BN Time Analyzed: 7:11

	IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
12 HOUR STD	85618	6.65	272120	9.90	131454	14.24
UPPER LIMIT	171236		544240		262908	
LOWER LIMIT	42809		136060		65727	
EPA SAMPLE NO.						
01 BLNK10	81635	6.64	295185	9.88	137597	14.23
02 BLNK11	87304	6.65	299325	9.89	148804	14.23
03 5MW1GW1	103885	6.66	382892	9.90	200211	14.24
04 5RNSBLK	92942	6.65	333843	9.89	165407	14.24
05 3MW1GW1	81308	6.66	304376	9.91	159003	14.26
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Harris Environmental Technology Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): B0942 Date Analyzed: 7/3/89

Instrument ID: H5970BN Time Analyzed: 7:11

	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
12 HOUR STD	176310	17.74	90733	24.17	62369	27.37
UPPER LIMIT	352620		181466		124738	
LOWER LIMIT	88155		45366		31184	
EPA SAMPLE NO.						
01 BLNK10	171371	17.73	71141	24.15	57141	27.36
02 BLNK11	211181	17.74	101670	24.17	69632	27.37
03 5MW1GW1	260421	17.75	122089	24.18	78004	27.38
04 5RNSBLK	231718	17.74	107995	24.16	71082	27.37
05 3MW1GW1	217168	17.77	102957	24.20	62530	27.40
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

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8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Lab File ID (Standard): A1571 Date Analyzed: 6/19/89

Instrument ID: 7001VO Time Analyzed: 21:47

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	17623.	9.49	53146.	19.58	48010.	24.4
UPPER LIMIT	35246.	9.99	106292.	20.08	96020.	24.
LOWER LIMIT	8812.	8.99	26573.	19.08	24005.	23.
EPA SAMPLE NO.						
1 VBLK01	17272.	9.57	52380.	19.58	48064.	24.
2 2-SW-1	17702.	9.49	52230.	19.58	46969.	24.
3 2-SW-MS	14549.	9.57	43907.	19.58	40267.	24.
4 2-SW-MSD	17503.	9.57	51500.	19.58	47206.	24.
5 2-SW-2	17683.	9.60	52459.	19.58	47469.	24.
6 2-SW-3	17199.	9.57	51052.	19.58	47536.	24.
7 2-SW-7	17648.	9.57	51769.	19.58	48379.	24.
8 2-SD-3	12186.	9.57	39965.	19.58	34233.	24.
9 2-SD-1	13996.	9.57	44446.	19.58	37563.	24.
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard area values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID (Standard): A1583 Date Analyzed: 6/20/89

Instrument ID: 7001VO Time Analyzed: 15:33

Matrix:(soil/water) SOIL Level:(low/med): LOW Column:(pack/cap) PACK

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	18749.	9.49	56352.	19.58	49145.	24.42
UPPER LIMIT	37498.	9.99	112704.	20.08	98290.	24.92
LOWER LIMIT	9375.	8.99	28176.	19.08	24573.	23.92
EPA SAMPLE NO.						
1 VBLK01	16929.	9.49	49303.	19.58	44735.	24.41
2 2-SD-1	14943.	9.60	45192.	19.58	39803.	24.41
3 2-SD-MS	16634.	9.49	48251.	19.58	43725.	24.41
4 2-SD-MSD	13268.	9.57	39768.	19.62	33560.	24.42
5 2-SD-7	12284.	9.57	39691.	19.58	34645.	24.41
6 6BH1SS1	15328.	9.45	44644.	19.58	39354.	24.41
7 2-SW-4	17613.	9.57	54116.	19.58	49286.	24.42
8 2-SW-5	17388.	9.57	51939.	19.58	48081.	24.42
9 2-SW-8	11308.	9.57	33493.	19.58	31077.	24.41
10 6BH1SS2	15639.	9.57	46638.	19.58	42835.	24.41
11 6BH1SS3	14287.	9.60	41980.	19.58	39266.	24.41
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Lab File ID (Standard): A1599 Date Analyzed: 6/21/8[illegible]

Instrument ID: 7001VO Time Analyzed: 16:01

Matrix:(soil/water) SOIL Level:(low/med): LOW Column:(pack/cap) PACK

		IS1(BCM)			IS2(DFB)			IS3(CBZ)	
		AREA #	RT		AREA #	RT		AREA #	RT
	12 HOUR STD	18970.	9.49		57145.	19.58		50119.	24.4
	UPPER LIMIT	37940.	9.99		114290.	20.08		100238.	24.
	LOWER LIMIT	9485.	8.99		28573.	19.08		25060.	23.9
	EPA SAMPLE NO.								
1	VBLK01	17994.	9.49		54970.	19.58		49989.	24.
2	2-SD-4	10786.	9.57		37428.	19.58		28553.	24.4
3	2-SD-5	14960.	9.57		43419.	19.59		37390.	24.4
4	3BH3SS2	14151.	9.57		41081.	19.58		36315.	24.
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Lab File ID (Standard): A1612 Date Analyzed: 6/22/89

Instrument ID: 7001VO Time Analyzed: 17:22

Matrix:(soil/water) SOIL Level:(low/med): LOW Column:(pack/cap) PACK

		IS1(BCM)		IS2(DFB)		IS3(CBZ)	
		AREA #	RT	AREA #	RT	AREA #	RT
	12 HOUR STD	18477.	9.49	57310.	19.58	50571.	24.38
	UPPER LIMIT	36954.	9.99	114620.	20.08	101142.	24.88
	LOWER LIMIT	9239.	8.99	28655.	19.08	25286.	23.88
	EPA SAMPLE NO.						
1	VBLK01	17399.	9.58	54875.	19.60	49915.	24.39
2	TB 9/19	17134.	9.58	53376.	19.59	48142.	24.42
3	2-SW-6	17271.	9.58	52776.	19.59	47835.	24.43
4	2-SD-6	15727.	9.57	49984.	19.58	43737.	24.42
5	3BH1SS1	14947.	9.49	40969.	19.58	33145.	24.42
6	3BH1SS3	12831.	9.57	33002.	19.58	28567.	24.42
7	3BH2SS2	13021.	9.57	34847.	19.58	27838.	24.38
8	3BH2SS1	14736.	9.57	39528.	19.58	29524.	24.38
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag internal standard area values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1 PRN

Lab File ID (Standard): A1627 Date Analyzed: 6/23/9

Instrument ID: 7001VO Time Analyzed: 17:07

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

		IS1(BCM)			IS2(DFB)			IS3(CBZ)	
		AREA	#	RT	AREA	#	RT	AREA	#	RT
	12 HOUR STD	19523.		9.49	58643.		19.58	51722.		24.
	UPPER LIMIT	39046.		9.99	117286.		20.08	103444.		24.
	LOWER LIMIT	9762.		8.99	29322.		19.08	25861.		23.
	EPA SAMPLE NO.									
1	VBLK01	17992.		9.57	54652.		19.58	49800.		24.
2	TB6/19-2	17468.		9.58	54279.		19.60	49763.		24.
3	1RINSATE	17990.		9.57	54672.		19.58	49889.		24.
4	1FIELDBL	17658.		9.57	51888.		19.58	48487.		24.
5	1M214GW1	17651.		9.57	51109.		19.58	47876.		24.
6	1M216GW1	18604.		9.57	54024.		19.59	49676.		24.
7	1M206GW1	17722.		9.57	52885.		19.58	49115.		24.
8	1M218GW1	17918.		9.57	54544.		19.58	49376.		24.
9	1M210GW1	15890.		9.57	48426.		19.58	44588.		24.
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20										
21										
22										

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area
LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard area values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Lab File ID (Standard): A1644 Date Analyzed: 6/24/89

Instrument ID: 7001VO Time Analyzed: 16:44

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

		IS1(BCM)			IS2(DFB)			IS3(CBZ)		
		AREA	#	RT	AREA	#	RT	AREA	#	RT
	12 HOUR STD	19089.		9.49	58899.		19.58	51375.		24.42
	UPPER LIMIT	38178.		9.99	117798.		20.08	102750.		24.92
	LOWER LIMIT	9545.		8.99	29450.		19.08	25688.		23.92
	EPA SAMPLE NO.									
1	VBLK01	14930.		9.61	46134.		19.58	41641.		24.42
2	S2TRPBLK	17217.		9.61	52935.		19.58	48343.		24.42
3	6TAP	17240.		9.57	51877.		19.58	48986.		24.41
4	6TAP MS	17186.		9.60	52183.		19.58	48224.		24.41
5	6TAP MSD	17669.		9.57	54117.		19.58	49470.		24.41
6	2MW1GW1	18054.		9.57	53266.		19.58	49722.		24.41
7	6MW1GW1	18033.		9.57	53533.		19.58	50503.		24.41
8	3BH4SS1	13662.		9.57	39694.		19.58	35709.		24.42
9	3BH3SS1	17087.		9.57	50273.		19.58	42431.		24.38
10	3BH1SS2	15451.		9.57	44606.		19.58	39942.		24.38
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Lab File ID (Standard): A1659 Date Analyzed: 6/26/89

Instrument ID: 7001VO Time Analyzed: 6:46

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

	IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
12 HOUR STD	18750.		9.45	60208.		19.58	51885.		24.42
UPPER LIMIT	37500.		9.95	120416.		20.08	103770.		24.9
LOWER LIMIT	9375.		8.95	30104.		19.08	25943.		23.92
EPA SAMPLE NO.									
1 VBLK01	17418.		9.49	54538.		19.58	48483.		24.41
2 TBLK6/24	17676.		9.56	54351.		19.58	49191.		24.41
3 5RBK6/24	17877.		9.58	53899.		19.59	49011.		24.43
4 5MW1GW1	16970.		9.57	52570.		19.58	48577.		24.41
5 1M1203G1	17387.		9.60	53285.		19.58	47562.		24.42
6 5BH1SS1	17834.		9.53	52581.		19.58	47142.		24.42
7 5BH1SS2	15319.		9.57	46566.		19.63	43015.		24.46
8 3MW1GW1	17447.		9.57	52501.		19.59	48336.		24.42
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22									

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Lab File ID (Standard): A1674 Date Analyzed: 6/29/89

Instrument ID: 7001VO Time Analyzed: 12:11

Matrix:(soil/water) WATER Level:(low/med): LOW Column:(pack/cap) PACK

		IS1(BCM)			IS2(DFB)			IS3(CBZ)		
		AREA	#	RT	AREA	#	RT	AREA	#	RT
	12 HOUR STD	17670.		9.49	58370.		19.58	50361.		24.38
	UPPER LIMIT	35340.		9.99	116740.		20.08	100722.		24.88
	LOWER LIMIT	8835.		8.99	29185.		19.08	25181.		23.88
	EPA SAMPLE NO.									
1	VBLK01	16413.		9.55	53300.		19.60	47827.		24.40
2	1M204GW1	15925.		9.56	48921.		19.61	44733.		24.41
3	2RBK6/23	16472.		9.58	51753.		19.59	46977.		24.42
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22										

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk

8

STANDARD ADDITION RESULTS

Lab Name: Harris Environmental Tech. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Concentration Units: mg/kg

EPA Sample No.	An	0 ADD ABS	1 ADD CON mg/L	1 ADD ABS	2 ADD CON mg/L	2 ADD ABS	3 ADD CON mg/kg	3 ADD ABS	Final Conc.	r	Q
LANGB-2-SD-1	SE	.000	.030	.032	.060	.048	.090	.082	<0.1	.992	+
LANGB-2-SD-1DUP	SE	.006	.030	.031	.060	.060	.090	.063	0.4	.961	+
LANGB-2-SD-3	SE	.003	.030	.033	.060	.059	.090	.079	0.1	.996	
LANGB-2-SD-7	SE	.008	.030	.035	.060	.060	.090	.078	0.4	.996	
LANGB-6-BH1-SS1	SE	.000	.030	.035	.060	.052	.090	.099	0.0	.985	+
LANGB-6-BH1-SS2	SE	.003	.030	.039	.060	.056	.090	.091	0.4	.991	+
LANGB-6-BH1-SS3	SE	.001	.030	.038	.060	.060	.090	.071	0.1	.970	+
LANGB-6-BH1-SS3DUP	SE	.000	.030	.040	.060	.055	.090	.093	0.1	.987	+
LANGB-4-BH3-SS1	SE	.004	.030	.037	.060	.049	.090	.083	0.5	.985	+
LANGB-4-BH3-SS2	SE	.000	.030	.036	.060	.065	.090	.095	0.0	.999	
LANGB-4-BH4-SS1	SE	.000	.030	.031	.060	.060	.090	.095	0.0	.999	
LANGB-4-BH2-SS1	SE	.006	.030	.032	.060	.055	.090	.083	0.0	.999	
LANGB-4-BH2-SS2	SE	.007	.030	.040	.060	.056	.090	.080	0.9	.991	+
LANGB-4-BH1-SS1	SE	.008	.030	.034	.060	.058	.090	.074	10.0	.995	
LANGB-4-BH1-SS2	SE	.000	.030	.040	.060	.057	.090	.070	0.0	.963	+
LANGB-2-SD-4	SE	.000	.030	.034	.060	.063	.090	.078	0.0	.987	+
LANGB-2-SD-5	SE	.000	.030	.039	.060	.058	.090	.086	0.0	.991	+
LANGB-2-SD-6	SE	.002	.030	.032	.060	.051	.090	.070	0.2	.993	+
LANGB-2-SD-6DUP	SE	.006	.030	.033	.060	.060	.090	.077	0.7	.995	
LANGB-3-BH2-SS1	SE	.000	.030	.031	.060	.056	.090	.078	0.0	.997	
LANGB-3-BH2-SS1DUP	SE	.002	.030	.024	.060	.051	.090	.075	0.0	.999	
LANGB-3-BH2-SS2	SE	.005	.030	.029	.060	.047	.090	.092	0.6	.979	+
LANGB-3-BH4-SS1	SE	.003	.030	.031	.060	.052	.090	.075	0.3	.998	
LANGB-3-BH3-SS1	SE	.002	.030	.027	.060	.046	.090	.081	0.3	.995	
LANGB-3-BH3-SS2	SE	.006	.030	.027	.060	.055	.090	.081	0.8	.998	
LANGB-3-BH1-SS-2	SE	.006	.030	.026	.060	.056	.090	.079	0.7	.997	
LANGB-3-BH1-SS-1	SE	.000	.030	.027	.060	.053	.090	.079	0.0	.999	
LANGB-5-BH1-SS-1	SE	.006	.030	.032	.060	.054	.090	.072	0.0	.997	
LANGB-5-BH1-SS-1DUP	SE	.003	.030	.037	.060	.045	.090	.071	0.2	.976	+
LANGB-5-BH1-SS-2	SE	.000	.030	.029	.060	.040	.090	.087	0.0	.971	+

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STANDARD ADDITION RESULTS

Lab Name: Harris Environmental Tech. Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------ SDG No.: ------

Concentration Units: mg/kg

EPA Sample No.	An	0 ADD ABS	1 ADD CON mg/L	1 ADD ABS	2 ADD CON mg/L	2 ADD ABS	3 ADD CON mg/kg	3 ADD ABS	Final Conc.	r	Q
LANGB-2-SD-1	AS	.102	0.030	.142	.060	.173	.090	.192	3.9	.988	+
LANGB-2-SD-1DUP	AS	.083	0.030	.129	.060	.166	.090	.195	2.6	.995	
LANGB-2-SD-3	AS	.072	0.030	.114	.060	.149	.090	.172	2.5	.992	+
LANGB-2-SD-7	AS	.076	0.030	.105	.060	.148	.090	.170	2.9	.993	+
LANGB-6-BH1-SS1	AS	.087	0.030	.140	.060	.190	.090	.230	5.3	.998	
LANGB-6-BH1-SS2	AS	.062	0.030	.113	.060	.115	.090	.214	3.8	.930	+
LANGB-6-BH1-SS3	AS	.025	0.030	.086	.060	.130	.090	.154	1.5	.982	+
LANGB-6-BH1-SS3DUP	AS	.017	0.030	.073	.060	.129	.090	.188	0.9	.999	
LANGB-4-BH3-SS1	AS	.102	0.030	.146	.060	.178	.090	.231	7.3	.996	
LANGB-4-BH3-SS2	AS	.050	0.030	.106	.060	.148	.090	.196	3.8	.998	
LANGB-4-BH4-SS1	AS	.053	0.030	.101	.060	.142	.090	.199	3.4	.998	
LANGB-4-BH2-SS1	AS	.095	0.030	.151	.060	.192	.090	.240	5.9	.998	
LANGB-4-BH2-SS2	AS	.106	0.030	.145	.060	.205	.090	.238	6.9	.994	+
LANGB-4-BH1-SS1	AS	.129	0.030	.166	.060	.199	.090	.242	10.4	.999	
LANGB-4-BH1-SS2	AS	.064	0.030	.120	.060	.155	.090	.201	4.1	.996	
LANGB-2-SD-4	AS	.057	0.030	.125	.060	.155	.090	.211	3.3	.990	+
LANGB-2-SD-5	AS	.060	0.030	.095	.060	.115	.090	.173	5.1	.979	+
LANGB-2-SD-6	AS	.034	0.030	.083	.060	.098	.090	.170	2.4	.971	+
LANGB-2-SD-6DUP	AS	.049	0.030	.095	.060	.127	.090	.137	4.3	.965	+
LANGB-3-BH2-SS1	AS	.072	0.030	.120	.060	.159	.090	.223	4.4	.995	
LANGB-3-BH2-SS1DUP	AS	.068	0.030	.123	.060	.163	.090	.196	4.5	.993	+
LANGB-3-BH2-SS2	AS	.064	0.030	.117	.060	.154	.090	.187	4.5	.994	+
LANGB-3-BH4-SS1	AS	.080	0.030	.134	.060	.173	.090	.187	5.8	.970	+
LANGB-3-BH3-SS1	AS	.056	0.030	.109	.060	.145	.090	.190	3.7	.997	
LANGB-3-BH3-SS2	AS	.051	0.030	.099	.060	.150	.090	.193	3.2	.999	
LANGB-3-BH1-SS-2	AS	.076	0.030	.125	.060	.178	.090	.215	4.8	.997	
LANGB-3-BH1-SS-1	AS	.069	0.030	.112	.060	.160	.090	.211	4.4	.999	
LANGB-5-BH1-SS-1	AS	.048	0.030	.108	.060	.158	.090	.213	2.6	.999	
LANGB-5-BH1-SS-1DUP	AS	.052	0.030	.113	.060	.165	.090	.219	3.3	.999	
LANGB-5-BH1-SS-2	AS	.060	0.030	.111	.060	.152	.090	.199	3.8	.999	

9

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP5890, #230 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 6/26/89 TO: 6/27/89
TIME(S) OF ANALYSIS FROM: 16:03:57 TO: 22:29:38

DATE OF ANALYSIS 6/27/89
TIME OF ANALYSIS 12:20:
EPA SAMPLE NO. (STANDARD) 1242 200

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%
alpha-BHC	ND*							
beta-BHC	ND*							
delta-BHC	ND*							
gamma-BHC	ND*							
Heptachlor	ND*							
Aldrin	ND*							
Hept. epoxide	ND*							
Endosulfan I	ND*							
Dieldrin	ND*							
4,4'-DDE	ND*							
Endrin	ND*							
Endosulfan II	ND*							
4,4'-DDD	ND*							
Endo. sulfate	ND*							
4,4'-DDT	ND*							
Methoxychlor	ND*							
Endrin ketone	ND*							
a. Chlordane	ND*							
g. Chlordane	ND*							
Toxaphene	ND*							
Aroclor-1016	6.970	6.914	7.026	5,055,438				
Aroclor-1221	3.771	3.761	3.781	2,385,938				
Aroclor-1232	6.980	6.950	7.010	2,393,473				
Aroclor-1242	7.003	6.970	7.036	4,404,493	6.970	4,389,270	Y	0
Aroclor-1248	9.265	9.215	9.315	4,728,098				
Aroclor-1254	17.255	17.125	17.385	5,909,600				
Aroclor-1260	28.236	28.091	28.381	4,639,733				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

*ND = Not Determined for this analysis.

Note: Determining that no compounds were found above the CRQL is a form quantitation, and therefore at least one column must meet the 15.0% crite

For multicomponent analytes, the single largest peak that is characteris of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition

9

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP5890, #230 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 6/26/89 TO: 6/27/89
TIME(S) OF ANALYSIS FROM: 16:03:57 TO: 22:29:38

DATE OF ANALYSIS 6/27/89
TIME OF ANALYSIS 21:02:33
EPA SAMPLE NO. (STANDARD) 1248.200

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
alpha-BHC	ND*							
beta-BHC	ND*							
delta-BHC	ND*							
gamma-BHC	ND*							
Heptachlor	ND*							
Aldrin	ND*							
Hept. epoxide	ND*							
Endosulfan I	ND*							
Dieldrin	ND*							
4,4'-DDE	ND*							
Endrin	ND*							
Endosulfan II	ND*							
4,4'-DDD	ND*							
Endo. sulfate	ND*							
4,4'-DDT	ND*							
Methoxychlor	ND*							
Endrin ketone	ND*							
a. Chlordane	ND*							
g. Chlordane	ND*							
Toxaphene	ND*							
Aroclor-1016	6.970	6.914	7.026	5,055,438				
Aroclor-1221	3.771	3.761	3.781	2,385,938				
Aroclor-1232	6.980	6.950	7.010	2,393,473				
Aroclor-1242	7.003	6.973	7.033	4,404,493				
Aroclor-1248	9.265	9.215	9.315	4,728,098	9.218	4,446,898	Y	5.9%
Aroclor-1254	17.255	17.125	17.385	5,909,600				
Aroclor-1260	28.236	28.091	28.381	4,639,733				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed. %D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

*ND = Not Determined for this analysis.

Note: Determining that no compounds were found above the CRQL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP5890, #230 GC Column ID: 2250/2401

DATE(S) OF ANALYSIS FROM: 6/26/89 TO: 6/27/89
TIME(S) OF ANALYSIS FROM: 16:03:57 TO: 22:29:38

DATE OF ANALYSIS 6/27/8
TIME OF ANALYSIS 22:29
EPA SAMPLE NO. (STANDARD) PCB Spik Solution 26

COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N
alpha-BHC	ND*						
beta-BHC	ND*						
delta-BHC	ND*						
gamma-BHC	ND*						
Heptachlor	ND*						
Aldrin	ND*						
Hept. epoxide	ND*						
Endosulfan I	ND*						
Dieldrin	ND*						
4,4'-DDE	ND*						
Endrin	ND*						
Endosulfan II	ND*						
4,4'-DDD	ND*						
Endo. sulfate	ND*						
4,4'-DDT	ND*						
Methoxychlor	ND*						
Endrin ketone	ND*						
a. Chlordane	ND*						
g. Chlordane	ND*						
Toxaphene	ND*						
Aroclor-1016	6.970	6.914	7.026	5,055,438			
Aroclor-1221	3.771	3.761	3.781	2,385,938			
Aroclor-1232	6.980	6.950	7.010	2,393,473			
Aroclor-1242	7.003	6.973	7.033	4,404,493	6.994	4,195,660	Y
Aroclor-1248	9.265	9.215	9.315	4,728,098			
Aroclor-1254	17.255	17.125	17.385	5,909,600			
Aroclor-1260	28.236	28.091	28.381	4,639,733			

Under QNT Y/N: enter Y if quantitation was performed, N if not perform
%D must be less than or equal to 15.0% for quantitation, and less than
or equal to 20.0% for confirmation.

*ND = Not Determined for this analysis.

Note: Determining that no compounds were found above the CRQL is a fo
quantitation, and therefore at least one column must meet the 15.0% crit

For multicomponent analytes, the single largest peak that is character
of the component should be used to establish retention time and %D.
Identification of such analytes is based primarily on pattern recognitic

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Instrument Detection Limits (Quarterly)

Lab Name: Harris Environmental Tech. Contract: ----------

Lab Code: -------- Case No.: ------- SAS No.: --------- SDG No.: ----------

ICP ID Number: 159 Date: _____

Flame AA ID Number: _____

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	CRDL (mg/L)	IDL (ug/L)	M
Aluminum					
Antimony					
Arsenic	193.7		.010	10	F
Barium	493.4		.200	10	P
Beryllium					
Cadmium	228.8		.005	2	F
Calcium					
Chromium	267.7		.010	35	P
Cobalt					
Copper					
Iron					
Lead	283.3		.003	5	F
Magnesium					
Manganese					
Mercury	253.7		.0002	0.5	CV
Nickel					
Potassium					
Selenium	196.0		.005	10	F
Silver	328.1		.010	2	F
Sodium					
Thallium					
Vanadium					
Zinc					

Comments:

FORM X - IN

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO: _____

Detection Limits

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: Detection Limits Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: (soil/water) Soil Lab Sample ID: -------

Sample wt/vol: 30 (g/mL) g Lab File ID: -------

Level: (low/med) Low Date Received: -------

% Moisture: not dec. _____ dec. XX Date Extracted: -------

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: -------

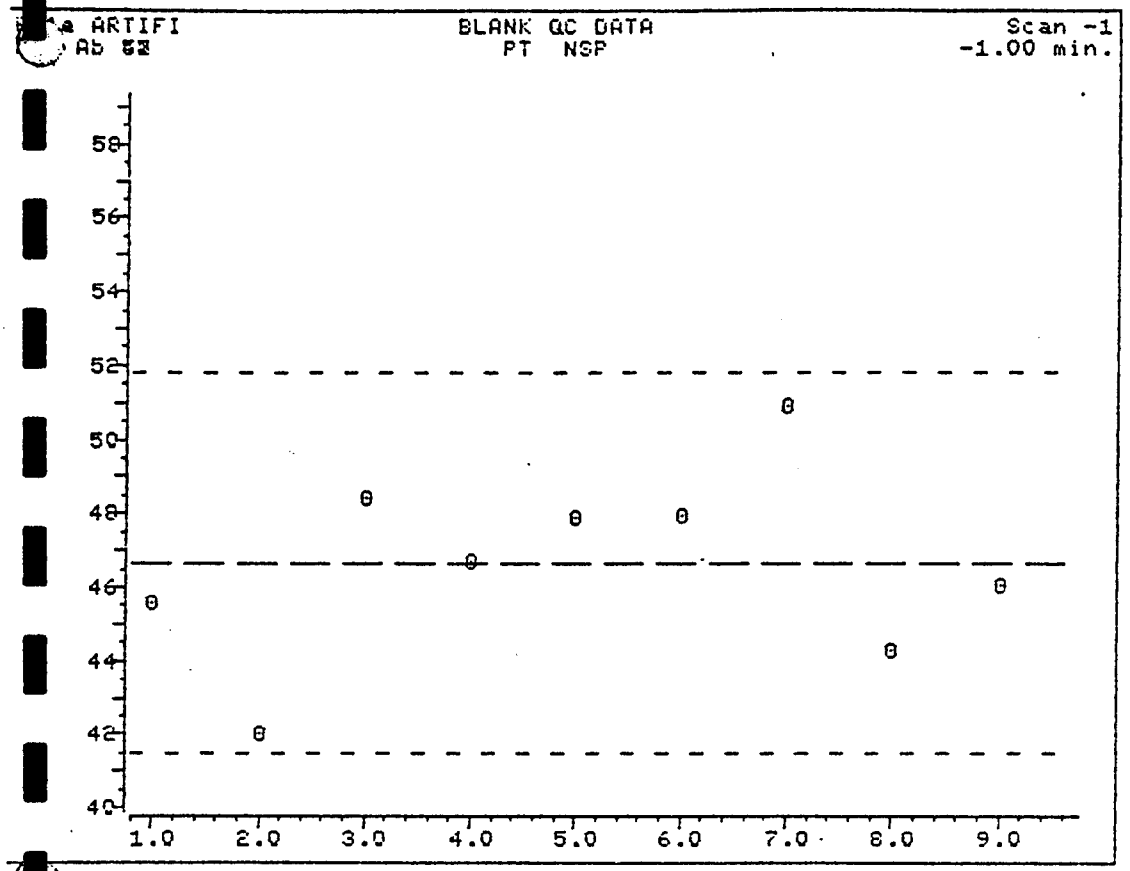
GPC Cleanup: (Y/N) N pH: --- Dilution Factor: -----

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
319-84-6	alpha-BHC	ND*	
319-85-7	beta-BHC	ND*	
319-86-8	delta-BHC	ND*	
58-89-9	gamma-BHC (Lindane)	ND*	
76-44-8	Heptachlor	ND*	
309-00-2	Aldrin	ND*	
1024-57-3	Heptachlor epoxide	ND*	
959-98-8	Endosulfan I	ND*	
60-57-1	Dieldrin	ND*	
72-55-9	4,4'-DDE	ND*	
72-20-8	Endrin	ND*	
33213-65-9	Endosulfan II	ND*	
72-54-8	4,4'-DDD	ND*	
1031-07-8	Endosulfan sulfate	ND*	
50-29-3	4,4'-DDT	ND*	
72-43-5	Methoxychlor	ND*	
53494-70-5	Endrin ketone	ND*	
5103-71-9	alpha-Chlordane	ND*	
5103-74-2	gamma-Chlordane	ND*	
8001-35-2	Toxaphene	ND*	
12674-11-2	Aroclor-1016	1.6	U
11104-28-2	Aroclor-1221	1.6	U
11141-16-5	Aroclor-1232	1.6	U
53469-21-9	Aroclor-1242	1.6	U
12672-29-6	Aroclor-1248	1.6	U
11097-69-1	Aroclor-1254	3.2	U
11096-82-5	Aroclor-1260	3.2	U

*ND = Not Determined for this study.

APPENDIX D3

QC BLANK ANALYTICAL RESULTS

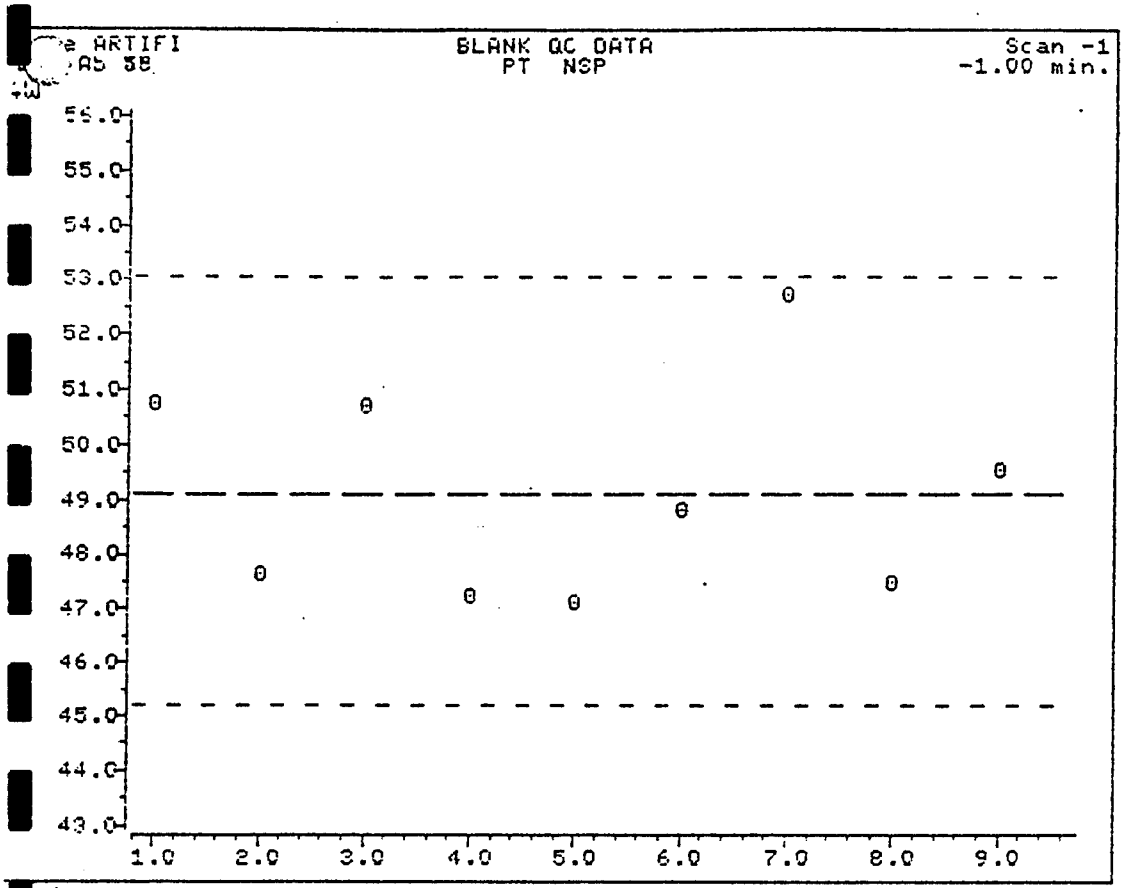


Surrogate: DICHLOROETHANE (d4)

Mean :	46.6520		
Standard Dev. :	2.5758	RSD:	5.5212%
Std Dev. Mean :	.8586	RSD:	1.8404%
X-axis range :	1.0000		9.0000
number points :	9		
coordinates :	Y		

EPA CLP Upper limit:	57.70	UG/L	
+2 Standard Dev. :	51.80	UG/L	250NG IN 5ML H20
Mean Value :	46.65	UG/L	
-2 Standard Dev. :	41.50	UG/L	
EPA CLP Lower limit:	43.00	UG/L	

>A1561::D2	890616	15:10	1,2-Dichloroethane-d	VBLANK01	45.610
>A1572::D2	890619	22:32	1,2-Dichloroethane-d	VBLANK01	42.016
>A1585::D2	890620	16:32	1,2-Dichloroethane-d	VBLK01	48.456
>A1600::D2	890621	18:14	1,2-Dichloroethane-d	VBLANK01	46.731
>A1613::D2	890622	18:07	1,2-Dichloroethane-d	VBLANK01	47.894
>A1628::D2	890623	18:36	1,2-Dichloroethane-d	VBLANK01	47.944
>A1645::L1	890624	17:29	1,2-Dichloroethane-d	VBLK01	50.896
>A1661::L1	890626	08:09	1,2-Dichloroethane-d	VBLK01	44.276
>A1676::DB	890629	13:41	1,2-Dichloroethane-d	VBLK01	46.045



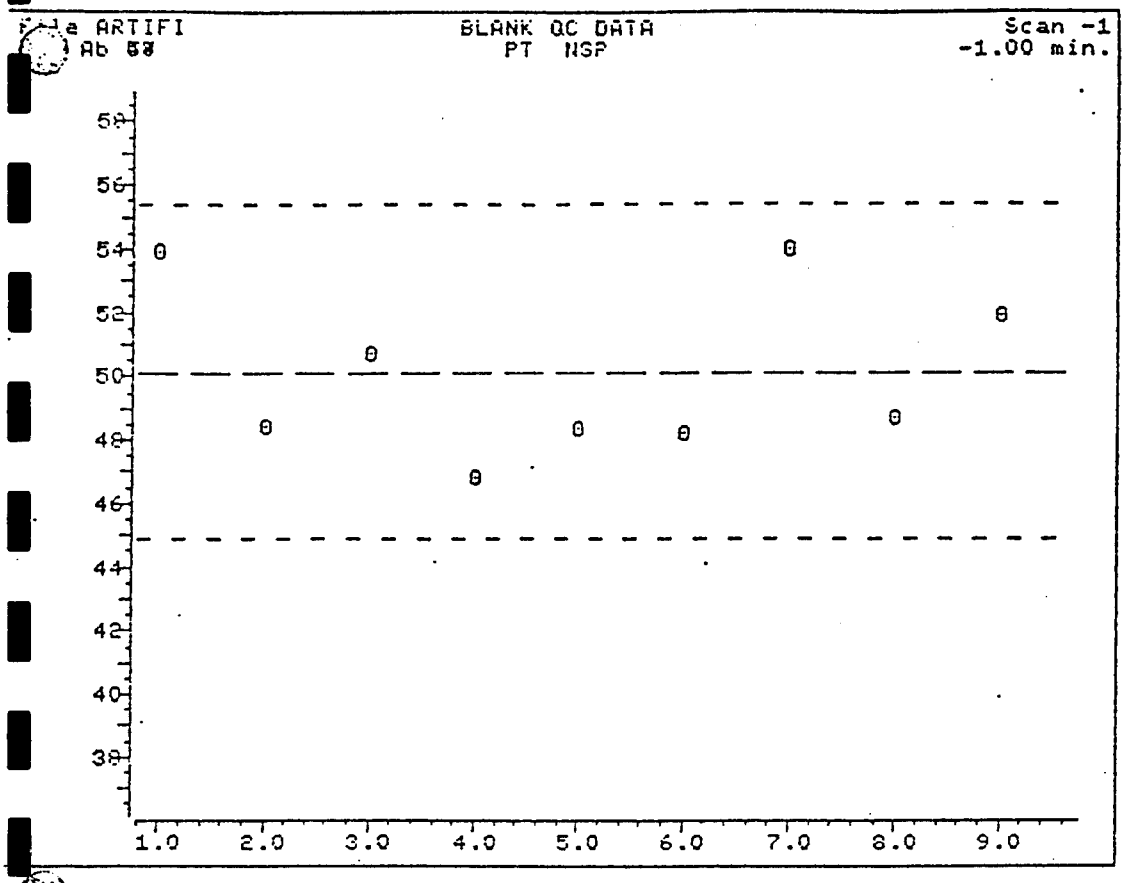
Surrogate: TOLUENE(d8)

Mean :	49.1222		
Standard Dev. :	1.9570	RSD:	3.9839%
Std Dev. Mean :	.6523	RSD:	1.3280%
X-axis range :	1.0000		9.0000
number points :	9		
coordinates :	Y		

EPA CLP Upper limit:	55.00	UG/L	
+2 Standard Dev. :	53.04	UG/L	250NG IN 5ML H20
Mean Value :	49.12	UG/L	
-2 Standard Dev. :	45.21	UG/L	
EPA CLP Lower limit:	44.00	UG/L	

1

A1561::D2	890616	15:10	Toluene-d8	VBLANK01	50.751
A1572::D2	890619	22:32	Toluene-d8	VBLANK01	47.658
A1585::D2	890620	16:32	Toluene-d8	VBLK01	50.706
A1600::D2	890621	18:14	Toluene-d8	VBLANK01	47.250
A1613::D2	890622	18:07	Toluene-d8	VBLANK01	47.127
A1628::D2	890623	18:36	Toluene-d8	VBLANK01	48.815
A1645::L1	890624	17:29	Toluene-d8	VBLK01	52.721
A1661::L1	890626	08:09	Toluene-d8	VBLK01	47.508
A1676::DB	890629	13:41	Toluene-d8	VBLK01	49.564



Surrogate: BROMOFLUOROBENZENE

Mean :	50.1226		
Standard Dev. :	2.6308	RSD:	5.2487%
Std Dev. Mean :	.8769	RSD:	1.7496%
X-axis range :	1.0000		9.0000
number points :	9		
coordinates :	Y		

EPA CLP Upper limit:	57.00	UG/L	
+2 Standard Dev. :	55.38	UG/L	250NG IN 5ML H2O
Mean Value :	50.12	UG/L	
-2 Standard Dev. :	44.86	UG/L	
EPA CLP Lower limit:	38.00	UG/L	

1

>A1561::D2	890616	15:10	Bromofluorobenzene	VBLANK01	53.90
>A1572::D2	890619	22:32	Bromofluorobenzene	VBLANK01	48.434
>A1585::D2	890620	16:32	Bromofluorobenzene	VBLK01	50.69
>A1600::D2	890621	18:14	Bromofluorobenzene	VBLANK01	46.83
>A1613::D2	890622	18:07	Bromofluorobenzene	VBLANK01	48.325
>A1628::D2	890623	18:36	Bromofluorobenzene	VBLANK01	48.243
>A1645::L1	890624	17:29	Bromofluorobenzene	VBLK01	54.01
>A1661::L1	890626	08:09	Bromofluorobenzene	VBLK01	48.724
>A1676::DB	890629	13:41	Bromofluorobenzene	VBLK01	51.930

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-FIELD BI

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: --- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Water Lab Sample ID: 6905

Level (low/med): Low Date Received: 6/22/89

% Solids: -----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.002		U	
7440-39-3	Barium	.008			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ---- Texture: -----

Color After: ----- Clarity After: ---- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA S

1FIE

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1631

Level: (low/med) LOW Date Received: 6/22/

% Moisture: not dec.100. Date Analyzed: 6/2

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	
75-01-4	Vinyl Chloride	10.	
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	
67-64-1	Acetone	10.	
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	
78-93-3	2-Butanone	10.	
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	
108-05-4	Vinyl Acetate	10.	
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	
71-43-2	Benzene	5.	
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE I

1FLDBLK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0933

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

1FLDBLK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0933

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMF

1RINSAT

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1630

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. Date Analyzed: 6/23/89

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	C
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

1RNSBLK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0932

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE I

1RNSBLK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0932

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-RINSATE

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6895

Level (low/med): Low Date Received: 6/22/89

% Solids: _____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.002		U	
7440-39-3	Barium	.008		U	
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

VBLK01

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1600

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 6/21/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	8.	
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

VBLK01

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1572

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 6/19/8

Column: (pack/cap) PACK Dilution Factor: 1.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	13.	
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

VBLK01

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1585

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane		10.	U
74-83-9	Bromomethane		10.	U
75-01-4	Vinyl Chloride		10.	U
75-00-3	Chloroethane		10.	U
75-09-2	Methylene Chloride		8.	
67-64-1	Acetone		10.	U
75-15-0	Carbon Disulfide		5.	U
75-35-4	1,1-Dichloroethene		5.	U
75-34-3	1,1-Dichloroethane		5.	U
540-59-0	1,2-Dichloroethene (total)		5.	U
67-66-3	Chloroform		5.	U
107-06-2	1,2-Dichloroethane		5.	U
78-93-3	2-Butanone		10.	U
71-55-6	1,1,1-Trichloroethane		5.	U
56-23-5	Carbon Tetrachloride		5.	U
108-05-4	Vinyl Acetate		10.	U
75-27-4	Bromodichloromethane		5.	U
78-87-5	1,2-Dichloropropane		5.	U
10061-01-5	cis-1,3-Dichloropropene		5.	U
79-01-6	Trichloroethene		5.	U
124-48-1	Dibromochloromethane		5.	U
79-00-5	1,1,2-Trichloroethane		5.	U
71-43-2	Benzene		5.	U
10061-02-6	trans-1,3-Dichloropropene		5.	U
75-25-2	Bromoform		5.	U
108-10-1	4-Methyl-2-Pentanone		10.	U
591-78-6	2-Hexanone		10.	U
127-18-4	Tetrachloroethene		5.	U
79-34-5	1,1,2,2-Tetrachloroethane		5.	U
108-88-3	Toluene		5.	U
108-90-7	Chlorobenzene		5.	U
100-41-4	Ethylbenzene		5.	U
100-42-5	Styrene		5.	U
1330-20-7	Xylene (total)		5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SA

BLANK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0835

Level: (low/med) LOW Date Received: 0/ 0/

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPL

BLANK2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0835

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

Duplicate of 022 KHA

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE

Lab Name: Harris Environmental Tech. Contract: 51312 LANGB-1-MW02

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6910

Level (low/med): Low Date Received: 6/22/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.005			
7440-39-3	Barium	.346			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ------ Clarity Before: ----- Texture: -----

Color After: ------ Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

Duplicate of 0206
KHA 10-27-89

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

1M218GW1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1636

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. Date Analyzed: 6/24/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

Duplicate of [illegible] KHA 10-

18

EPA SAMPLE

1M218GW1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0930

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/30/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 2/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	C
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

Duplicate of 0206
KHA 10-27-89

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

1M218GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0930

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/30/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 2/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE N

-2-RINSATE BL

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: --- Case No.: --- SAS No.: --- SDG No.: ---

Matrix (soil/water): Water Lab Sample ID: 6921

Level (low/med): Low Date Received: 6/23/

% Solids: ---

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.002		U	
7440-39-3	Barium	.008		U	
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ------ Clarity Before: --- Texture: ---

Color After: ------ Clarity After: --- Artifacts: ---

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPL

2RBK6/23

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1678

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. Date Analyzed: 6/29/89

Column: (pack/cap) PACK Dilution Factor: 1.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	71.	
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPL

2RNSBLK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0902

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	C
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2RNSBLK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0902

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0(

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U. S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

LANGB-
2-RINSATE BLANK

Lab Name: Harris Environmental Technologies Contract: ------

Lab Code: ------ Case No.: ---- SAS No.: ------ SDG No.: --------

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q
Aluminum								
Antimony								
Arsenic								
Barium		0.494		0.000		0.50	99	
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

Comments:

FORM V (Part 2) - IN

U. S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: ------ | LANGB-2-MW1-GW1 |

Lab Code: ------ Case No.: ---- SAS No.: ------ SDG No.: --------

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ XXXX mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury		0.0054		0.0004		0.005	100		CV
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SA

2-SD-

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1587

Level: (low/med) LOW Date Received: 6/19/

% Moisture: not dec. 46. Date Analyzed: 6/20/8

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
74-87-3	Chloromethane	19.	U
74-83-9	Bromomethane	19.	U
75-01-4	Vinyl Chloride	19.	U
75-00-3	Chloroethane	19.	U
75-09-2	Methylene Chloride	9.	U
67-64-1	Acetone	19.	U
75-15-0	Carbon Disulfide	9.	U
75-35-4	1,1-Dichloroethene	78.	
75-34-3	1,1-Dichloroethane	9.	U
540-59-0	1,2-Dichloroethene (total)	9.	U
67-66-3	Chloroform	9.	U
107-06-2	1,2-Dichloroethane	9.	U
78-93-3	2-Butanone	19.	U
71-55-6	1,1,1-Trichloroethane	9.	U
56-23-5	Carbon Tetrachloride	9.	U
108-05-4	Vinyl Acetate	19.	U
75-27-4	Bromodichloromethane	9.	U
78-87-5	1,2-Dichloropropane	9.	U
10061-01-5	cis-1,3-Dichloropropene	9.	U
79-01-6	Trichloroethene	94.	
124-48-1	Dibromochloromethane	9.	U
79-00-5	1,1,2-Trichloroethane	9.	U
71-43-2	Benzene	81.	
10061-02-6	trans-1,3-Dichloropropene	9.	U
75-25-2	Bromoform	9.	U
108-10-1	4-Methyl-2-Pentanone	19.	U
591-78-6	2-Hexanone	19.	U
127-18-4	Tetrachloroethene	9.	U
79-34-5	1,1,2,2-Tetrachloroethane	9.	U
108-88-3	Toluene	81.	
108-90-7	Chlorobenzene	87.	
100-41-4	Ethylbenzene	9.	U
100-42-5	Styrene	9.	U
1330-20-7	Xylene (total)	9.	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-MSD

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1588

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec. 46. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	19.	U
74-83-9	Bromomethane	19.	U
75-01-4	Vinyl Chloride	19.	U
75-00-3	Chloroethane	19.	U
75-09-2	Methylene Chloride	9.	U
67-64-1	Acetone	19.	U
75-15-0	Carbon Disulfide	9.	U
75-35-4	1,1-Dichloroethene	86.	
75-34-3	1,1-Dichloroethane	9.	U
540-59-0	1,2-Dichloroethene (total)	9.	U
67-66-3	Chloroform	9.	U
107-06-2	1,2-Dichloroethane	9.	U
78-93-3	2-Butanone	19.	U
71-55-6	1,1,1-Trichloroethane	9.	U
56-23-5	Carbon Tetrachloride	9.	U
108-05-4	Vinyl Acetate	19.	U
75-27-4	Bromodichloromethane	9.	U
78-87-5	1,2-Dichloropropane	9.	U
10061-01-5	cis-1,3-Dichloropropene	9.	U
79-01-6	Trichloroethene	95.	
124-48-1	Dibromochloromethane	9.	U
79-00-5	1,1,2-Trichloroethane	9.	U
71-43-2	Benzene	83.	
10061-02-6	trans-1,3-Dichloropropene	9.	U
75-25-2	Bromoform	9.	U
108-10-1	4-Methyl-2-Pentanone	19.	U
591-78-6	2-Hexanone	19.	U
127-18-4	Tetrachloroethene	9.	U
79-34-5	1,1,2,2-Tetrachloroethane	9.	U
108-88-3	Toluene	89.	
108-90-7	Chlorobenzene	90.	
100-41-4	Ethylbenzene	9.	U
100-42-5	Styrene	9.	U
1330-20-7	Xylene (total)	9.	U

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5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: --------

LANGB-2-SD-1

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium		0.580		.0925		0.50	98		
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.
LANGB-2-SD-1

Lab Name: Harris Environmental Technolog Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------- SDG No.: -----

Matrix (soil/water): soil Level (low/med): low

% Solids for Sample: ----- % Solids for Duplicate: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								NR
Antimony								
Arsenic	1.0	3.90		2.64		38.5	*	F
Barium	20.0	126		119		13.9		P
Beryllium								
Cadmium	0.5	0.51		0.30		51.9	*	F
Calcium								
Chromium	1.0	9.25		9.55		3.2		P
Cobalt								
Copper								
Iron								
Lead	0.3	18.2		20.4		11.4		F
Magnesium								
Manganese								
Mercury	.02	.049		.048		2.1		CV
Nickel								
Potassium								
Selenium	0.5	<0.1		0.37		200		F
Silver	1.0	<0.1		<0.1				F
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

FORM VI - IN

7/8

U. S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

LANGB-2-SD-3

Lab Name: Harris Environmental Technologies Contract: --------

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead		0.1540		.0966		.05	115		F
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver		0.0060		0.0006		0.005	108		F
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.
LANGB-2-SD-6

Lab Name: Harris Environmental Technolog Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------- SDG No.: -------

Matrix (soil/water): soil Level (low/med): low

% Solids for Sample: ----- % Solids for Duplicate: ------

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic	1.0	2.36		4.32		58.7	*	F
Barium	20.0	127		129		1.6		P
Beryllium								
Cadmium	0.5	0.71		0.67		5.8		F
Calcium								
Chromium	1.0	17.3		19.0		9.4		P
Cobalt								
Copper								
Iron								
Lead	0.3	12.0		24.0		66.6	*	F
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	0.5	0.23		0.69		100		F
Silver	1.0	1.0		1.0		0		F
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

FORM VI - IN

7/88

Duplicate of SD
KHA 10-27-8

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

LANGB-2-SD-7

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: ----

Matrix (soil/water): Sediment Lab Sample ID: 6629

Level (low/med): Low Date Received: 6/19/89

% Solids: -------

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	2.9			
7440-39-3	Barium	103			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.3			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	9.3			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	15.4			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.038			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.4			
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

Duplicate of SD-3
KHA 10-27-8

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-7

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1589

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec. 49. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	20.	U
74-83-9	Bromomethane	20.	U
75-01-4	Vinyl Chloride	20.	U
75-00-3	Chloroethane	20.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	20.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
540-59-0	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
108-05-4	Vinyl Acetate	20.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	20.	U
591-78-6	2-Hexanone	20.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	Xylene (total)	10.	U

Duplicate of KHA 10-

EPA SAMPL

2-SD-7

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0873

Level: (low/med) LOW Date Received: 6/19/8

% Moisture: not dec. 49. dec. 0. Date Extracted: 6/22/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/8

GPC Cleanup: (Y/N) N pH: 7.1 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
108-95-2	Phenol	330.	U
111-44-4	bis(2-Chloroethyl)ether	330.	U
95-57-8	2-Chlorophenol	330.	U
541-73-1	1,3-Dichlorobenzene	330.	U
106-46-7	1,4-Dichlorobenzene	330.	U
100-51-6	Benzyl alcohol	330.	U
95-50-1	1,2-Dichlorobenzene	330.	U
95-48-7	2-Methylphenol	330.	U
108-60-1	bis(2-Chloroisopropyl)ether	330.	U
106-44-5	4-Methylphenol	330.	U
621-64-7	N-Nitroso-di-n-propylamine	330.	U
67-72-1	Hexachloroethane	330.	U
98-95-3	Nitrobenzene	330.	U
78-59-1	Isophorone	330.	U
88-75-5	2-Nitrophenol	330.	U
105-67-9	2,4-Dimethylphenol	330.	U
65-85-0	Benzoic acid	1600.	U
111-91-1	bis(2-Chloroethoxy)methane	330.	U
120-83-2	2,4-Dichlorophenol	330.	U
120-82-1	1,2,4-Trichlorobenzene	330.	U
91-20-3	Naphthalene	330.	U
106-47-8	4-Chloroaniline	330.	U
87-68-3	Hexachlorobutadiene	330.	U
59-50-7	4-Chloro-3-methylphenol	330.	U
91-57-6	2-Methylnaphthalene	330.	U
77-47-4	Hexachlorocyclopentadiene	330.	U
88-06-2	2,4,6-Trichlorophenol	330.	U
95-95-4	2,4,5-Trichlorophenol	1600.	U
91-58-7	2-Chloronaphthalene	330.	U
88-74-4	2-Nitroaniline	1600.	U
131-11-3	Dimethylphthalate	330.	U
208-96-8	Acenaphthylene	330.	U
606-20-2	2,6-Dinitrotoluene	330.	U

KHA 10-27-89

EPA SAMPLE

2-SD-7

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0873

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec. 49. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600.	U
83-32-9	Acenaphthene	330.	U
51-28-5	2,4-Dinitrophenol	1600.	U
100-02-7	4-Nitrophenol	1600.	U
132-64-9	Dibenzofuran	330.	U
121-14-2	2,4-Dinitrotoluene	330.	U
84-66-2	Diethylphthalate	330.	U
7005-72-3	4-Chlorophenyl-phenylether	330.	U
86-73-7	Fluorene	330.	U
100-01-6	4-Nitroaniline	1600.	U
534-52-1	4,6-Dinitro-2-methylphenol	330.	U
86-30-6	N-Nitrosodiphenylamine	330.	U
101-55-3	4-Bromophenyl-phenylether	330.	U
118-74-1	Hexachlorobenzene	330.	U
87-86-5	Pentachlorophenol	1600.	U
85-01-8	Phenanthrene	330.	U
120-12-7	Anthracene	330.	U
84-74-2	Di-n-Butylphthalate	330.	U
206-44-0	Fluoranthene	330.	U
129-00-0	Pyrene	330.	U
85-68-7	Butylbenzylphthalate	330.	U
91-94-1	3,3'-Dichlorobenzidine	660.	U
56-55-3	Benzo(a)Anthracene	330.	U
218-01-9	Chrysene	330.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	860.	
117-84-0	Di-n-octylphthalate	330.	U
205-99-2	Benzo(b)fluoranthene	330.	U
207-08-9	Benzo(k)fluoranthene	330.	U
50-32-8	Benzo(a)Pyrene	330.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330.	U
53-70-3	Dibenzo(a,h)Anthracene	330.	U
191-24-2	Benzo(g,h,i)Perylene	330.	U

(1) - Cannot be separated from diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

2-SW-MS

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1574

Level: (low/med) LOW Date Received: 6/19/8

% Moisture: not dec.100. Date Analyzed: 6/20/8

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	C
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	46.	
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	49.	
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	43.	
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	47.	
108-90-7	Chlorobenzene	50.	
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-MSD

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1575

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	48.	
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	54.	
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	45.	
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	49.	
108-90-7	Chlorobenzene	52.	
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

U. S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

LANGB-2-SW-1

Lab Name: Harris Environmental Technologies Contract: _____

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium		0.0021		0.0000		0.002	105		F
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead		0.0619		0.000		.05	124		F
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver		0.005		0.0		0.005	100		F
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U. S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: ------ | LANGB-2-SW-2 |

Lab Code: ------ Case No.: ---- SAS No.: ------ SDG No.: --------

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ XXXX mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead		0.0612		0.0		0.05	122		F
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver		0.0038		0.0		0.004	95		F
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

2-SW-6

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0934

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23/

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
108-95-2	Phenol	43.	
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	90.	
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	51.	
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	58.	
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	64.	
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	99.	
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-6MS

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0934

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	75.	
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	65.	
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	88.	
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	110.	
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	86.	
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

1B

EPA SA

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

2-SW

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0935

Level: (low/med) LOW Date Received: 6/22

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
108-95-2	Phenol	52.	
111-44-4	bis(2-Chloroethyl)ether	10.	
95-57-8	2-Chlorophenol	110.	
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	38.	
100-51-6	Benzyl alcohol	10.	
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	42.	
67-72-1	Hexachloroethane	10.	
98-95-3	Nitrobenzene	10.	
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	
105-67-9	2,4-Dimethylphenol	10.	
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	
120-82-1	1,2,4-Trichlorobenzene	53.	
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	110.	
91-57-6	2-Methylnaphthalene	10.	
77-47-4	Hexachlorocyclopentadiene	10.	
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

2-SW-6

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0935

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	60.	
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	61.	
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	62.	
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	140.	
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	90.	
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

Duplicate of SW KHA 10-2

1

EPA SAMPLE NO

INORGANIC ANALYSIS DATA SHEET

LANGB-2-SW-7

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6617

Level (low/med): Low Date Received: 6/19/89

% Solids: ____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.014			
7440-39-3	Barium	.049			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ____ Clarity Before: ____ Texture: ____

Color After: ____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

Duplicate of SW-3
KHA 10-27-89

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-7

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: . SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1578

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.(

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

Duplicate of KHA 10-2

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

2-SW-7

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0847

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

Duplicate of SW-1
KHA 10-27-8

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-7

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0847

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

BLANK3

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0848

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 6/21/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	170.	U
111-44-4	bis(2-Chloroethyl)ether	170.	U
95-57-8	2-Chlorophenol	170.	U
541-73-1	1,3-Dichlorobenzene	170.	U
106-46-7	1,4-Dichlorobenzene	170.	U
100-51-6	Benzyl alcohol	170.	U
95-50-1	1,2-Dichlorobenzene	170.	U
95-48-7	2-Methylphenol	170.	U
108-60-1	bis(2-Chloroisopropyl)ether	170.	U
106-44-5	4-Methylphenol	170.	U
621-64-7	N-Nitroso-di-n-propylamine	170.	U
67-72-1	Hexachloroethane	170.	U
98-95-3	Nitrobenzene	170.	U
78-59-1	Isophorone	170.	U
88-75-5	2-Nitrophenol	170.	U
105-67-9	2,4-Dimethylphenol	170.	U
65-85-0	Benzoic acid	830.	U
111-91-1	bis(2-Chloroethoxy)methane	170.	U
120-83-2	2,4-Dichlorophenol	170.	U
120-82-1	1,2,4-Trichlorobenzene	170.	U
91-20-3	Naphthalene	170.	U
106-47-8	4-Chloroaniline	170.	U
87-68-3	Hexachlorobutadiene	170.	U
59-50-7	4-Chloro-3-methylphenol	170.	U
91-57-6	2-Methylnaphthalene	170.	U
77-47-4	Hexachlorocyclopentadiene	170.	U
88-06-2	2,4,6-Trichlorophenol	170.	U
95-95-4	2,4,5-Trichlorophenol	830.	U
91-58-7	2-Chloronaphthalene	170.	U
88-74-4	2-Nitroaniline	830.	U
131-11-3	Dimethylphthalate	170.	U
208-96-8	Acenaphthylene	170.	U
606-20-2	2,6-Dinitrotoluene	170.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

BLANK3

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0848

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	830.	U
83-32-9	Acenaphthene	170.	U
51-28-5	2,4-Dinitrophenol	830.	U
100-02-7	4-Nitrophenol	830.	U
132-64-9	Dibenzofuran	170.	U
121-14-2	2,4-Dinitrotoluene	170.	U
84-66-2	Diethylphthalate	170.	U
7005-72-3	4-Chlorophenyl-phenylether	170.	U
86-73-7	Fluorene	170.	U
100-01-6	4-Nitroaniline	830.	U
534-52-1	4,6-Dinitro-2-methylphenol	170.	U
86-30-6	N-Nitrosodiphenylamine	170.	U
101-55-3	4-Bromophenyl-phenylether	170.	U
118-74-1	Hexachlorobenzene	170.	U
87-86-5	Pentachlorophenol	830.	U
85-01-8	Phenanthrene	170.	U
120-12-7	Anthracene	170.	U
84-74-2	Di-n-Butylphthalate	170.	U
206-44-0	Fluoranthene	170.	U
129-00-0	Pyrene	170.	U
85-68-7	Butylbenzylphthalate	170.	U
91-94-1	3,3'-Dichlorobenzidine	330.	U
56-55-3	Benzo(a)Anthracene	170.	U
218-01-9	Chrysene	170.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	170.	U
117-84-0	Di-n-octylphthalate	170.	U
205-99-2	Benzo(b)fluoranthene	170.	U
207-08-9	Benzo(k)fluoranthene	170.	U
50-32-8	Benzo(a)Pyrene	170.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	170.	U
53-70-3	Dibenzo(a,h)Anthracene	170.	U
191-24-2	Benzo(g,h,i)Perylene	170.	U

(1) - Cannot be separated from diphenylamine

U. S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: --------

LANGB-3-BH1-SS2

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q
Aluminum								
Antimony								
Arsenic								
Barium		1.479		0.999		0.50	96	P
Beryllium								
Cadmium								
Calcium								
Chromium		0.577		0.113		0.50	93	P
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

Comments:

FORM V (Part 2) - IN

U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: --------

LANGB-3-BH2-SS1

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium		0.0041		0.00018		0.002	115		E
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE N

LANGB-3-BH2-

Lab Name: Harris Environmental Technolog Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------- SDG No.: --

Matrix (soil/water): soil Level (low/med): lo

% Solids for Sample: ----- % Solids for Duplicate: --

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	
Aluminum								
Antimony								
Arsenic	1.0	4.43		4.49		1.3		
Barium	20.0	199		200		0.5		P
Beryllium								
Cadmium	0.5	0.36		0.33		8.7		
Calcium								
Chromium	1.0	23.8		19.0		22.4	*	P
Cobalt								
Copper								
Iron								
Lead	0.3	9.2		9.4		2.2		F
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	0.5	<0.1		<0.1				F
Silver	1.0	0.15		0.12		22.2		F
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: _____ LANGB-3-BH3-SS2

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury		0.0051		0.0002		0.005	98		CV
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

6
DUPLICATES

EPA SAMPLE
LANGB-3-BH4-S

Lab Name: Harris Environmental Technolog Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix (soil/water): soil Level (low/med): _

% Solids for Sample: _____ % Solids for Duplicate: _____

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury	0.02	.039		.037		5.3		
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: ------

LANGB-3-MW1-GW1

Lab Code: ------ Case No.: ---- SAS No.: ------ SDG No.: --------

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic		0.0415		0.0022		0.04	98		P
Barium									
Beryllium									
Cadmium		0.00126		0.00013		0.001	113		P
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury		0.0049		0.0002		0.005	94		CV
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

LANGB-4-BH2-S[illegible]

Lab Name: Harris Environmental Technolog Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------- SDG No.: ----

Matrix (soil/water): soil Level (low/med): low

% Solids for Sample: ----- % Solids for Duplicate: ---

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury	0.02	.029		.029		0		CV
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

FORM VI - IN

7/88

U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: --------

LANGB-4-BH3-SS1

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury		0.0052		0.0004		0.005	96		CV
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U.S. EPA - CLP

Duplicate of 3-5 KHA 10-27-

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE

Lab Name: Harris Environmental Tech. Contract: 51312 LANGB-4-BH4

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: ---

Matrix (soil/water): Soil Lab Sample ID: 6707

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.4			
7440-39-3	Barium	190			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.2			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	5			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	6.2			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.011			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.1		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: ---

Color After: ----- Clarity After: ----- Artifacts: ---

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH4-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ------ Case No.: DE-072 SAS No.: ------ SDG No.: -----

Matrix: (soil/water) Soil Lab Sample ID: 6707

Sample wt/vol: 30 (g/mL) g Lab File ID: LANGB-4-BH4-SS1

Level: (low/med) Low Date Received: 6/20/89

% Moisture: not dec. ------ dec. 17.1 Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 6/27/89

GPC Cleanup: (Y/N) N pH: ---- Dilution Factor: ------

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
319-84-6	alpha-BHC	ND*	
319-85-7	beta-BHC	ND*	
319-86-8	delta-BHC	ND*	
58-89-9	gamma-BHC (Lindane)	ND*	
76-44-8	Heptachlor	ND*	
309-00-2	Aldrin	ND*	
1024-57-3	Heptachlor epoxide	ND*	
959-98-8	Endosulfan I	ND*	
60-57-1	Dieldrin	ND*	
72-55-9	4,4'-DDE	ND*	
72-20-8	Endrin	ND*	
33213-65-9	Endosulfan II	ND*	
72-54-8	4,4'-DDD	ND*	
1031-07-8	Endosulfan sulfate	ND*	
50-29-3	4,4'-DDT	ND*	
72-43-5	Methoxychlor	ND*	
53494-70-5	Endrin ketone	ND*	
5103-71-9	alpha-Chlordane	ND*	
5103-74-2	gamma-Chlordane	ND*	
8001-35-2	Toxaphene	ND*	
12674-11-2	Aroclor-1016	1.9	U
11104-28-2	Aroclor-1221	1.9	U
11141-16-5	Aroclor-1232	1.9	U
53469-21-9	Aroclor-1242	1.9	U
12672-29-6	Aroclor-1248	1.9	U
11097-69-1	Aroclor-1254	3.9	U
11096-82-5	Aroclor-1260	3.9	U

*ND = Not Determined for this study.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SA

BLANKS

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0830

Level: (low/med) LOW Date Received: 0/ 0/

% Moisture: not dec.100. dec. 0. Date Extracted: 6/2

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/8

GPC Cleanup: (Y/N) N pH: .0 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

BLANK5

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0830

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: .0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE [illegible]

Lab Name: Harris Environmental Tech. Contract: 51312 -5-RINSATE B[illegible]

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6928

Level (low/med): Low Date Received: 6/24/8[illegible]

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.002		U	
7440-39-3	Barium	.008		U	
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ------ Clarity Before: ---- Texture: ----

Color After: ------ Clarity After: ---- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/8[illegible]

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPL

5RNSBLK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0947

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

5RNSB

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0947

Level: (low/med) LOW Date Received: 6/24

% Moisture: not dec.100. dec. 0. Date Extracted: 6/2

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
99-09-2	3-Nitroaniline	50.	
83-32-9	Acenaphthene	10.	
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	
132-64-9	Dibenzofuran	10.	
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	
86-30-6	N-Nitrosodiphenylamine	10.	
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	
87-86-5	Pentachlorophenol	50.	
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2

U. S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

LANGB-5-
RINSATE BLANK

Lab Name: Harris Environmental Technologie Contract: ------

Lab Code: ------ Case No.: ---- SAS No.: ------ SDG No.: --------

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium		0.0358		0.0		0.04	90		F
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

TBLK0

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1662

Level: (low/med) LOW Date Received: 6/24

% Moisture: not dec.100. Date Analyzed: 6/26/8

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPL

5RBK6/24

Lab Name: HARRIS Contract: IF8

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1663

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec.100. Date Analyzed: 6/26/89

Column: (pack/cap) PACK Dilution Factor: 1.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE N

Lab Name: Harris Environmental Tech. Contract: 51312 LANGB-6-TAPWA

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6916

Level (low/med): Low Date Received: 6/23/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.004			
7440-39-3	Barium	.110			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.003			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: ----

Color After: ----- Clarity After: ----- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE I

6TAPWTR

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0900

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

6TAPWTR

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0900

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

6TAP6/

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1648

Level: (low/med) LOW Date Received: 6/23/8

% Moisture: not dec.100. Date Analyzed: 6/24/8

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	J
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	7.	
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	7.	
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA S

6TAF

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1649

Level: (low/med) LOW Date Received: 6/2

% Moisture: not dec.100. Date Analyzed: 6/

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
74-87-3	Chloromethane	10.
74-83-9	Bromomethane	10.
75-01-4	Vinyl Chloride	10.
75-00-3	Chloroethane	10.
75-09-2	Methylene Chloride	5.
67-64-1	Acetone	10.
75-15-0	Carbon Disulfide	5.
75-35-4	1,1-Dichloroethene	43.
75-34-3	1,1-Dichloroethane	5.
540-59-0	1,2-Dichloroethene (total)	5.
67-66-3	Chloroform	5.
107-06-2	1,2-Dichloroethane	5.
78-93-3	2-Butanone	10.
71-55-6	1,1,1-Trichloroethane	5.
56-23-5	Carbon Tetrachloride	5.
108-05-4	Vinyl Acetate	10.
75-27-4	Bromodichloromethane	6.
78-87-5	1,2-Dichloropropane	5.
10061-01-5	cis-1,3-Dichloropropene	5.
79-01-6	Trichloroethene	48.
124-48-1	Dibromochloromethane	7.
79-00-5	1,1,2-Trichloroethane	5.
71-43-2	Benzene	43.
10061-02-6	trans-1,3-Dichloropropene	5.
75-25-2	Bromoform	5.
108-10-1	4-Methyl-2-Pentanone	10.
591-78-6	2-Hexanone	10.
127-18-4	Tetrachloroethene	5.
79-34-5	1,1,2,2-Tetrachloroethane	5.
108-88-3	Toluene	42.
108-90-7	Chlorobenzene	46.
100-41-4	Ethylbenzene	5.
100-42-5	Styrene	5.
1330-20-7	Xylene (total)	5.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAI

6TAP6I

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1650

Level: (low/med) LOW Date Received: 6/23/8

% Moisture: not dec.100. Date Analyzed: 6/24/8

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	42.	
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	4.	
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	6.	
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	49.	
124-48-1	Dibromochloromethane	7.	
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	42.	
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	43.	
108-90-7	Chlorobenzene	47.	
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA

TB6

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1629

Level: (low/med) LOW Date Received: 6/2

% Moisture: not dec.100. Date Analyzed: 6/

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
74-87-3	Chloromethane	10.
74-83-9	Bromomethane	10.
75-01-4	Vinyl Chloride	10.
75-00-3	Chloroethane	10.
75-09-2	Methylene Chloride	5.
67-64-1	Acetone	10.
75-15-0	Carbon Disulfide	5.
75-35-4	1,1-Dichloroethene	5.
75-34-3	1,1-Dichloroethane	5.
540-59-0	1,2-Dichloroethene (total)	5.
67-66-3	Chloroform	5.
107-06-2	1,2-Dichloroethane	5.
78-93-3	2-Butanone	10.
71-55-6	1,1,1-Trichloroethane	5.
56-23-5	Carbon Tetrachloride	5.
108-05-4	Vinyl Acetate	10.
75-27-4	Bromodichloromethane	5.
78-87-5	1,2-Dichloropropane	5.
10061-01-5	cis-1,3-Dichloropropene	5.
79-01-6	Trichloroethene	5.
124-48-1	Dibromochloromethane	5.
79-00-5	1,1,2-Trichloroethane	5.
71-43-2	Benzene	5.
10061-02-6	trans-1,3-Dichloropropene	5.
75-25-2	Bromoform	5.
108-10-1	4-Methyl-2-Pentanone	10.
591-78-6	2-Hexanone	10.
127-18-4	Tetrachloroethene	5.
79-34-5	1,1,2,2-Tetrachloroethane	5.
108-88-3	Toluene	5.
108-90-7	Chlorobenzene	5.
100-41-4	Ethylbenzene	5.
100-42-5	Styrene	5.
1330-20-7	Xylene (total)	5.

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

S2TRPB

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1646

Level: (low/med) LOW Date Received: 6/23/8

% Moisture: not dec.100. Date Analyzed: 6/24/8

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	IU
74-83-9	Bromomethane	10.	IU
75-01-4	Vinyl Chloride	10.	IU
75-00-3	Chloroethane	10.	IU
75-09-2	Methylene Chloride	5.	IU
67-64-1	Acetone	10.	IU
75-15-0	Carbon Disulfide	5.	IU
75-35-4	1,1-Dichloroethene	5.	IU
75-34-3	1,1-Dichloroethane	5.	IU
540-59-0	1,2-Dichloroethene (total)	5.	IU
67-66-3	Chloroform	5.	IU
107-06-2	1,2-Dichloroethane	5.	IU
78-93-3	2-Butanone	10.	IU
71-55-6	1,1,1-Trichloroethane	5.	IU
56-23-5	Carbon Tetrachloride	5.	IU
108-05-4	Vinyl Acetate	10.	IU
75-27-4	Bromodichloromethane	5.	IU
78-87-5	1,2-Dichloropropane	5.	IU
10061-01-5	cis-1,3-Dichloropropene	5.	IU
79-01-6	Trichloroethene	5.	IU
124-48-1	Dibromochloromethane	5.	IU
79-00-5	1,1,2-Trichloroethane	5.	IU
71-43-2	Benzene	5.	IU
10061-02-6	trans-1,3-Dichloropropene	5.	IU
75-25-2	Bromoform	5.	IU
108-10-1	4-Methyl-2-Pentanone	10.	IU
591-78-6	2-Hexanone	10.	IU
127-18-4	Tetrachloroethene	5.	IU
79-34-5	1,1,2,2-Tetrachloroethane	5.	IU
108-88-3	Toluene	5.	IU
108-90-7	Chlorobenzene	5.	IU
100-41-4	Ethylbenzene	5.	IU
100-42-5	Styrene	5.	IU
1330-20-7	Xylene (total)	5.	IU

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

TB 6/1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1614

Level: (low/med) LOW Date Received: 6/20/8

% Moisture: not dec.100. Date Analyzed: 6/22/89

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

6BH1SMS

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0905

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	4600.	
111-44-4	bis(2-Chloroethyl)ether	210.	U
95-57-8	2-Chlorophenol	4800.	
541-73-1	1,3-Dichlorobenzene	210.	U
106-46-7	1,4-Dichlorobenzene	1600.	
100-51-6	Benzyl alcohol	210.	U
95-50-1	1,2-Dichlorobenzene	210.	U
95-48-7	2-Methylphenol	210.	U
108-60-1	bis(2-Chloroisopropyl)ether	210.	U
106-44-5	4-Methylphenol	210.	U
621-64-7	N-Nitroso-di-n-propylamine	2400.	
67-72-1	Hexachloroethane	210.	U
98-95-3	Nitrobenzene	210.	U
78-59-1	Isophorone	210.	U
88-75-5	2-Nitrophenol	210.	U
105-67-9	2,4-Dimethylphenol	210.	U
65-85-0	Benzoic acid	1000.	U
111-91-1	bis(2-Chloroethoxy)methane	210.	U
120-83-2	2,4-Dichlorophenol	210.	U
120-82-1	1,2,4-Trichlorobenzene	2200.	
91-20-3	Naphthalene	210.	U
106-47-8	4-Chloroaniline	210.	U
87-68-3	Hexachlorobutadiene	210.	U
59-50-7	4-Chloro-3-methylphenol	3800.	
91-57-6	2-Methylnaphthalene	210.	U
77-47-4	Hexachlorocyclopentadiene	210.	U
88-06-2	2,4,6-Trichlorophenol	210.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	210.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	210.	U
208-96-8	Acenaphthylene	210.	U
606-20-2	2,6-Dinitrotoluene	210.	U

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

LANGB-5-BH1-S

Lab Name: Harris Environmental Technolog Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix (soil/water): soil Level (low/med): _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic	1.0	2.58		3.29		24.2	*	P
Barium	20.0	157		179		13.1		P
Beryllium								
Cadmium	0.5	0.84		2.24		90.9	*	P
Calcium								
Chromium	1.0	31.6		21.1		39.8	*	
Cobalt								
Copper								
Iron								
Lead	0.3	4.9		7.3		39.3	*	
Magnesium								
Manganese								
Mercury								
Nickel						..		
Potassium								
Selenium	0.5	0.72		0.44		48.3		P
Silver	1.0	< 0.1		0.15		200		
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

FORM VI - IN

U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: --------

LANGB-5-BH1-SS2

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead		.0749		.034		.04	102		F
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

LANGB-5-MW1-GW1

Lab Name: Harris Environmental Technologies Contract: ------

Lab Code: ------ Case No.: ---- SAS No.: ------ SDG No.: --------

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium		0.705		0.233		0.50	96		P
Beryllium									
Cadmium									
Calcium									
Chromium		0.0058		0.0006		0.005	104		F
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BLANK6

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0855

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	170.	U
111-44-4	bis(2-Chloroethyl)ether	170.	U
95-57-8	2-Chlorophenol	170.	U
541-73-1	1,3-Dichlorobenzene	170.	U
106-46-7	1,4-Dichlorobenzene	170.	U
100-51-6	Benzyl alcohol	170.	U
95-50-1	1,2-Dichlorobenzene	170.	U
95-48-7	2-Methylphenol	170.	U
108-60-1	bis(2-Chloroisopropyl)ether	170.	U
106-44-5	4-Methylphenol	170.	U
621-64-7	N-Nitroso-di-n-propylamine	170.	U
67-72-1	Hexachloroethane	170.	U
98-95-3	Nitrobenzene	170.	U
78-59-1	Isophorone	170.	U
88-75-5	2-Nitrophenol	170.	U
105-67-9	2,4-Dimethylphenol	170.	U
65-85-0	Benzoic acid	830.	U
111-91-1	bis(2-Chloroethoxy)methane	170.	U
120-83-2	2,4-Dichlorophenol	170.	U
120-82-1	1,2,4-Trichlorobenzene	170.	U
91-20-3	Naphthalene	170.	U
106-47-8	4-Chloroaniline	170.	U
87-68-3	Hexachlorobutadiene	170.	U
59-50-7	4-Chloro-3-methylphenol	170.	U
91-57-6	2-Methylnaphthalene	170.	U
77-47-4	Hexachlorocyclopentadiene	170.	U
88-06-2	2,4,6-Trichlorophenol	170.	U
95-95-4	2,4,5-Trichlorophenol	830.	U
91-58-7	2-Chloronaphthalene	170.	U
88-74-4	2-Nitroaniline	830.	U
131-11-3	Dimethylphthalate	170.	U
208-96-8	Acenaphthylene	170.	U
606-20-2	2,6-Dinitrotoluene	170.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

BLANK6

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0855

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	830.	U
83-32-9	Acenaphthene	170.	U
51-28-5	2,4-Dinitrophenol	830.	U
100-02-7	4-Nitrophenol	830.	U
132-64-9	Dibenzofuran	170.	U
121-14-2	2,4-Dinitrotoluene	170.	U
84-66-2	Diethylphthalate	170.	U
7005-72-3	4-Chlorophenyl-phenylether	170.	U
86-73-7	Fluorene	170.	U
100-01-6	4-Nitroaniline	830.	U
534-52-1	4,6-Dinitro-2-methylphenol	170.	U
86-30-6	N-Nitrosodiphenylamine	170.	U
101-55-3	4-Bromophenyl-phenylether	170.	U
118-74-1	Hexachlorobenzene	170.	U
87-86-5	Pentachlorophenol	830.	U
85-01-8	Phenanthrene	170.	U
120-12-7	Anthracene	170.	U
84-74-2	Di-n-Butylphthalate	170.	U
206-44-0	Fluoranthene	170.	U
129-00-0	Pyrene	170.	U
85-68-7	Butylbenzylphthalate	170.	U
91-94-1	3,3'-Dichlorobenzidine	330.	U
56-55-3	Benzo(a)Anthracene	170.	U
218-01-9	Chrysene	170.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	170.	U
117-84-0	Di-n-octylphthalate	170.	U
205-99-2	Benzo(b)fluoranthene	170.	U
207-08-9	Benzo(k)fluoranthene	170.	U
50-32-8	Benzo(a)Pyrene	170.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	170.	U
53-70-3	Dibenzo(a,h)Anthracene	170.	U
191-24-2	Benzo(g,h,i)Perylene	170.	U

(1) - Cannot be separated from diphenylamine

U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologie Contract: ------ | LANGB-6-TAP WATER

Lab Code: ------ Case No.: ---- SAS No.: ------ SDG No.: ---------

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic		0.043		.0021		0.04	102		F
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium		0.0334		0.0013		0.04	80		F
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

6BH1SM

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0905

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 6/24/

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/8

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	C
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	2000.	
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	4000.	
132-64-9	Dibenzofuran	210.	U
121-14-2	2,4-Dinitrotoluene	1700.	
84-66-2	Diethylphthalate	210.	U
7005-72-3	4-Chlorophenyl-phenylether	210.	U
86-73-7	Fluorene	210.	U
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	210.	U
86-30-6	N-Nitrosodiphenylamine	210.	U
101-55-3	4-Bromophenyl-phenylether	210.	U
118-74-1	Hexachlorobenzene	210.	U
87-86-5	Pentachlorophenol	4800.	
85-01-8	Phenanthrene	210.	U
120-12-7	Anthracene	210.	U
84-74-2	Di-n-Butylphthalate	210.	U
206-44-0	Fluoranthene	210.	U
129-00-0	Pyrene	2100.	
85-68-7	Butylbenzylphthalate	210.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U
56-55-3	Benzo(a)Anthracene	210.	U
218-01-9	Chrysene	210.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	210.	U
117-84-0	Di-n-octylphthalate	210.	U
205-99-2	Benzo(b)fluoranthene	210.	U
207-08-9	Benzo(k)fluoranthene	210.	U
50-32-8	Benzo(a)Pyrene	210.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	210.	U
53-70-3	Dibenzo(a,h)Anthracene	210.	U
191-24-2	Benzo(g,h,i)Perylene	210.	U

(1) - Cannot be separated from diphenylamine

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE: 6BH1SMSD

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0906

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	4000.	
111-44-4	bis(2-Chloroethyl)ether	210.	U
95-57-8	2-Chlorophenol	3800.	
541-73-1	1,3-Dichlorobenzene	210.	U
106-46-7	1,4-Dichlorobenzene	1300.	
100-51-6	Benzyl alcohol	210.	U
95-50-1	1,2-Dichlorobenzene	210.	U
95-48-7	2-Methylphenol	210.	U
108-60-1	bis(2-Chloroisopropyl)ether	210.	U
106-44-5	4-Methylphenol	210.	U
621-64-7	N-Nitroso-di-n-propylamine	1900.	
67-72-1	Hexachloroethane	210.	U
98-95-3	Nitrobenzene	210.	U
78-59-1	Isophorone	210.	U
88-75-5	2-Nitrophenol	210.	U
105-67-9	2,4-Dimethylphenol	210.	U
65-85-0	Benzoic acid	1000.	U
111-91-1	bis(2-Chloroethoxy)methane	210.	U
120-83-2	2,4-Dichlorophenol	210.	U
120-82-1	1,2,4-Trichlorobenzene	1900.	
91-20-3	Naphthalene	210.	U
106-47-8	4-Chloroaniline	210.	U
87-68-3	Hexachlorobutadiene	210.	U
59-50-7	4-Chloro-3-methylphenol	4200.	
91-57-6	2-Methylnaphthalene	210.	U
77-47-4	Hexachlorocyclopentadiene	210.	U
88-06-2	2,4,6-Trichlorophenol	210.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	210.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	210.	U
208-96-8	Acenaphthylene	210.	U
606-20-2	2,6-Dinitrotoluene	210.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

6BH1SM9

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0906

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	1800.	
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	5000.	
132-64-9	Dibenzofuran	210.	U
121-14-2	2,4-Dinitrotoluene	2300.	
84-66-2	Diethylphthalate	210.	U
7005-72-3	4-Chlorophenyl-phenylether	210.	U
86-73-7	Fluorene	210.	U
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	210.	U
86-30-6	N-Nitrosodiphenylamine	210.	U
101-55-3	4-Bromophenyl-phenylether	210.	U
118-74-1	Hexachlorobenzene	210.	U
87-86-5	Pentachlorophenol	5300.	
85-01-8	Phenanthrene	210.	U
120-12-7	Anthracene	210.	U
84-74-2	Di-n-Butylphthalate	210.	U
206-44-0	Fluoranthene	210.	U
129-00-0	Pyrene	2300.	
85-68-7	Butylbenzylphthalate	210.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U
56-55-3	Benzo(a)Anthracene	210.	U
218-01-9	Chrysene	210.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	210.	U
117-84-0	Di-n-octylphthalate	210.	U
205-99-2	Benzo(b)fluoranthene	210.	U
207-08-9	Benzo(k)fluoranthene	210.	U
50-32-8	Benzo(a)Pyrene	210.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	210.	U
53-70-3	Dibenzo(a,h)Anthracene	210.	U
191-24-2	Benzo(g,h,i)Perylene	210.	U

(1) - Cannot be separated from diphenylamine

U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: --------

LANGB-6-BH1-SS1

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium		1.479		0.966		0.5	103		P
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver		0.0050		0.0003		0.005	94		F
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U. S. EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: --------

LANGB-6-BH1-SS3

Lab Code: _____ Case No.: ____ SAS No.: _____ SDG No.: _____

Matrix: SOIL Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/Kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium		0.0020		0.0003		0.002	85		P
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

U.S. EPA - CLP

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DUPLICATES

EPA SAMPLE NO.
LANGB-6-BH1-SS3

Lab Name: Harris Environmental Technolog Contract: ----------

Lab Code: ------ Case No.: ------ SAS No.: ------- SDG No.: -------

Matrix (soil/water): soil Level (low/med): low

% Solids for Sample: ----- % Solids for Duplicate: -------

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum								
Antimony								
Arsenic	1.0	1.54		0.91		51.4	*	F
Barium	20.0	46.5		52.2		11.6		P
Beryllium								
Cadmium	0.5	0.06		0.07		15.4		F
Calcium								
Chromium	1.0	12.0		12.9		7.2		P
Cobalt								
Copper								
Iron								
Lead	0.3	4.2		2.8		40.0	*	F
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium	0.5	0.12		0.12		0		F
Silver	1.0	< 0.1		< 0.1				F
Sodium								
Thallium								
Vanadium								
Zinc								
Cyanide								

FORM VI - IN

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U. S. EPA - CLP

5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: Harris Environmental Technologies Contract: ------ | LANGB-6-MW1-GW1

Lab Code: ------ Case No.: ---- SAS No.: ------ SDG No.: ------

Matrix: WATER Level (low/med): LOW

Concentration Units: ~~ug/L~~ mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead									
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver		0.0038		0.0		0.004	95		
Sodium									
Thallium									
Vanadium									
Zinc									

Comments:

FORM V (Part 2) - IN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLI

BLANK7

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0931

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: .6/23/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 2/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.(

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

BLANK7

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0931

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/23/

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 2/8

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

BLANKS

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0897

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec. 0. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	170.	U
111-44-4	bis(2-Chloroethyl)ether	170.	U
95-57-8	2-Chlorophenol	170.	U
541-73-1	1,3-Dichlorobenzene	170.	U
106-46-7	1,4-Dichlorobenzene	170.	U
100-51-6	Benzyl alcohol	170.	U
95-50-1	1,2-Dichlorobenzene	170.	U
95-48-7	2-Methylphenol	170.	U
108-60-1	bis(2-Chloroisopropyl)ether	170.	U
106-44-5	4-Methylphenol	170.	U
621-64-7	N-Nitroso-di-n-propylamine	170.	U
67-72-1	Hexachloroethane	170.	U
98-95-3	Nitrobenzene	170.	U
78-59-1	Isophorone	170.	U
88-75-5	2-Nitrophenol	170.	U
105-67-9	2,4-Dimethylphenol	170.	U
65-85-0	Benzoic acid	830.	U
111-91-1	bis(2-Chloroethoxy)methane	170.	U
120-83-2	2,4-Dichlorophenol	170.	U
120-82-1	1,2,4-Trichlorobenzene	170.	U
91-20-3	Naphthalene	170.	U
106-47-8	4-Chloroaniline	170.	U
87-68-3	Hexachlorobutadiene	170.	U
59-50-7	4-Chloro-3-methylphenol	170.	U
91-57-6	2-Methylnaphthalene	170.	U
77-47-4	Hexachlorocyclopentadiene	170.	U
88-06-2	2,4,6-Trichlorophenol	170.	U
95-95-4	2,4,5-Trichlorophenol	830.	U
91-58-7	2-Chloronaphthalene	170.	U
88-74-4	2-Nitroaniline	830.	U
131-11-3	Dimethylphthalate	170.	U
208-96-8	Acenaphthylene	170.	U
606-20-2	2,6-Dinitrotoluene	170.	U

1C

EPA SAM

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BLANK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0897

Level: (low/med) LOW Date Received: 0/ 0/

% Moisture: not dec. 0. dec. 0. Date Extracted: 6/24/

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
99-09-2	3-Nitroaniline	830.	U
83-32-9	Acenaphthene	170.	U
51-28-5	2,4-Dinitrophenol	830.	U
100-02-7	4-Nitrophenol	830.	U
132-64-9	Dibenzofuran	170.	U
121-14-2	2,4-Dinitrotoluene	170.	U
84-66-2	Diethylphthalate	170.	U
7005-72-3	4-Chlorophenyl-phenylether	170.	U
86-73-7	Fluorene	170.	U
100-01-6	4-Nitroaniline	830.	U
534-52-1	4,6-Dinitro-2-methylphenol	170.	U
86-30-6	N-Nitrosodiphenylamine	170.	U
101-55-3	4-Bromophenyl-phenylether	170.	U
118-74-1	Hexachlorobenzene	170.	U
87-86-5	Pentachlorophenol	830.	U
85-01-8	Phenanthrene	170.	U
120-12-7	Anthracene	170.	U
84-74-2	Di-n-Butylphthalate	170.	U
206-44-0	Fluoranthene	170.	U
129-00-0	Pyrene	170.	U
85-68-7	Butylbenzylphthalate	170.	U
91-94-1	3,3'-Dichlorobenzidine	330.	U
56-55-3	Benzo(a)Anthracene	170.	U
218-01-9	Chrysene	170.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	170.	U
117-84-0	Di-n-octylphthalate	170.	U
205-99-2	Benzo(b)fluoranthene	170.	U
207-08-9	Benzo(k)fluoranthene	170.	U
50-32-8	Benzo(a)Pyrene	170.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	170.	U
53-70-3	Dibenzo(a,h)Anthracene	170.	U
191-24-2	Benzo(g,h,i)Perylene	170.	U

(1) - Cannot be separated from diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

BLANK9

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0898

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

BLANK9

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0898

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BLNK10

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0944

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

BLNK10

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0944

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

BLNK11

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0945

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE: BLNK11

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0945

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE I BLANK12

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0928

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. dec. 0. Date Extracted: 6/30/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 2/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

BLANK

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0928

Level: (low/med) LOW Date Received: 0/ 0/

% Moisture: not dec.100. dec. 0. Date Extracted: 6/30/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 2/8

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

APPENDIX D4

SPIKE SAMPLE RECOVERY

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Waters

SPIKE SAMPLE RECOVERY

HET Sample ID: Lab D.I. Water
EE Sample ID: None
Spike ID: 1

Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	% Recovery
Fluoride	<0.1	<0.05	0.00	100.0
Chloride	<0.1	<0.1	0.00	100.0
Nitrite	<0.1	<0.1	0.00	100.0
Nitrate	<0.1	<0.1	0.00	100.0
Sulfate	<0.1	<0.1	0.00	100.0

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Waters

SPIKE SAMPLE RECOVERY

HET Sample ID: Lab D.I. Water + Spike
EE Sample ID: None
Spike ID: 2

Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	% Recovery
Fluoride	0.93	<0.05	1.0	93.0
Chloride	0.89	<0.1	1.0	89.0
Nitrite	0.94	<0.1	1.0	94.0
Nitrate	1.00	<0.1	1.0	100.0
Sulfate	9.17	<0.1	1.0	91.7

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Waters

SPIKE SAMPLE RECOVERY

HET Sample ID: 6916 Matrix Spike
EE Sample ID: LANGB-6-Tap Water
Spike ID: 3

Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	% Recovery
Fluoride	1.43	0.70	1.0	73.0
Chloride	23.80	16.10	10.0	77.0
Nitrite	0.93	< 0.1	1.0	93.0
Nitrate	3.23	2.29	1.0	94.0
Sulfate	193.40	94.30	100.0	99.1

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Waters

SPIKE SAMPLE RECOVERY

HET Sample ID: 6916 Matrix Spike Dup.
EE Sample ID: LANGB-6-Tap Water
Spike ID: 4

Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	% Recovery
Fluoride	1.43	0.70	1.0	73.0
Chloride	23.90	16.20	10.0	77.0
Nitrite	0.92	< 0.1	1.0	92.0
Nitrate	3.2	2.29	1.0	91.0
Sulfate	193.70	93.50	100.0	100.2

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Waters

SPIKE SAMPLE RECOVERY

HET Sample ID: 6895 Matrix Spike
EE Sample ID: LANGB-1-Rinsate BL
Spike ID: 5

Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	% Recovery
Fluoride	0.92	<0.05	1.0	92.0
Chloride	0.91	<0.1	1.0	91.0
Nitrite	0.94	<0.1	1.0	94.0
Nitrate	0.99	<0.1	1.0	99.0
Sulfate	9.03	<0.1	10.0	90.3

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Waters

SPIKE SAMPLE RECOVERY

HET Sample ID: 6895 Matrix Spike Dup.
EE Sample ID: LANGB-1-Rinsate BL
Spike ID: 6

Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	% Recovery
Fluoride	0.91	<0.05	1.0	91.0
Chloride	0.90	<0.1	1.0	90.0
Nitrite	0.93	<0.1	1.0	93.0
Nitrate	0.99	<0.1	1.0	99.0
Sulfate	9.03	<0.1	10.0	90.3

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Waters

SPIKE SAMPLE RECOVERY

HET Sample ID: 6609 Matrix Spike
EE Sample ID: LANGB-2-SW-3
Spike ID: 7

Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	% Recovery
Fluoride	1.14	0.4	1.0	74.0
Chloride	26.30	21.70	5.0	92.0
Nitrite	0.96	< 0.1	1.0	96.0
Nitrate	1.00	< 0.1	1.0	100.0
Sulfate	64.40	17.10	50.0	94.6

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Waters

SPIKE SAMPLE RECOVERY

HET Sample ID: 6609 Matrix Spike Dup.
EE Sample ID: LANGB-2-SW-3
Spike ID: 8

Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	% Recovery
Fluoride	1.14	0.4	1.0	74.0
Chloride	26.10	22.05	5.0	81.0
Nitrite	0.71	< 0.1	1.0	71.0
Nitrate	1.01	< 0.1	1.0	101.0
Sulfate	63.85	17.5	50.0	92.7

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

SPIKE SAMPLE RECOVERY

HET Sample ID: Lab Blank
EE Sample ID: None
Spike ID: 1

Analyte	Spiked Sample Result (mg/Kg)	Sample Result (mg/Kg)	Spike Added (mg/Kg)	% Recovery
Fluoride	<10.0	<10.0	0.00	100.0
Chloride	<10.0	<10.0	0.00	100.0
Nitrite	<10.0	<10.0	0.00	100.0
Nitrate	<10.0	<10.0	0.00	100.0
Sulfate	<10.0	<10.0	0.00	100.0

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

SPIKE SAMPLE RECOVERY

HET Sample ID: Standard Matrix Spike
EE Sample ID: None
Spike ID: 2

Analyte	Spiked Sample Result (mg/Kg)	Sample Result (mg/Kg)	Spike Added (mg/Kg)	% Recovery
Fluoride	390.0	<10.0	400.0	97.5
Chloride	424.0	<10.0	400.0	106.0
Nitrite	392.0	<10.0	400.0	98.0
Nitrate	498.0	<10.0	500.0	99.6
Sulfate	1412.0	<10.0	1500.0	94.1

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

SPIKE SAMPLE RECOVERY

HET Sample ID: Standard Matrix Spike Dup.
EE Sample ID: None
Spike ID: 3

Analyte	Spiked Sample Result (mg/Kg)	Sample Result (mg/Kg)	Spike Added (mg/Kg)	% Recovery
Fluoride	392.0	<10.0	400.0	98.0
Chloride	392.0	<10.0	400.0	98.0
Nitrite	390.0	<10.0	400.0	97.5
Nitrate	494.0	<10.0	500.0	98.8
Sulfate	1406.0	<10.0	1500.0	93.7

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

SPIKE SAMPLE RECOVERY

HET Sample ID: 6707 Matrix Spike
EE Sample ID: LANGB-4-BH4-SS1
Spike ID: 4

Analyte	Spiked Sample Result (mg/Kg)	Sample Result (mg/Kg)	Spike Added (mg/Kg)	% Recovery
Fluoride	455.4	86.8	481.9	76.5
Chloride	534.9	47.0	481.9	101.2
Nitrite	491.6	< 10.0	481.9	102.0
Nitrate	669.9	36.1	602.4	105.2
Sulfate	2337.3	560.2	1807.2	98.3

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

SPIKE SAMPLE RECOVERY

HET Sample ID: 6707 Matrix Spike Dup.
EE Sample ID: LANGB-4-BH4-SS1
Spike ID: 5

Analyte	Spiked Sample Result (mg/Kg)	Sample Result (mg/Kg)	Spike Added (mg/Kg)	% Recovery
Fluoride	448.2	81.9	481.9	76.0
Chloride	530.1	66.3	481.9	96.2
Nitrite	486.8	< 10.0	481.9	101.0
Nitrate	657.8	43.4	602.4	102.0
Sulfate	2289.2	603.6	1807.0	93.3

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

SPIKE SAMPLE RECOVERY

HET Sample ID: 6742 Matrix Spike Dup.
EE Sample ID: LANGB-3-BH2-SS2
Spike ID: 6

Analyte	Spiked Sample Result (mg/Kg)	Sample Result (mg/Kg)	Spike Added (mg/Kg)	% Recovery
Fluoride	416.4	98.5	447.8	71.0
Chloride	519.4	57.1	447.8	103.2
Nitrite	465.7	< 10.0	447.8	104.0
Nitrate	615.7	17.9	559.7	106.8
Sulfate	2753.7	988.4	1679.1	105.1

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

SPIKE SAMPLE RECOVERY

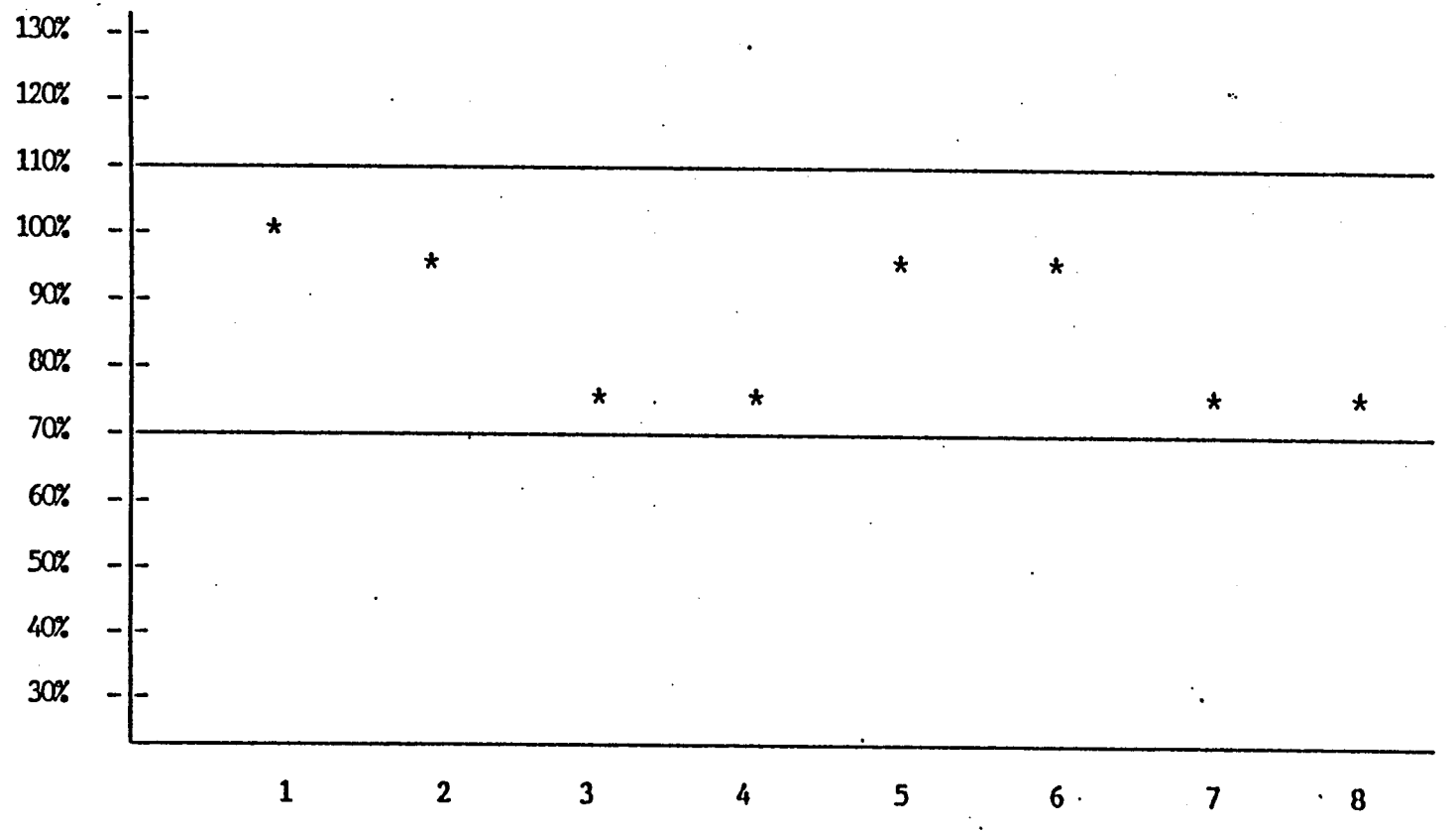
HET Sample ID: 6742 Matrix Spike
EE Sample ID: LANGB-3-BH2-SS2
Spike ID: 7

Analyte	Spiked Sample Result (mg/Kg)	Sample Result (mg/Kg)	Spike Added (mg/Kg)	% Recovery
Fluoride	416.4	91.8	447.8	72.5
Chloride	514.9	67.2	447.8	100.0
Nitrite	465.7	< 10.0	447.8	104.0
Nitrate	609.0	38.1	559.7	102.0
Sulfate	2760.4	977.2	1679.1	106.2

H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Fluoride in Environmental Water

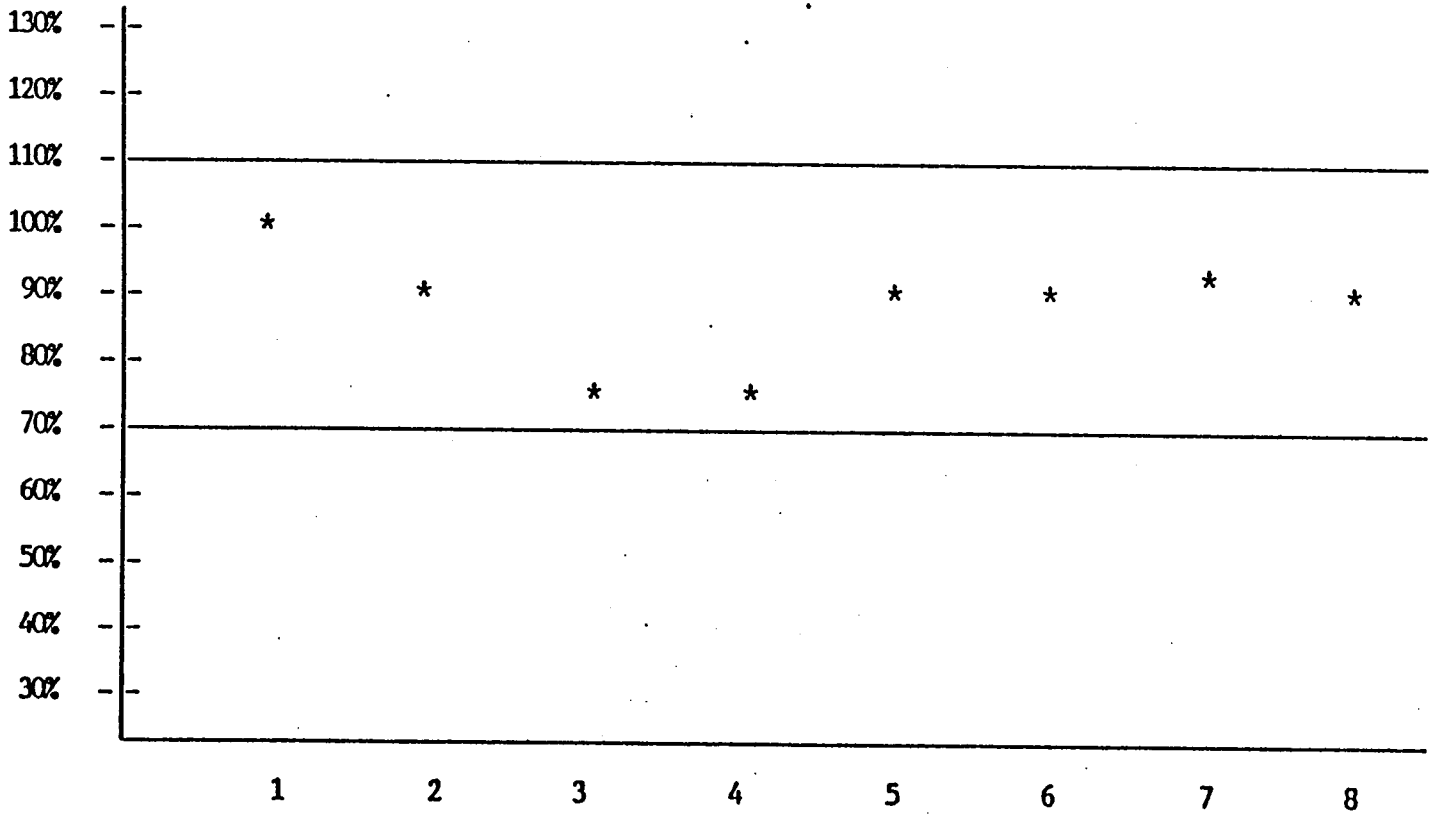
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Chloride in Environmental Water

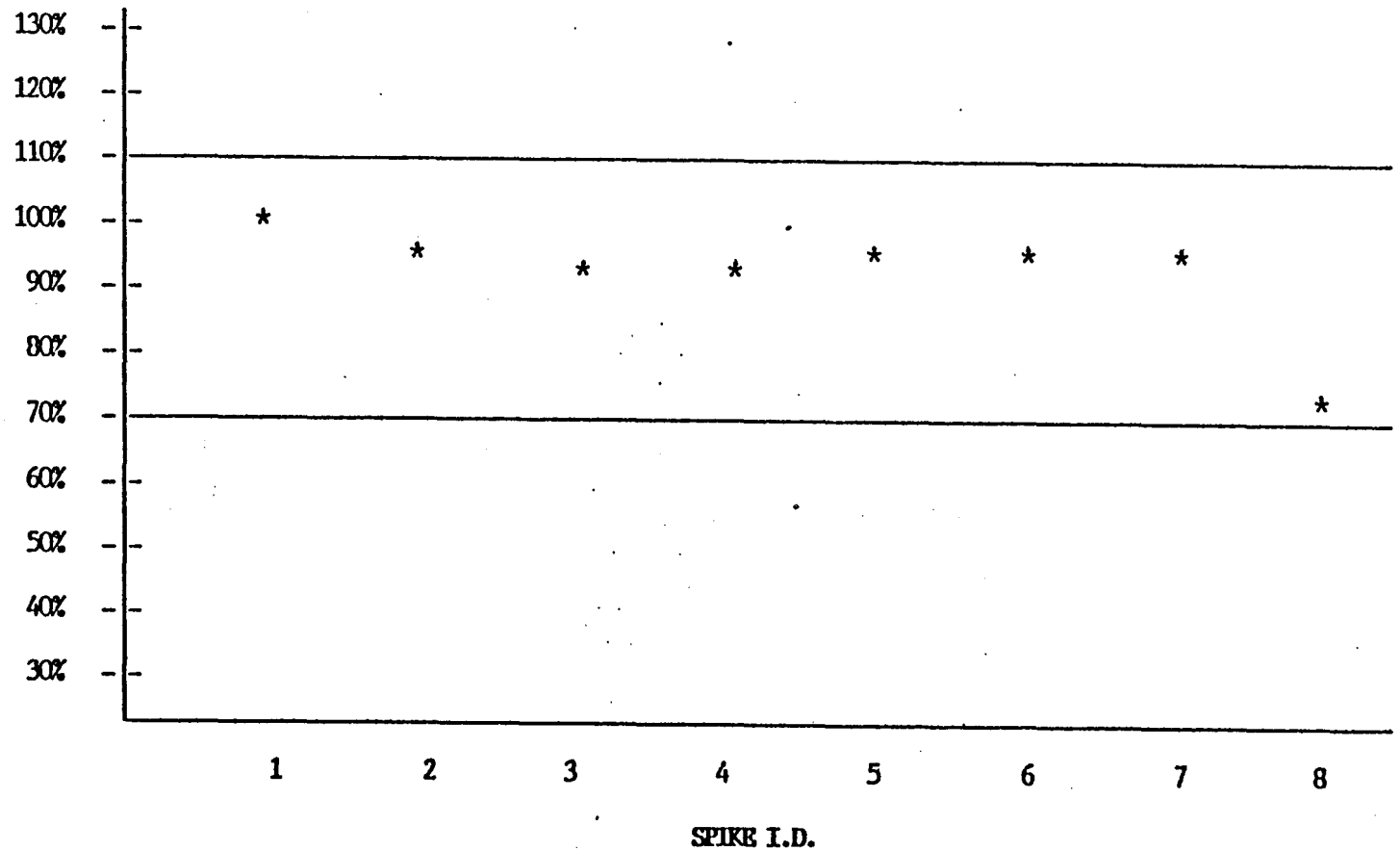
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Nitrite in Environmental Water

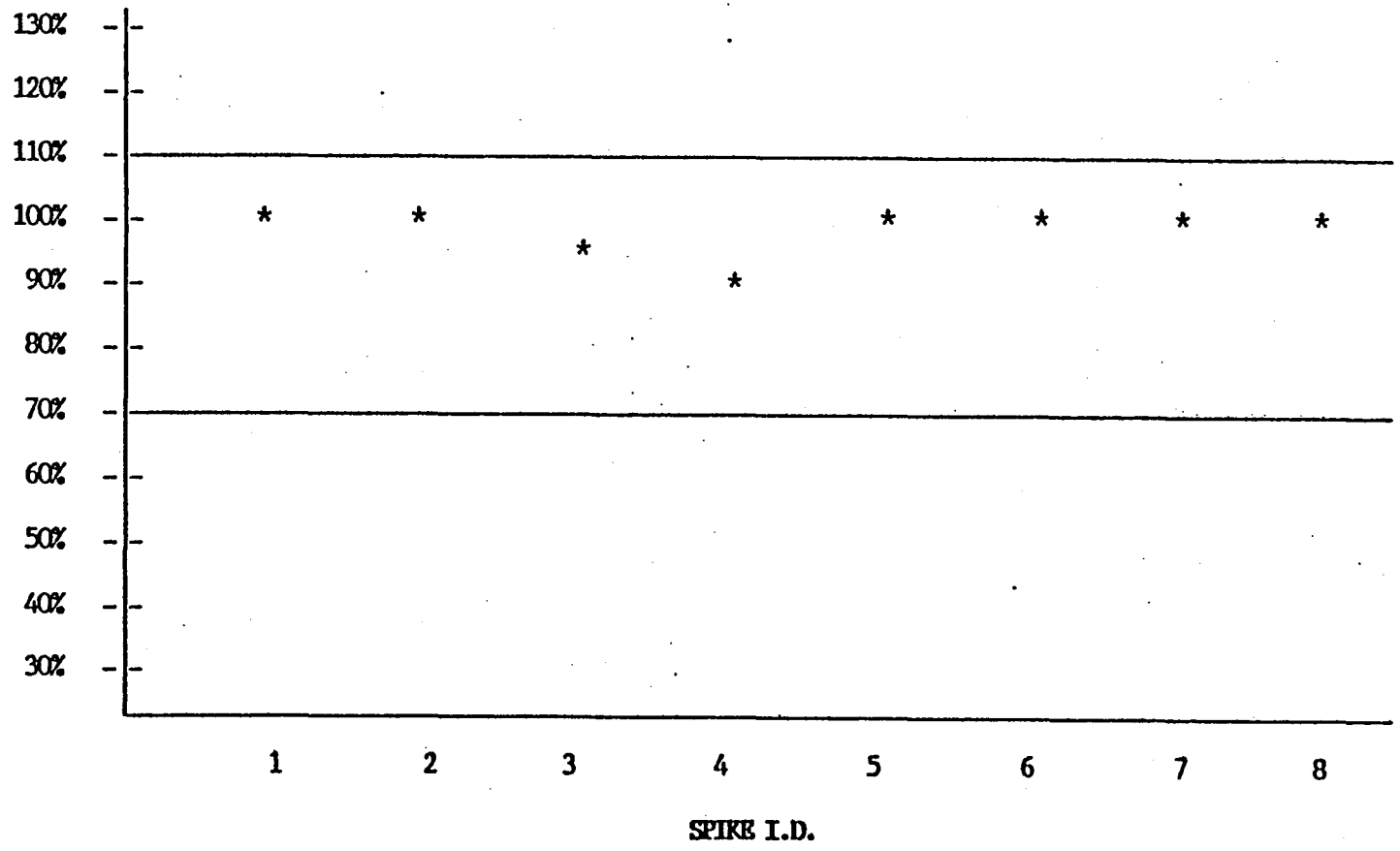
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Nitrate in Environmental Water

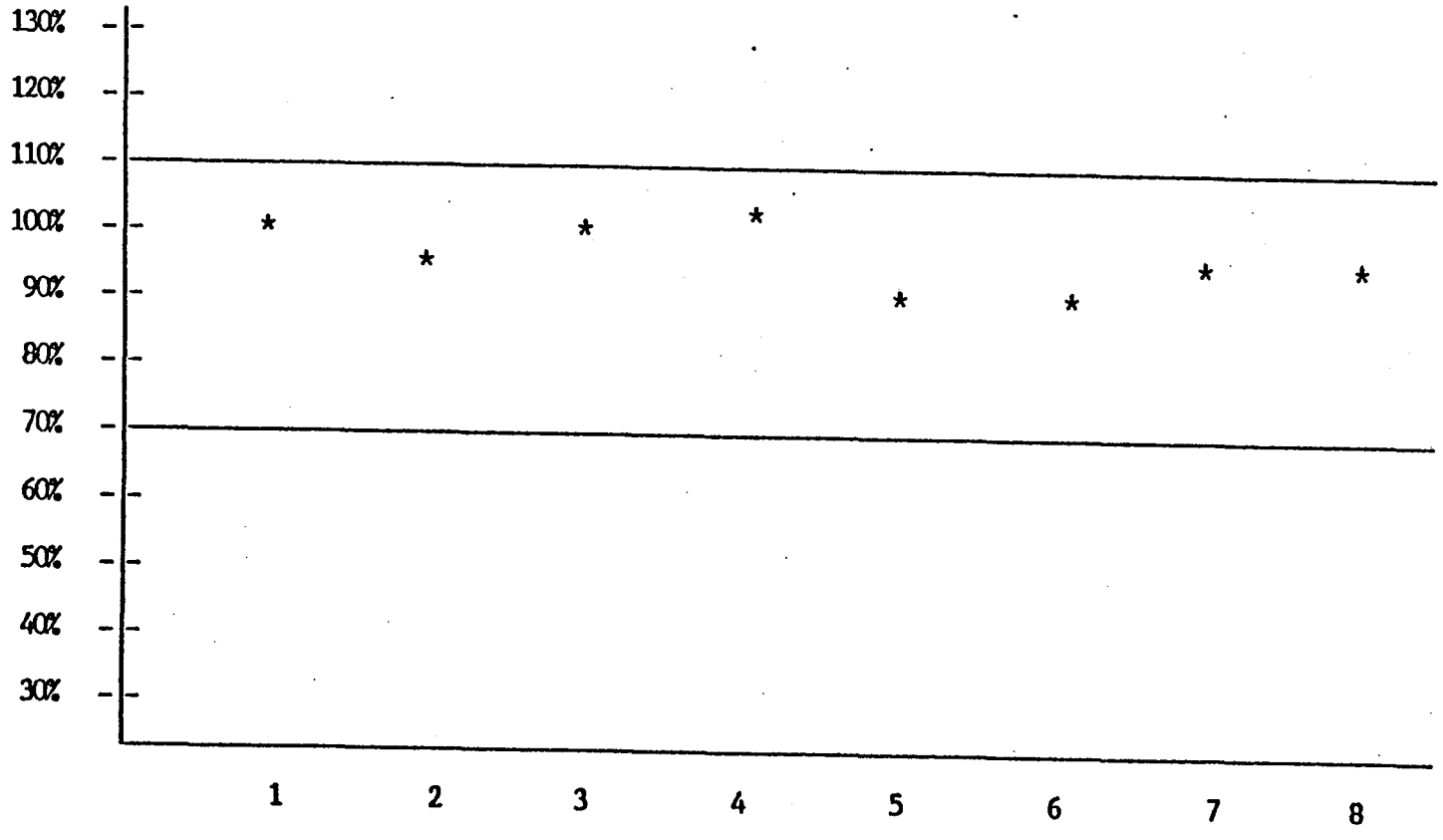
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Sulfate in Environmental Water

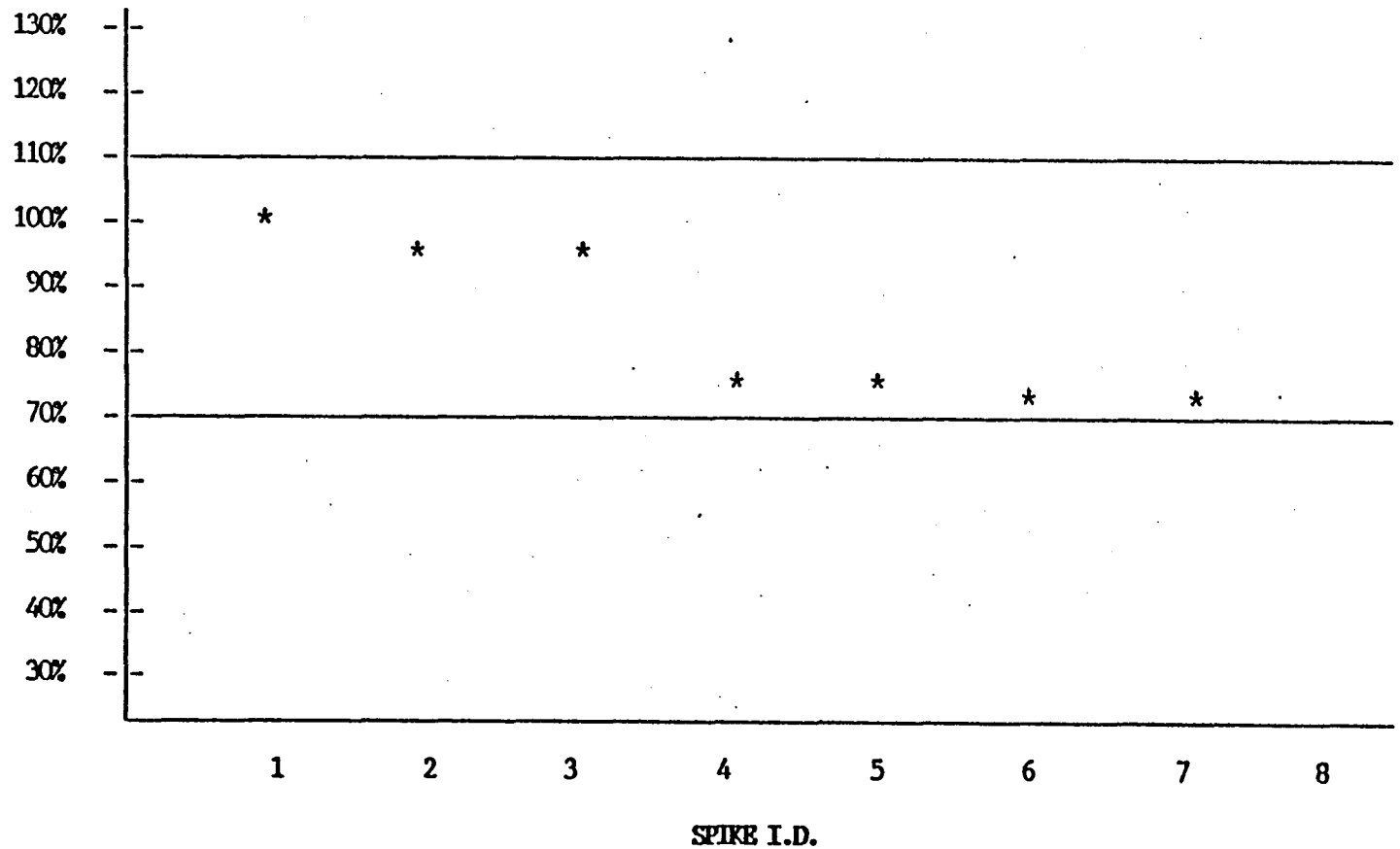
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Fluoride in Environmental Soil/Sediment

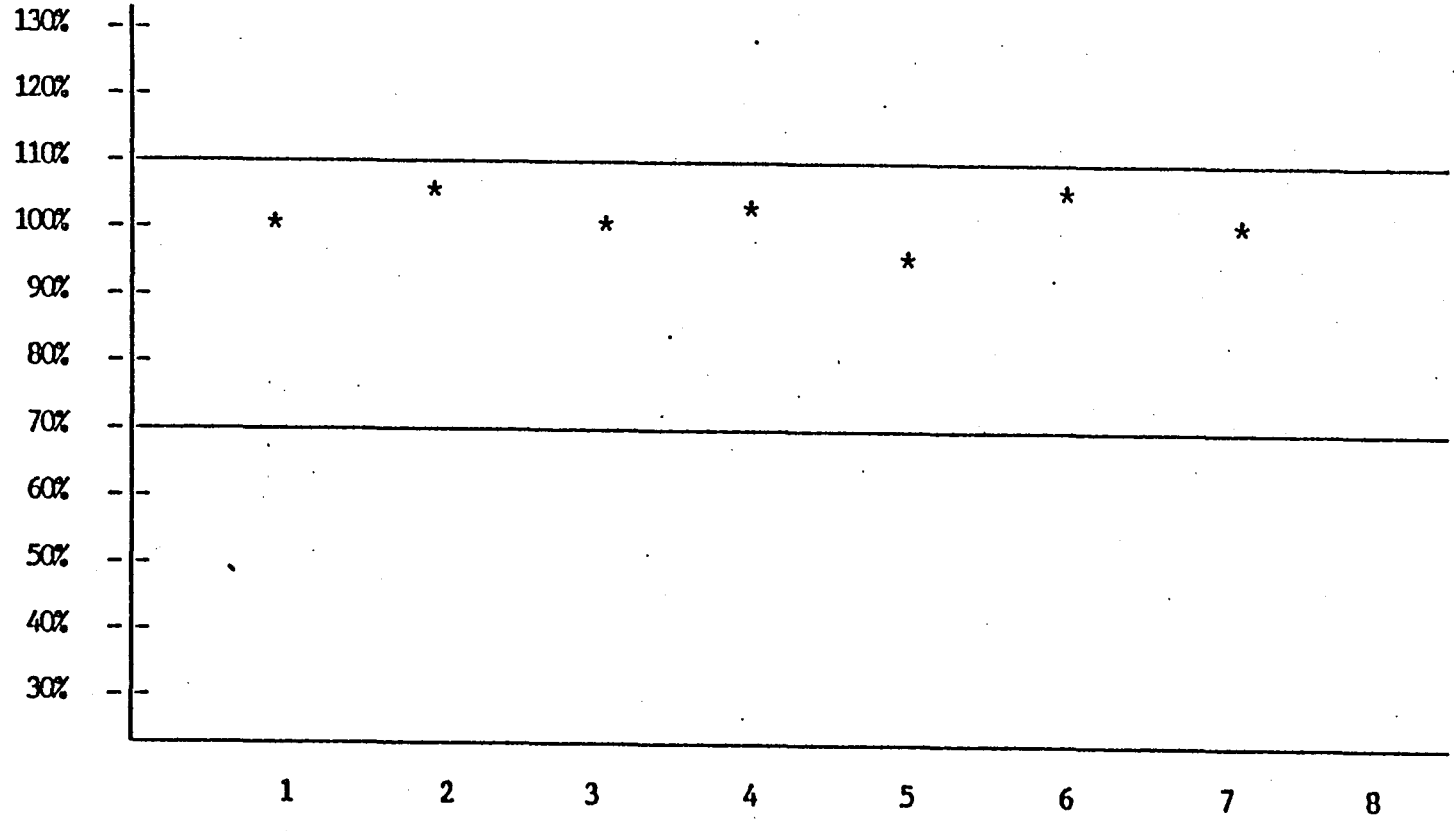
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Chloride in Environmental Soil/Sediment

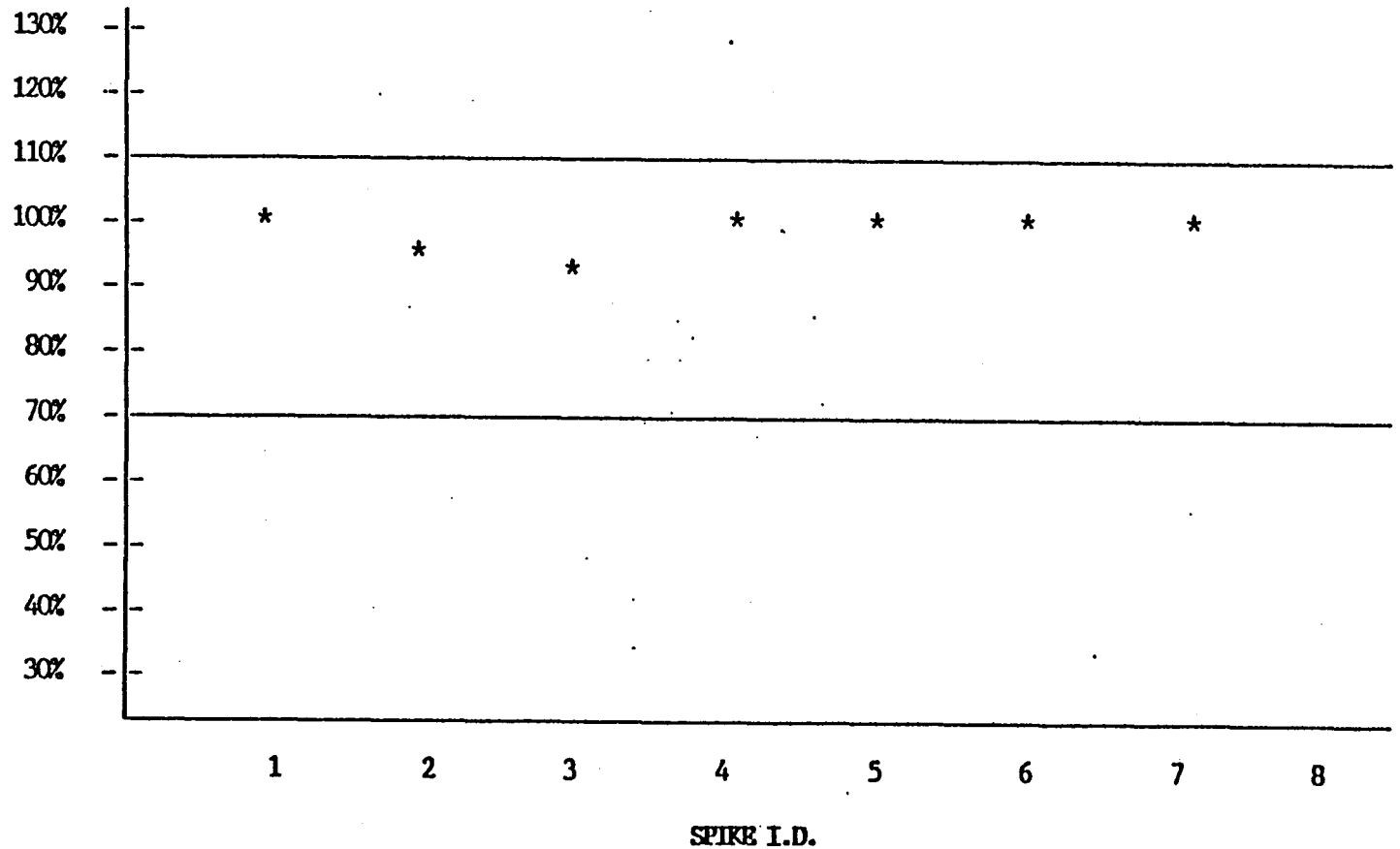
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Nitrite in Environmental Soil/Sediment

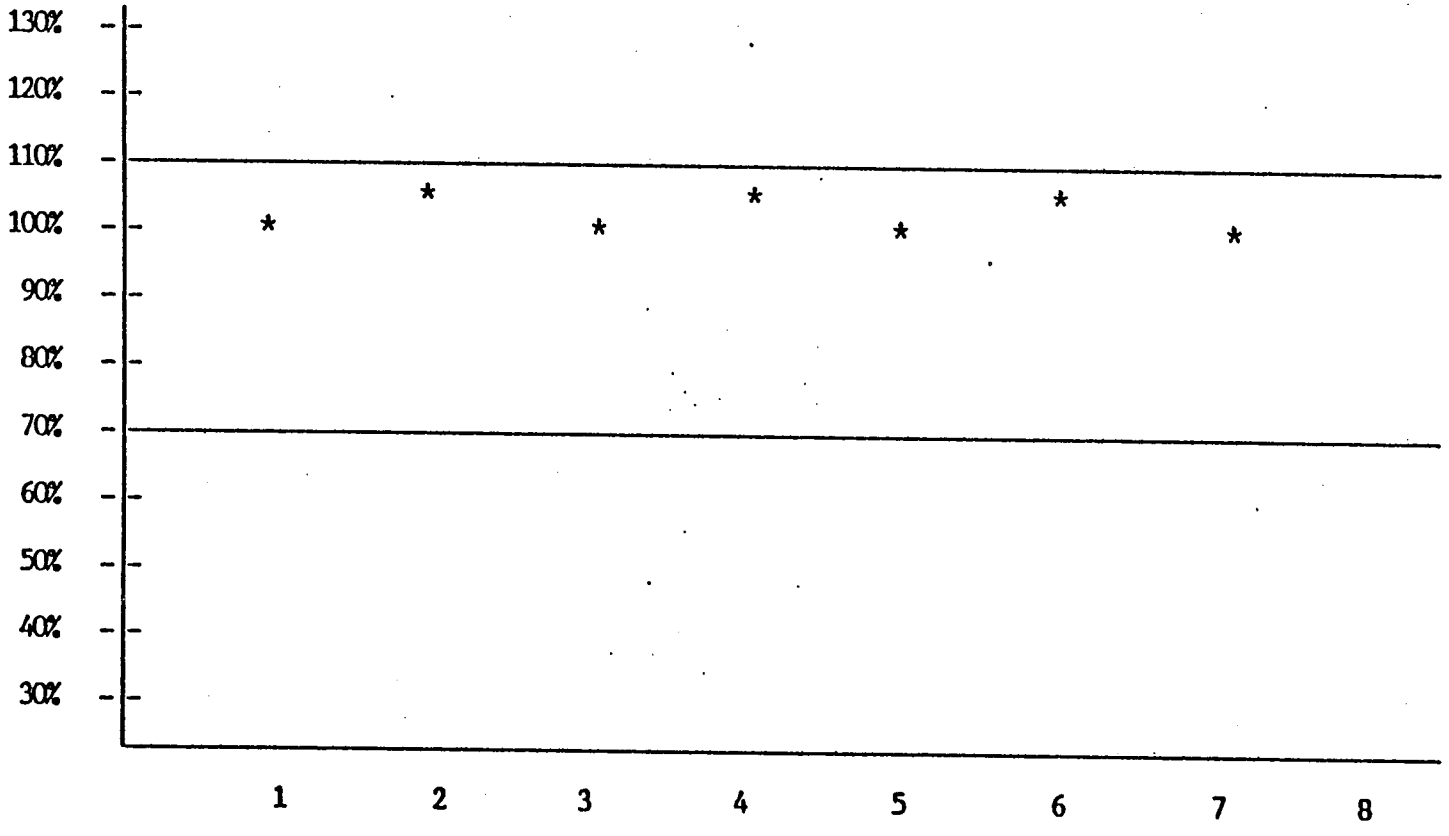
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Nitrate in Environmental Soil/Sediment

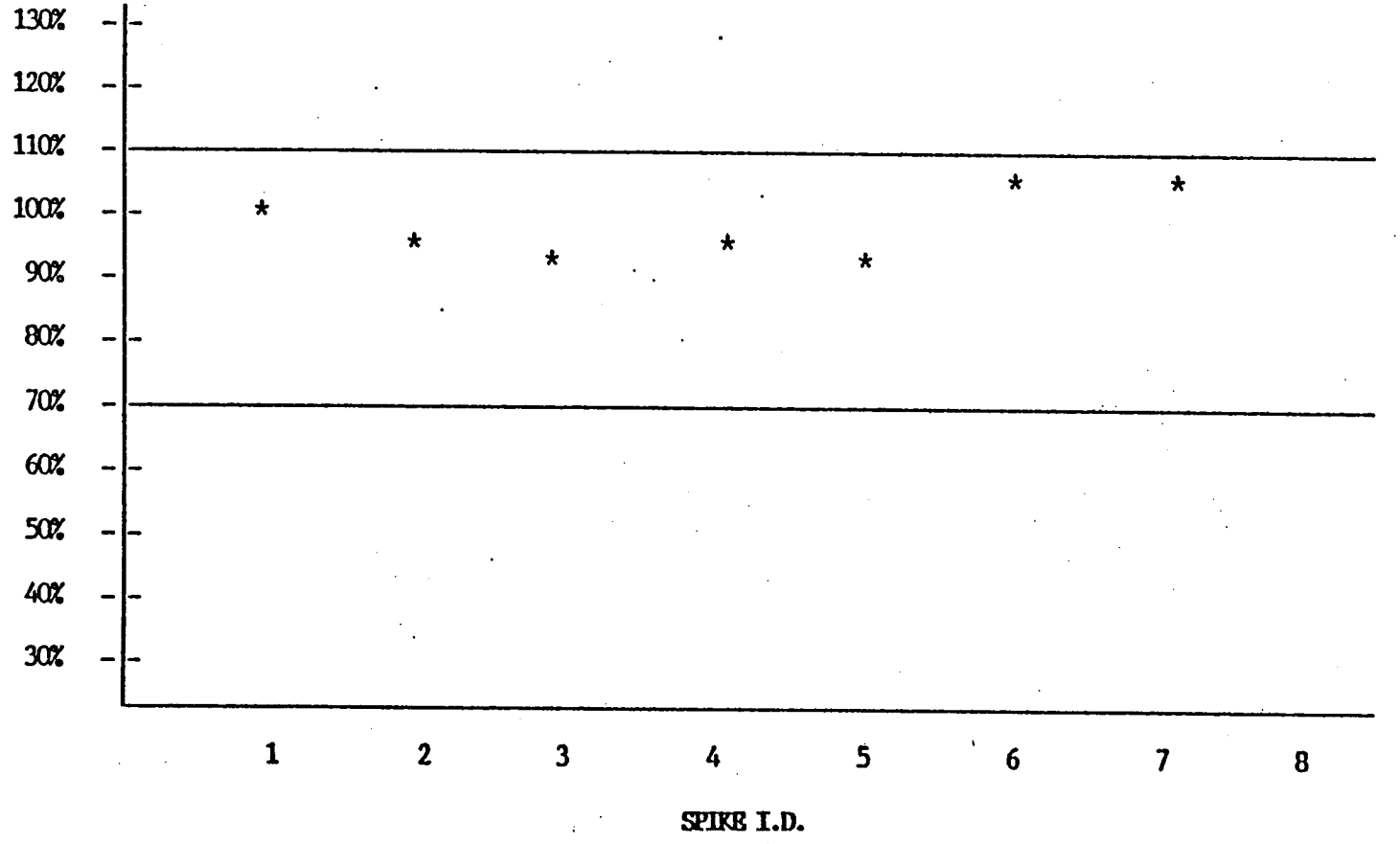
SPIKE SAMPLE RECOVERY



H.E.T. STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.

Sulfate in Environmental Soil/Sediment

SPIKE SAMPLE RECOVERY



APPENDIX D5

SURROGATE RECOVERY RESULTS

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TC OL
1	BLANK5	47	51	92	37	57	80		
2	2-SW-4	38	48	71	24	33	80		
3	2-SW-5	47	54	62	37	55	101		
4	2-SW-6	41	50	70	35	53	80		
5	2-SW-8	45	51	78	35	54	81		
6	BLANK2	59	59	70	33	48	71		
7	2-SW-1	61	69	92	33	51	83		
8	2-SW-2	52	60	68	34	48	90		
9	2-SW-3	74	80	101	34	52	90		
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(33-141)
S4 (PHL) = Phenol-d5	(10- 94)
S5 (2FP) = 2-Fluorophenol	(21-100)
S6 (TBP) = 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER
1	2-SW-7	63	65	85	37	55	97	
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
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22								
23								
24								
25								
26								
27								
28								
29								
30								

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl-d14	(33-141)
S4 (PHL)	= Phenol-d5	(10- 94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TC
1	BLANK3	62	67	100	75	70	70		
2	6BH1SS1	57	60	70	72	68	75		
3	6BH1SS2	78	55	57	63	65	62		
4	6BH1SS3	43	47	61	54	56	57		
5	2-SD-4	50	59	61	62	57	65		
6	2-SD-5	56	62	63	68	64	67		
7	2-SD-6	59	61	60	67	65	60		
8	BLANK6	61	63	91	71	71	69		
9	3BH2SS1	53	53	85	67	65	77		
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	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHE
1	13BH2SS2	61	66	75	101	105	69	
2	13BH4SS1	16 *	39	107	25	18 *	97	
3	13BH3SS1	110	73	93	78	61	90	
4	13BH3SS2	81	66	76	76	86	78	
5	13BH1SS1	70	65	75	62	62	73	
6	13BH1SS2	77	67	82	92	88	73	
7	12-SD-1	60	76	84	84	75	98	
8	12-SD-3	39	56	74	54	46	74	
9	12-SD-7	52	60	74	61	59	66	
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	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1\

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TC
1	BLANK9	67	72	87	37	54	72		
2	6MW1GW1	73	80	88	22	30	69		
3	6TAPWTR	65	72	90	32	45	83		
4	2MW1GW1	66	71	73	15	20 *	55		
5	2RNSBLK	60	64	91	30	43	60		
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		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl-d14	(33-141)
S4 (PHL)	= Phenol-d5	(10- 94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHE
1	BLANK8	42	43	52	88	79	58	
2	5BH1SS1	55	53	49	56	58	53	
3	5BH1SS2	67	68	57	77	79	83	
4	6BH1SMS	55	60	52	73	49	72	
5	6BH1SMSD	45	49	57	70	62	74	
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	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(23-120)
S2 (FBP) = 2-Fluorobiphenyl	(30-115)
S3 (TPH) = Terphenyl-d14	(18-137)
S4 (PHL) = Phenol-d5	(24-113)
S5 (2FP) = 2-Fluorophenol	(25-121)
S6 (TBP) = 2,4,6-Tribromophenol	(19-122)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
1	BLANK12	2 *	1 *	31 *	37	53	72		3
2	1M206GW1	53	59	80	0 *	0 *	0 *		3
3	1M218GW1	25 *	29 *	70	0 *	0 *	0 *		5
4	BLANK7	54	57	84	41	65	86		0
5	1RNSBLK	54	64	80	25	37	62		0
6	1FLDBLK	54	61	100	37	52	83		0
7	2-SW-6MS	64	68	92	26	35	60		0
8	2-SW-6MSD	52	58	95	31	44	67		0
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	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(33-141)
S4 (PHL) = Phenol-d5	(10- 94)
S5 (2FP) = 2-Fluorophenol	(21-100)
S6 (TBP) = 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TO U
1	BLNK10	74	77	91	42	60	87		0
2	BLNK11	79	76	102	32	49	79		0
3	5MW1GW1	73	74	92	38	45	83		0
4	5RNSBLK	84	83	103	30	47	73		0
5	3MW1GW1	56	59	73	6 *	6 *	8 *		3
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	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(33-141)
S4 (PHL) = Phenol-d5	(10- 94)
S5 (2FP) = 2-Fluorophenol	(21-100)
S6 (TBP) = 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2F

SOIL PESTICIDE QC RECOVERY

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: PCB SpikeQC Case No.: DE-072 SAS No.: _____ SDG No.: _____

Level: (low/med) Low

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	PCB Spike QC	----	109%
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ADVISORY QC LIMITS (24-150)

S1 (DBC) = Dibutylchlorendate

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogates diluted out

DBC was not used in this analysis - PCB 1242 was spiked to meet QC requirements.

2A

WATER VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 2

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK01	97	97	94		0
2	2-SW-1	99	98	92		0
3	2-SW-MS	96	94	90		0
4	2-SW-MSD	99	99	94		0
5	2-SW-2	100	97	93		0
6	2-SW-3	99	94	92		0
7	2-SW-7	98	93	92		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	2-SD-1	96	92	91		0
2	2-SD-MS	95	88	89		0
3	2-SD-MSD	106	90	94		0
4	2-SD-7	100	88	100		0
5	6BH1SS1	100	94	91		0
6	6BH1SS2	90	83	86		0
7	6BH1SS3	94	90	92		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2B

SOIL VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 2

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	2-SD-3	103	84	103		0
2	2-SD-1	100	83	96		0
3						
4						
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	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2A

WATER VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK01	101	101	97		0
2	2-SW-4	89	86	88		0
3	2-SW-5	91	88	90		0
4	2-SW-8	92	88	91		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2B

SOIL VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 4

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	2-SD-4	107	81	115		0
2	2-SD-5	97	108	93		0
3	3BH3SS2	99	85	93		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2A

WATER VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 4

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK01	94	94	93		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK01	94	97	96		0
2	TB 6/19	98	101	96		0
3	2-SW-6	97	100	92		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK01	98	96	96		0
2	TB6/19-2	98	98	99		0
3	1RINSATE	96	96	93		0
4	1FIELDBL	95	94	93		0
5	1M214GW1	95	93	91		0
6	1M216GW1	94	94	90		0
7	1M206GW1	95	92	93		0
8	1M218GW1	98	94	93		0
9	1M210GW1	95	95	94		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2B

SOIL VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	2-SD-6	101	93	93		0
2	3BH1SS1	111	96	88		0
3	3BH1SS3	112	94	95		0
4	3BH2SS2	106	83	90		0
5	3BH2SS1	109	77	89		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2A

WATER VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK01	105	108	102		0
2	S2TRPBLK	98	100	96		0
3	6TAP	92	93	94		0
4	6TAP MS	97	96	96		0
5	6TAP MSD	95	94	93		0
6	2MW1GW1	93	92	90		0
7	6MW1GW1	93	90	90		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	3BH4SS1	102	92	92		0
2	3BH3SS1	100	87	91		0
3	3BH1SS2	98	97	92		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 8

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK01	95	97	89		0
2	TBLK6/24	93	95	87		0
3	5RBK6/24	94	95	85		0
4	5MW1GW1	89	90	86		0
5	1M1203G1	94	113	87		0
6	3MW1GW1	93	94	85		0
7	1M209GW1	93	95	88		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2B

SOIL VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 8

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	5BH1SS1	95	90	82		0
2	5BH1SS2	93	93	88		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

2A

WATER VOLATILE SURROGATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 9

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
1	VBLK01	99	104	92		0
2	1M204GW1	103	111	94		0
3	2RBK6/23	97	104	88		0
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

APPENDIX D6

MATRIX SPIKE AND DUPLICATE RESULTS

1

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:Harris Environmental Tech Contract:-------

Lab Code: ----- Case No.: ----- SAS No.: ----- SDG No.: ------

Matrix Spike - EPA Sample No.: -----

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	#	LI RE
Phenol	200.00	0.00	43.00	21		12-
2-Chlorophenol	200.00	0.00	90.00	45		27-
1,4-Dichlorobenzene	100.00	0.00	51.00	51		36-
N-Nitroso-di-n-prop.(1)	100.00	0.00	58.00	58		41-
1,2,4-Trichlorobenzene	100.00	0.00	64.00	64		39-
4-Chloro-3-methylphenol	200.00	0.00	99.00	49		23-
Acenaphthene	100.00	0.00	75.00	75		46-
4-Nitrophenol	200.00	0.00	65.00	32		10-
2,4-Dinitrotoluene	100.00	0.00	88.00	88		24-
Pentachlorophenol	200.00	0.00	112.00	56		9-
Pyrene	100.00	0.00	86.00	86		26-

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	#	% RPD	#	QC LIMIT RPD	RE
Phenol	200.00	52.00	26		21		42	12-
2-Chlorophenol	200.00	110.00	54		18		40	27-
1,4-Dichlorobenzene	100.00	38.00	37		31	*	28	36-
N-Nitroso-di-n-prop.(1)	100.00	42.00	42		32		38	41-
1,2,4-Trichlorobenzene	100.00	53.00	52		20		28	39-
4-Chloro-3-methylphenol	200.00	108.00	54		9		42	23-
Acenaphthene	100.00	60.00	60		22		31	46-
4-Nitrophenol	200.00	61.00	30		6		50	10-
2,4-Dinitrotoluene	100.00	62.00	62		34		38	24-
Pentachlorophenol	200.00	144.00	72		25		50	9-
Pyrene	100.00	90.00	89		3		31	26-

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of qc limits

RPD: 1 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS: _____

_____

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: HARRIS ENVIRONMENTAL Contract:

Lab Code: HET Case No.: SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: 6BH1SS2 Level: (low/med) L

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	L #
Phenol	8228	0.00	4630	56	2
2-Chlorophenol	8228	0.00	4790	58	2
1,4-Dichlorobenzene	4114	0.00	1642	40	2
N-Nitroso-di-n-prop.(1)	4114	0.00	2394	58	4
1,2,4-Trichlorobenzene	4114	0.00	2200	54	3
4-Chloro-3-methylphenol	8228	0.00	3790	46	2
Acenaphthene	4114	0.00	2004	49	3
4-Nitrophenol	8228	0.00	3978	48	1
2,4-Dinitrotoluene	4114	0.00	1741	42	2
Pentachlorophenol	8228	0.00	4741	58	1
Pyrene	4114	0.00	2086	51	3

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	#	% RPD	#	QC LIM RPD	
Phenol	8228	4028	49		14		35	2
2-Chlorophenol	8228	3777	46		24		50	2
1,4-Dichlorobenzene	4114	1347	33		20		27	2
N-Nitroso-di-n-prop.(1)	4114	1928	47		22		38	4
1,2,4-Trichlorobenzene	4114	1892	45		17		23	3
4-Chloro-3-methylphenol	8228	4248	52		11		33	2
Acenaphthene	4114	1830	45		9		19	3
4-Nitrophenol	8228	5005	61		23		50	1
2,4-Dinitrotoluene	4114	2254	55		26		47	2
Pentachlorophenol	8228	5325	64		10		47	1
Pyrene	4114	2270	55		8		36	3

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of qc limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS: _____

SOIL PCB MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name: Harris Environmental Tech. Contract: 51312

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - EPA Sample No.: _____ Level:(low/med) Low

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
gamma-BHC (Lindane)					46-127
Heptachlor					35-130
Aldrin					34-132
Dieldrin					31-134
Endrin					42-139
4,4'-DDT					23-134
PCB-1242	1.79	0	1.97	1.10	

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)					50	46-127
Heptachlor					31	35-130
Aldrin					43	34-132
Dieldrin					38	31-134
Endrin					45	42-139
4,4'-DDT					50	23-134
PCB-1242	1.79	1.95	1.09	0.1		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: HET Sample #6707 was used (Client ID: LANGB-4-BH4-SS1) values were calculated by measurement with the spiking solution.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Matrix Spike - EPA Sample No.: 2-SW-1

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #
1,1-Dichloroethene	50.	0.	46.	91.
Trichloroethene	50.	0.	49.	99.
Benzene	50.	0.	43.	86.
Toluene	50.	0.	47.	95.
Chlorobenzene	50.	0.	50.	99.

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	% RPD #	QC RPD
1,1-Dichloroethene	50.	48.	96.	5.	14
Trichloroethene	50.	54.	108.	8.	14
Benzene	50.	45.	90.	5.	11
Toluene	50.	49.	99.	4.	13
Chlorobenzene	50.	52.	104.	5.	13

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

APPENDIX D7

METHOD BLANK SUMMARY

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0830 Lab Sample ID:

Date Extracted: 6/21/89 Extraction:(SepF/Cont/Sonc) S

Date Analyzed: 6/22/89 Time Analyzed: 4:4

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	2-SW-4		B0831	6/22/89
2	2-SW-5		B0832	6/22/89
3	2-SW-6		B0833	6/22/89
4	2-SW-8		B0834	6/22/89
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Lab File ID: B0835 Lab Sample ID:

Date Extracted: 6/20/89 Extraction:(SepF/Cont/Sonc)

Date Analyzed: 6/22/89 Time Analyzed: 8 2

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	2-SW-1		B0836	6/22/89
2	2-SW-2		B0837	6/22/89
3	2-SW-3		B0838	6/22/89
4				
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COMMENTS:

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0855 Lab Sample ID:

Date Extracted: 6/22/89 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 6/23/89 Time Analyzed: 1:43

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	3BH2SS1		B0856	6/23/89
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Lab File ID: B0848 Lab Sample ID:

Date Extracted: 6/21/89 Extraction:(SepF/Cont/Sonc)

Date Analyzed: 6/22/89 Time Analyzed: 20[illegible]1

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	6BH1SS1		B0849	6/22/89
2	6BH1SS2		B0850	6/22/89
3	6BH1SS3		B0851	6/22/89
4	2-SD-4		B0852	6/22/89
5	2-SD-5		B0853	6/23/89
6	2-SD-6		B0854	6/23/89
7				
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COMMENTS:

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0898 Lab Sample ID:

Date Extracted: 6/24/89 Extraction:(SepF/Cont/Sonc) SO

Date Analyzed: 6/25/89 Time Analyzed: 21:35

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	6MW1GW1		B0899	6/25/89
2	6TAPWTR		B0900	6/25/89
3	2MW1GW1		B0901	6/25/89
4	2RNSBLK		B0902	6/26/89
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COMMENTS:

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0897 Lab Sample ID:

Date Extracted: 6/24/89 Extraction: (SepF/Cont/Sonc

Date Analyzed: 6/25/89 Time Analyzed: 20[illegible]4

Matrix: (soil/water) SOIL Level: (low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	6BH1SMS		B0905	6/26/89
2	6BH1SMSD		B0906	6/26/89
3	5BH1SS1		B0903	6/26/89
4	5BH1SS2		B0904	6/26/89
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0931 Lab Sample ID:

Date Extracted: 6/23/89 Extraction:(SepF/Cont/Sonc) SEPF

Date Analyzed: 7/ 2/89 Time Analyzed: 23:21

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	1RNSBLK		B0932	7/ 3/89
2	1FLDBLK		B0933	7/ 3/89
3	2-SW-MS		B0934	7/ 3/89
4	6-SW-MSD		B0935	7/ 3/89
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0928 Lab Sample ID:

Date Extracted: 6/30/89 Extraction: (SepF/Cont/Sonc)

Date Analyzed: 7/ 2/89 Time Analyzed: 21[illegible]0

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	1M206GW1		B0929	7/ 2/89
2	1M218GW1		B0930	7/ 2/89
3				
4				
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COMMENTS:

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SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0944 Lab Sample ID:

Date Extracted: 6/27/89 Extraction:(SepF/Cont/Sonc) SEPF

Date Analyzed: 7/ 3/89 Time Analyzed: 8:42

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	SMW1GW1		B0946	7/ 3/89
2	SRNSBLK		B0947	7/ 3/89
3				
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COMMENTS:

page 1 of 1

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: B0945 Lab Sample ID:

Date Extracted: 6/27/89 Extraction:(SepF/Cont/Sonc) SEP

Date Analyzed: 7/ 3/89 Time Analyzed: 9:27

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7002VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	3MW1GW1		B0948	7/ 3/89
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COMMENTS:

PESTICIDE METHOD BLANK SUMMARY

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: _____ Case No.: _____ SAS No.: ------ SDG No.: ------

Lab Sample ID: Blank Extraction Lab File ID: ----------

Matrix: (soil/water) Soil Level: (low/med) Low

Date Extracted: 6/21/89 Extraction: (SepF/Cont/Sonc) Sonc

Date Analyzed (1): 6/27/89 Date Analyzed (2): ---------

Time Analyzed (1): 02:13:16 Time Analyzed (2): ---------

Instrument ID (2): # Instrument ID (2): ---------

GC Column ID (1): 2250/2401 GC Column ID (1): ---------

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	1 ---	PCB Spike QC	6/27/89	------
02	---	Matrix Spike	6/27/89	------
03	---	Matrix Spike Dup	6/27/89	------
04	LANGB-4-BH3-SS1	6705	6/27/89	------
05	LANGB-4-BH3-SS2	6706	6/27/89	------
06	LANGB-4-BH4-SS1	6707	6/27/89	------
07	LANGB-4-BH2-SS1	6708	6/27/89	------
08	LANGB-4-BH2-SS2	6709	6/27/89	------
09	LANGB-4-BH1-SS1	6710	6/27/89	------
10	LANGB-4-BH1-SS2	6711	6/27/89	------
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COMMENTS: _____

VOLATILE METHOD BLANK SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Lab File ID: A1585 Lab Sample ID:

Date Analyzed: 6/20/89 Time Analyzed: 16:3

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7001VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	2-SD-1		A1586	17:17
2	2-SD-MS		A1587	18:15
3	2-SD-MSD		A1588	19:01
4	2-SD-7		A1589	19:45
5	6BH1SS1		A1590	21:13
6	2-SW-4		A1591	21:58
7	2-SW-5		A1592	22:43
8	2-SW-8		A1594	0:13
9	6BH1SS2		A1595	0:58
10	6BH1SS3		A1596	1:42
11				
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COMMENTS:

VOLATILE METHOD BLANK SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Lab File ID: A1572 Lab Sample ID:

Date Analyzed: 6/19/89 Time Analyzed: 22:32

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7001VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	2-SW-1		A1573	23:43
2	2-SW-MS		A1574	0:27
3	2-SW-MSD		A1575	1:12
4	2-SW-2		A1576	1:57
5	2-SW-3		A1577	2:41
6	2-SW-7		A1578	3:26
7	2-SD-3		A1580	4:55
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Lab File ID: A1600 Lab Sample ID:

Date Analyzed: 6/21/89 Time Analyzed: 18[illegible]1

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7001VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	2-SD-4		A1603	20:28
2	2-SD-5		A1604	21:13
3	3BH3SS2		A1609	0:57
4				
5				
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COMMENTS:

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

VBLK01

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1613

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 6/22/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	10.		U
74-83-9	Bromomethane	10.		U
75-01-4	Vinyl Chloride	10.		U
75-00-3	Chloroethane	10.		U
75-09-2	Methylene Chloride	10.		
67-64-1	Acetone	10.		U
75-15-0	Carbon Disulfide	5.		U
75-35-4	1,1-Dichloroethene	5.		U
75-34-3	1,1-Dichloroethane	5.		U
540-59-0	1,2-Dichloroethene (total)	5.		U
67-66-3	Chloroform	5.		U
107-06-2	1,2-Dichloroethane	5.		U
78-93-3	2-Butanone	10.		U
71-55-6	1,1,1-Trichloroethane	5.		U
56-23-5	Carbon Tetrachloride	5.		U
108-05-4	Vinyl Acetate	10.		U
75-27-4	Bromodichloromethane	5.		U
78-87-5	1,2-Dichloropropane	5.		U
10061-01-5	cis-1,3-Dichloropropene	5.		U
79-01-6	Trichloroethene	5.		U
124-48-1	Dibromochloromethane	5.		U
79-00-5	1,1,2-Trichloroethane	5.		U
71-43-2	Benzene	5.		U
10061-02-6	trans-1,3-Dichloropropene	5.		U
75-25-2	Bromoform	5.		U
108-10-1	4-Methyl-2-Pentanone	10.		U
591-78-6	2-Hexanone	10.		U
127-18-4	Tetrachloroethene	5.		U
79-34-5	1,1,2,2-Tetrachloroethane	5.		U
108-88-3	Toluene	5.		U
108-90-7	Chlorobenzene	5.		U
100-41-4	Ethylbenzene	5.		U
100-42-5	Styrene	5.		U
1330-20-7	Xylene (total)	5.		U

VOLATILE METHOD BLANK SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Lab File ID: A1613 Lab Sample ID:

Date Analyzed: 6/22/89 Time Analyzed: 18:0

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7001VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	TB 9/19		A1614	18:51
2	2-SW-6		A1615	19:36
3	2-SD-6		A1616	20:21
4	3BH1SS1		A1620	0:10
5	3BH1SS3		A1622	1:40
6	3BH2SS2		A1623	2:24
7	3BH2SS1		A1624	3:09
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COMMENTS:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

VBLK01

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1628

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 6/23/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	7.	
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6

Lab File ID: A1628 Lab Sample ID:

Date Analyzed: 6/23/89 Time Analyzed: 1

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 7001VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	TB6/19-2		A1629	19:21
2	1RINSATE		A1630	20:06
3	1FIELDBL		A1631	20:51
4	1M214GW1		A1632	21:36
5	1M216GW1		A1633	22:20
6	1M206GW1		A1635	23:50
7	1M218GW1		A1636	0:34
8	1M210GW1		A1637	1:19
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COMMENTS:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

VBLK01

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1645

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 6/24/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	6.	
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Lab File ID: A1645 Lab Sample ID:

Date Analyzed: 6/24/89 Time Analyzed: 17:

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 7001VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	S2TRPBLK		A1646	18:14
2	6TAP		A1648	19:44
3	6TAP MS		A1649	20:28
4	6TAP MSD		A1650	21:13
5	2MW1GW1		A1651	21:58
6	6MW1GW1		A1652	22:43
7	3BH4SS1		A1655	0:56
8	3BH3SS1		A1656	1:41
9	3BH1SS2		A1657	2:26
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COMMENTS:

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE: VBLK01

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1661

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec:100. Date Analyzed: 6/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Lab File ID: A1661 Lab Sample ID:

Date Analyzed: 6/26/89 Time Analyzed: 8[illegible]0

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: 7001VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	TBLK6/24		A1662	8:54
2	5RBK6/24		A1663	9:38
3	5MW1GW1		A1664	10:23
4	1M1203G1		A1667	12:38
5	5BH1SS1		A1669	14:38
6	5BH1SS2		A1670	15:23
7	3MW1GW1		A1671	16:08
8	1M209GW1		A1672	16:53
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COMMENTS:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

VBLK01

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1676

Level: (low/med) LOW Date Received: 0/ 0/ 0

% Moisture: not dec.100. Date Analyzed: 6/29/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Lab File ID: A1676 Lab Sample ID:

Date Analyzed: 6/29/89 Time Analyzed: 1

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 7001VO

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
1	1M204GW1		A1677	14:26
2	2RBK6/23		A1678	15:11
3				
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COMMENTS:

APPENDIX D8
SUMMARY OF QC SAMPLE ANALYTICAL RESULTS

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR FIELD QUALITY CONTROL SAMPLES
LINCOLN AIR NATIONAL GUARD BASE, NEBRASKA

ES Identifier	Laboratory ID #	Volatiles E624		Semivolatiles E625	Metals (SW6010)		Mercury (SW7471)	Common Anions (A429)		Total Petroleum Hydrocarbons (E418.1)
--Trip Blanks										
LANGB-1-Trip Blank	TB 6/19-2	ND		NR	NR		NR	NR		NR
LANGB-2-Trip Blank	S2TRPBLK	ND		NR	NR		NR	NR		NR
TRIP BLANK	TB 6/19	ND		NR	NR		NR	NR		NR
LANGB-5-Trip Blank	TBLK 6/24	ND		NR	NR		NR	NR		NR
--Field Blanks										
LANGB-1-Field Blank	1 FIELDBL	ND		ND	ND		<0.0005	ND		<1.0
--Rinseate Blanks										
LANGB-1-Rinseate Blank	1 RINSATE	ND		ND	ND		<0.0005	ND		<1.0
LANGB-2-Rinseate Blank	2RBK 6/23	Methylene Chloride	71	ND	ND		<0.0005	ND		<1.0
LANGB-5-Rinseate Blank	5RBK 6/24	ND		ND	ND		<0.0005	ND		<1.0
LANGB-2-SW8	2SW8	ND		ND	ND		<0.0005	NR		<1.0
--Sources Water Blanks										
LANGB-6-Tap Water	6TAP 6/23	Chloroform	5J	ND	Arsenic	0.004	<0.0005	Flouride	0.70	<1.0
		Bromodichloromethane	7		Barium	0.110		Chloride	16.1	
		Dibromochloromethane	7		Selenium	0.003		Nitrate	2.3	
								Sulfate	94.3	

TABLE 5
SUMMARY OF ANALYTICAL RESULTS FOR FIELD DUPLICATE SAMPLES
LINCOLN AIR NATIONAL GUARD BASE, NEBRASKA

SAMPLE ID	DUPLICATE ID	PARAMETER	RESULT 1	RESULT 2	AVERAGE	RELATIVE DIFFERENCE (%)
LANGB-1-MW0206	LANGB-1-MW0218	Volatiles	ND	ND	ND	NC
		Semivolatiles	ND	ND	ND	NC
		Total Petroleum Hydrocarbons	<1.0	<1.0	<1.0	NC
		Fluoride	0.54	0.55	0.545	1.8
		Chloride	96	92	93.8	4.3
		Nitrate	8.7	8.6	8.65	1.2
		Sulfate	70	69	69.3	1.4
		Arsenic	0.006	0.005	0.0055	18
		Barium	0.335	0.346	0.3405	3.2
LANGB-2-SW3	LANGB-2-SW7	Volatiles	ND	ND	ND	NC
		Semivolatiles	ND	ND	ND	NC
		Total Petroleum Hydrocarbons	<1.0	1.3	NC	NC
		Fluoride	0.41	0.41	0.41	0.0
		Chloride	22	21	21.15	5.2
		Sulfate	18	18	18.1	<1
		Arsenic	0.017	0.014	0.0155	19
		Barium	0.037	0.049	0.043	28
		Selenium	0.005	0.002	0.0035	86
LANGB-2-SD3	LANGB-2-SD7	Volatiles	ND	ND	ND	NC
		Bis(2-ethylhexyl) Phthalate	870	860	865	1.2
		Total Petroleum Hydrocarbons	335	489	412	37
		Fluoride	65	57	61.2	13
		Chloride	517	493	505.3	4.7
		Sulfate	8740	3513	6126	85
		Arsenic	2.5	2.9	2.7	15
		Barium	119	103	111	14
		Cadmium	0.4	0.3	0.35	29
		Chromium	9.7	9.3	9.5	4.2
		Lead	9.7	15	12.55	45
		Mercury	0.048	0.038	0.043	23
		Selenium	0.1	0.4	0.25	120

TABLE 5

SUMMARY OF ANALYTICAL RESULTS FOR FIELD DUPLICATE SAMPLES

LINCOLN AIR NATIONAL GUARD BASE, NEBRASKA

SAMPLE ID	DUPLICATE ID	PARAMETER	RESULT 1	RESULT 2	AVERAGE	RELATIVE DIFFERENCE (%)
LANGB-3-BH2-SS1	LANGB-3-BH4-SS1	Volatiles	ND	ND	ND	NC
		Semivolatiles	ND	ND	ND	NC
		Total Petroleum Hydrocarbons	<50	113	NC	NC
		Fluoride	74	51	62.3	37
		Chloride	72	43	57.3	50
		Nitrite	12	ND	NC	NC
		Nitrate	108	132	119.8	20
		Sulfate	290	143	216.6	68
		Arsenic	4.4	5.8	5.10	27
		Barium	199	204	201.5	2.5
		Cadmium	0.4	0.4	0.40	0.0
		Chromium	24	25	24.5	4.1
		Lead	9.2	9.9	9.55	7.3
		Mercury	0.030	0.039	0.0345	26
		Selenium	ND	0.3	NC	NC
		Silver	0.2	0.2	0.2	0.0
LANGB-4-BH1-SS2	LANGB-4-BH4-SS1	Volatiles	NR	NR	NC	NC
		Semivolatiles	NR	NR	NC	NC
		Total Petroleum Hydrocarbons	75	58	66.3	26
		Pesticides/PCB's	ND	ND	ND	NC
		Fluoride	83	87	84.8	4.7
		Chloride	835	47	441	179
		Nitrate	319	36	178	159
		Sulfate	803	560	682	36
		Arsenic	4.1	3.4	3.75	19
		Barium	180	190	185	5.4
		Cadmium	0.2	0.2	0.2	0.0
		Chromium	22	5.0	13.5	126
		Lead	5.8	6.2	6.0	6.7
		Mercury	0.022	0.011	0.0165	67

APPENDIX D9
DATA VALIDATION SUMMARY

DATA VALIDATION SUMMARY
155th AIR REFUELING GROUP
NEBRASKA AIR NATIONAL GUARD BASE
LINCOLN MUNICIPAL AIRPORT
LINCOLN, NEBRASKA

INTRODUCTION

A total of 46 field samples, including 20 soil samples, 6 stream sediment samples, 12 groundwater samples, and 8 surface water samples were collected between June 19 and June 26, 1989, at the Nebraska Air National Guard Base (ANGB) in Lincoln, Nebraska. Samples were packed in ice, shipped to the Harris Environmental Technologies, Inc. laboratory, and selectively analyzed by the methods indicated for volatile organics (EPA624-CLPM), semivolatile organics (EPA625-CLPM), polychlorinated biphenyl (PCB) compounds (SW8080), metals (SW3010/3020, SW3050; SW6010/7000), anions (SMA429), and total recoverable petroleum hydrocarbons (EPA418.1). The specific quality control (QC) criteria associated with each of the listed analytical methods were used to validate each class of parameters for each analytical matrix.

The analytical data were evaluated in accordance with the Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (Oak Ridge Gaseous Diffusion Plant, 1988) and the quality assurance section of the Nebraska ANGB site inspection project work plan (Engineering-Science, Inc., 1989). Laboratory QC data were reviewed for HAZWRAP Level C validation, and affected associated sample data were validated and coded with quality indicator flags. Specific sample analytes traceable to QC violations were validated as estimated (flagged "J") or unusable (flagged "R"), based upon

the severity of the QC violation. The following sections describe specific data validation procedures and results.

GC/MS ANALYSIS

Gas chromatography/mass spectroscopy (GC/MS) analyses were performed using U.S. Environmental Protection Agency (EPA) analytical methods modified for the Contract Laboratory Program (CLP). The CLP-modified EPA methods are denoted with the EPA number followed by the CLP method (CLPM) suffix.

Water, soil, and sediment matrix samples were analyzed for volatile and semivolatile organic compounds using methods EPA624-CLPM and EPA 625-CLPM, respectively. Laboratory QC data for each method were reviewed for matrix spike recovery, duplicate spike relative percent difference (RPD), surrogate spike recoveries, blank contamination, instrument tuning and calibration, and internal standard area count and retention time stability. In general, only exceptions to QC criteria are noted. All other QC criteria are considered valid. Laboratory data QC violations resulted in the flagging of affected groups of analytes as either estimated but valid values, or as unusable invalid values.

VOLATILE ORGANICS

Contract-Required Quantitation Limit (CRQL) Value Deviations from Protocol

Samples 3-BH1-SS2, 3-BH3-SS1, 3-BH4-SS1, 5-BH1-SS1, and 5-BH1-SS2 did not meet the contractual detection limit criteria for all volatile target analytes. The samples were analyzed using a sample size of 1 gram instead of the required 5-gram amount. Samples were then reported with a dilution factor of either 5.00 or 1.00. No target analytes were detected in these samples. A case narrative justifying the reasons for effective sample dilution when target analytes were not detected was not provided.

Calibration and Method Blank Deviations From Protocol

A separate calibration curve was not performed for the heated purge-and-trap method used to analyze low-level soil matrix samples, in contrast to the ambient purge-and-trap method used to analyze water matrix samples. This could have resulted in biased results (low) for soil matrix method blank and field sample analyte concentrations. An inspection of the minimum relative response factor (RRF) data did not reflect any extremely low (<0.050) RRF values which would impact analyte concentration bias in the associated soil sample results. The majority of the analyte RRF values were greater than 0.600; the exceptions were 1,1,2-trichloroethane and trans-1,3-dichloropropene, which were reported at RRF values greater than 0.360 and 0.380 respectively. These analytes characteristically display low RRF values in contrast to the other target analytes. Additionally, instrument stability was demonstrated for the low RRF-value analytes, as each respective percent relative standard deviation and percent difference value was less than 10 percent.

Calibration-check compound (CCC) and system performance-check compound (SPCC) for all initial and continuing calibrations met the CLP criteria requirements.

A water method blank was used for both the water and soil matrix samples in this investigation. Although water is routinely used as a suitable matrix for soil method blank samples, the water matrix sample used as the soil matrix blank should have been processed through a heated purge-and-trap device. Possible adverse effects to the validity of the data are described in the paragraph above which discusses the differences in purge-and-trap techniques for low-level water and soil matrix samples.

Blank Contamination Results

Methylene Chloride Contamination in Field and Method Blanks

Methylene chloride contamination on the order of 6 to 13 micrograms per liter (μg/L) was present in all method blanks except lab file number A1676. Methylene chloride was not detected in any field sample with the exception of the rinseate blank 2RB6/23, which displayed high contamination at 71 μg/L. The method blank (A1676) associated with sample 2RB6/23 reported methylene chloride as undetected at 5U μg/L. For samples which were shipped in the same cooler as sample 2RB6/23 (S2TRPBLK, 2-MW1-GW1) or collected on the same day as sample 2RB6/23 (5-BH1-SS1, 5-BH1-SS2, 6-MW1-GW1, 6TAP6/23) methylene chloride was reported as undetected. Inspection of the analytical analysis sequence and resultant concentration of methylene chloride in samples analyzed prior to sample 2RB6/23 confirmed that the methylene chloride presence could not be attributed to GC column carryover. It is therefore suspected that the methylene chloride contamination present in the rinseate blank sample 2RB6/23 is attributable to either a contaminated rinseate source water or, more likely, a contaminated sample bottle provided by Harris Environmental Technologies, Inc. An inspection of the documentation for the source water purity, in addition to bottle-blanks control number documentation, is warranted in order to determine the source of contamination. These items have not been provided by the laboratory. The high-level methylene chloride contamination was an isolated occurrence and demonstrated no adverse effects on the project data quality.

Low-Level Field Blank Contamination

Sample 6TAP6/23 contained low levels of chloroform (5J μg/L), bromodichloromethane (7 μg/L), and dibromocholormethane (7 ug/L). None of these analytes was detected in any of the field samples or in the laboratory method blank samples for this investigation.

Trip Blanks

Several volatile organic samples were shipped without an accompanying trip blank. The following samples were associated through shipment in the same cooler, which did not contain a trip blank:

Set 1- 1-MW0204-GW1, 1-MW0210-GW1, 1-MW0214-GW1, 1-MW0216-GW1, Field Blank 6/22;
Set 2- 1-MW0209-GW1, 1-MW1203-GW1;
Set 3- 3-MW1-GW1;
Set 4- 6-MW1-GW1;
Set 5- 2-SW1, 2-SW2;
Set 6- 2-SW3; and
Set 7- 2-SW7.

Volatile organic compounds were not detected in the environmental samples from Sets 3, 4, 5, 6, and 7. Therefore, the integrity of samples within these sets could not have been compromised as a result of violation of the trip blank requirements.

Both samples from Set 2 displayed high levels of volatile aromatic compounds in addition to non-detected volatile aromatic compounds. Both of these samples were from wells located in the near vicinity of recovery well RW-2, which contained free product. Therefore, high levels of dissolved volatile aromatic compounds were expected, and the integrity of the samples had not been compromised.

Volatile aromatic compounds were detected in two of the five samples from Set 1. All other samples within this set displayed non-detected volatile aromatic compound concentrations. One of the samples in which volatile aromatic compounds were not detected was the field blank. This indicates that the samples in which volatile aromatic compounds were detected were not compromised as a result of violation of the trip blank requirements.

GC/MS Tuning

Bromofluorobenzene (BFB) ion-abundance ratios met CLP criteria requirements. All BFB tunes were completed within the 12-hour criterion limit. All samples were associated with a tune.

Calibration

The Continuing Calibration Form VII-VOA for laboratory file number A1571 (Date: 6/19/89; 21:47 hours; Instrument: 7001VO) was missing from the supplied data package. Consequently, the samples analyzed under this calibration [VBLK01 (FILE ID A1572), 2-SW-1, 2-SW-MS, 2-SW-MSD, 2-SW-2, 2-SW-3, 2-SW-7, and 2-SD-3] could not be validated for continuing calibration compound percent difference linearity or for system performance calibration compound minimum relative response factor stability criteria. All other initial and continuing CCC and SPCC compounds met the CLP criteria requirements.

Control Charts

Control charts with supporting data were submitted for QC blank spike surrogate recovery data. The mean and upper and lower warning control limits were calculated from the supporting data. The upper and lower action limits were not calculated. However, only nine spiked blank samples were used to calculate the control limits. If the laboratory does not have 20 points to use in setting control chart limits, the recommended EPA recovery values for the analytical method must be used.

A spike of 250 milligrams (mg) in 5 milliliters (ml) of blank water was used. The mean recovery values for toluene-d8, BFB, and dichloroethane-d4 were within the QC recovery limits required in the CLP organics statement of work (U.S. Environmental Protection Agency, 1988).

Miscellaneous Incorrectly-Documented Data

Sample 2-SD-1 was reported on two separate surrogate recovery Forms II-VOA-2, with differing recovery values for each surrogate analyte.

Sample 1-M209-GW1, analyzed on June 26, 1989, at 16:53 hours, was not reported on any of the Internal Standards Area Summary Forms VIII-VOA and could not therefore be validated for internal standards criteria.

Sample 2-SD-1 was incorrectly reported on Form VIII covering the 12-hour standard analyzed on June 19, 1989, at 21:47 hours. The BFB Tune Form V-VOA and Organics Analysis Data Sheet (OADS) Form I-VOA both indicate the sample was analyzed on June 20, 1989. Sample 2-SD-1 was correctly reported on the Form VIII-VOA covering the 12-hour standard analyzed on June 20, 1989, at 15:33 hours. However, the internal standards area count abundances and retention time data points do not match each sample 2-SD-1 reported on the two Forms VIII-VOA.

Sample TB 6/19 was incorrectly reported as sample TB 9/19 on Form VIII-VOA covering the 12-hour standard analyzed on June 22, 1989, at 17:22 hours.

SEMIVOLATILE ORGANICS

CRQL Value Deviations From Protocol

The laboratory used CRQLs for soil matrix samples, which were a factor of one-half of the method-established analyte quantitation limit values. The variance in analyte quantitation limit values could be a result of an undocumented deviation in methodology procedures. Gel-permeation chromatography (GPC) cleanup was not performed for any samples in this study. All water samples, including the method blanks, were reported as analyzed using a dilution

factor of 2.00 and sample volume of 1,000 ml. All soil samples were reported as analyzed using a dilution factor of 1.00 and sample weight of 30 grams. Percent moisture was used to calculate the soil matrix CRQL analyte values.

GC/MS Tuning

Decafluortriphenylphosphine (DFTPP) ion-abundance ratios met CLP criteria requirements. All DFTPP tunes were completed within the 12-hour criterion limit. All samples were associated with a tune.

Internal Standards Area Count Stability

The area count abundance of a given internal standard (IS) in each sample is utilized to quantify the concentration of each analyte in the group of associated target compounds, as listed in Table 1 (U.S. Environmental Protection Agency, 1988). Variation of the IS area count abundance outside of the established criteria impacts the accuracy of the concentration values. Minor deviation from the IS area count abundance criteria interval cause data concentrations to become validated as estimated but usable values. Extreme deviation from the IS area count abundance criteria interval demonstrates an indication that the analytical system is out of control and impacts the sample quantifications as unusable values.

Samples displayed IS area count abundance outside the factor of two, -50 percent to +100 percent, criteria limits in comparison to the IS area count abundance of the associated 12-hour continuing calibration standard. In each case where an internal standard compound is validated as outside of the criteria window, the group of analytes which are quantified using the specific internal standard (Table 1) is adversely affected.

TABLE 1
SEMIVOLATILE INTERNAL STANDARDS WITH CORRESPONDING TCL ANALYTES a/
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1,4-Dichlorobenzene-d4 (DCB)	Naphthalene-d8 (NPT)	Acenaphthene-d10 (ANT)	Phenanthrene-d10 (PHN)	Chrysene-d12 (CRY)	Perylene-d12 (PRY)
*Phenol	Nitrobenzene	Hexachlorocyclo-pentadiene	*4,6-Dinitro-2-methylphenol	Pyrene	Di-n-octyl Phthalate
bis (2-Chloroethyl) ether	Isophorone	*2,4,6-Trichloro-phenol	N-nitrosodi-phenylamine	Butylbenzyl Phthalate	Benzo(b)fluor-anthene
*2-Chlorophenol	*2-Nitrophenol	*2,4,5-Trichloro-phenol	1,2-Diphenylhy-drazine	3,3'-Dichloro-benzidine	Benzo(k)fluor-anthene
1,3-Dichlorobenzene	*2,4-Dimethyl-phenol	2-Chloronaphthalene	4-Bromophenyl Phenyl Ether	Benzo(a)-anthracene	Benzo(a)pyrene
1,4-Dichlorobenzene	Benzoic acid	2-Nitroaniline	Hexachloro-benzene	bis(2-ethylhexyl) Phthalate	Indeno(1,2,3-cd) pyrene
*Benzyl Alcohol	bis(2-Chloro-ethoxy)methane	Dimethyl Phthalate	*Pentachloro-phenol	Chrysene	Dibenz(a,h) anthracene
1,2-Dichlorobenzene	*2,4-Dichloro-phenol	Acenaphthylene	Phenanthrene	Terphenyl-d14 (Surr) b/	Benzo(g,h,i) perylene
*2-Methylphenol	1,2,4-Trichloro-benzene	3-Nitroaniline	Anthracene		
bis (2-Chloroiso-propyl)ether	Naphthalene	Acenaphthene	Di-n-butyl Phthalate		
*4-Methylphenol	4-Chloroaniline	*2,4-Dinitrophenol	Fluoranthene		
N-nitroso-Di-n-propylamine	Hexachloro-butadiene	*4-Nitrophenol			
Hexachloroethane	*4-Chloro-3-methylphenol	Dibenzofuran			
*2-Fluorophenol (Surr)	2-Methylnaphth-alene	2,4-Dinitrotoluene			
*Phenol-d6 (Surr)	Nitrobenzene-d5 (Surr)	2,6-Dinitrotoluene			
		Diethyl Phthalate			
		4-Chlorophenyl phenyl ether			
		Fluorene			
		4-Nitroaniline			
		2-Fluorobiphenyl (Surr)			
		*2,4,6-Tribromo Phenol (Surr)			

a/ TCL = target compound list
b/ Surr - surrogate compound
Source: U.S. Environmental Protection Agency, 1988.

deviation from the IS area count abundance criteria interval demonstrates an indication that the analytical system is out of control and impacts the sample quantifications as unusable values.

Samples displayed IS area count abundance outside the factor of two, -50 percent to +100 percent, criteria limits in comparison to the IS area count abundance of the associated 12-hour continuing calibration standard. In each case where an internal standard compound is validated as outside of the criteria window, the group of analytes which are quantified using the specific internal standard (Table 1) is adversely affected.

The following samples displayed IS area count abundance outside of the QC criteria. The analytes quantified from the affected IS (Table 1) for each sample listed below are considered as estimated but valid values (flagged "J"). Non-detects are considered as estimated elevated detection limits. The possibility of false negative detection is the resultant impact on the associated data.

		Internal Standard Area Count		Percent of 12-Hour Standard
Sample	IS Code	Sample	12-Hour Standard	
3-BH2-SS2	PRY	42632	87127	-51%
3-BH4-SS1	CRY	65765	150744	-56%
3-BH4-SS1	PRY	35456	87127	-59%
3-BH1-SS2	PRY	35527	87127	-59%
2-SD-3	CRY	69691	150744	-54%
2-SD-3	PRY	35444	87127	-59%

The following samples displayed IS area count abundances in extreme deviation from the QC criteria. The analytes quantified from the affected IS (Table 1) for each sample listed below are considered as unusable invalid values (flagged "R").

Matrix Spike/Duplicate

The RPD of 1,4-Dichlorobenzene in the water matrix spike and spike duplicate samples (2-SW-MS and 2-SW-MSD, respectively) exceeded the maximum allowable RPD criteria (28 percent) by 3 percent (31 percent). This analyte is validated as estimated (flagged "J") in the unspiked sample only (2-SW-1).

Surrogate Recovery

The samples listed below displayed surrogate recovery values outside of the allowable criteria range. The percent recovery value and percent recovery criterion interval are listed for each surrogate compound. The data, both detected analytes and non-detected analytes, are affected and validated as listed.

		Surrogate Percent Recovery		
Sample	SUR Code	Sample	Criteria	Data Validation
3-MW1-GW1	PHL	6	10- 94	All acid compounds are estimated.
3-MW1-GW1	2FP	6	21-100	
3-MW1-GW1	TBP	8	10-123	
BLANK 12	NBZ	2	35-114	All base/neutral compounds are estimated.
BLANK 12	FBP	1	43-116	
BLANK 12	TPH	31	33-141	
1MW0206GW1	PHL	0	10- 94	All acid compounds are invalid/unusable.
1MW0206GW1	2FP	0	21-100	
1MW0206GW1	TBP	0	10-123	
1MW0218GW1	NBZ	25	35-114	All base/neutral compounds are estimated.
1MW0218GW1	FBP	29	43-116	
1MW0218GW1	PHL	0	10- 94	All acid compounds are invalid/unusable.
1MW0218GW1	2FP	0	21-100	
1MW0218GW1	TBP	0	10-123	

All acid analytes in sample 3-MW1-GW1 are validated as estimated (flagged "J") biased low, because of low recovery in all three acid surrogate compounds. All base/neutral analytes in the samples analyzed under BLANK 12 (1-MW0206-GW1 and 1-MW0218-GW1) are

validated as estimated (flagged "J"), biased low, because of low recovery in all three base/neutral compounds. Acid compounds in sample 1-MW0206-GW1 are validated as unusable (flagged "R") because all three acid surrogate compounds displayed zero percent recovery. For sample 1-MW0218-GW1 all acid compounds are validated as estimated (flagged "J"), and all base/neutral compounds are validated as unusable (flagged "R") because of low recovery in two of three acid surrogate compounds and three of three base/neutral surrogate compounds, respectively.

Acid compounds are named acid or phenol (Table 1). A naming exception is benzol alcohol, which is an acid. All other compounds are classified as base/neutral.

Blank Contamination

Neither field nor method blanks were reported to contain any semivolatile target analytes.

Control Charts

Laboratory control charts were not submitted for the semivolatile analyses.

Miscellaneous Incorrectly-Documented Data

Sample 3-BH3-SS1 analyzed on June 23, 1989, at 10:17 was not reported on any Internal Standards Area Summary Form VIII-SV, and therefore could not be validated for internal standards criteria.

Sample 3-BH3-SS1 was incorrectly identified as sample 3-BH2-SS1 on the Semivolatile Internal Standards Area Summary Forms VIII-SV-1&2 covering the 12-hour calibration on June 22, 1989, at 17:59 hours.

PCB COMPOUNDS

Soil, sediment, and water samples were analyzed for PCBs using method SW8080. PCB data could not be validated because necessary QC information was missing from the data package supplied. Sample results for the method extraction blanks were not provided. Inspection of the proper analytical sequence, in addition to retention time shift percent difference criteria, could not be evaluated for all samples because the Pesticides Evaluation Standards Summary Form VIII Pest-2 was not provided. Continuing calibration factor percent difference (percent D) linearity for quantitation could not be evaluated because the Pesticides/PCBs Standard Summary Form IX Pest was not provided for the continuing calibration analyses for Aroclors 1016, 1221, 1232, 1254 and 1260. Continuing calibration percent D information was provided on Forms IX Pest for two separate analyses of Aroclor 1242 and one analysis of Aroclor 1248.

Aroclor 1242 was used as the surrogate and matrix spike compound with acceptable percent recovery and RPD values.

PETROLEUM HYDROCARBONS

Soil, sediment, and water samples were analyzed for petroleum hydrocarbons using EPA method 418.1. Petroleum hydrocarbon data could not be validated because necessary QC information was missing from the data package supplied. No information on blanks, spikes, standards, and instrument calibration, and no sample control chart were provided.

ANIONS

Soil, sediment, and water samples were analyzed for common anions using method SMA 429. Target anions included chloride, fluoride, sulfate, nitrite, and nitrate.

Both environmental and associated QC samples were reported with neither the time nor date of analysis. The only data submitted which contained the analysis dates were the calibration curve summary reports. Absence of necessary sample analysis dates prevented the validation of the anions data. However, the following observations which yield data-quality impressions were made during the attempted review process.

The technical holding time of the nitrite and nitrate anions appears to have been violated by several weeks. The technical analytical holding time for nitrite and nitrate ions without acid preservation is 48 hours from time of sample collection. This holding time can be extended to 14 days provided samples are preserved with acid at a pH of less than 2 at the time of collection. However, the data results must then be reported as total oxidized nitrogen (the sum of nitrite and nitrate). The laboratory reported nitrite and nitrate as separate quantities for all samples in this investigation. Samples were collected between June 19 and June 26, 1989. The calibration curves were analyzed between June 27 and July 7 for all target anions.

The technical analytical holding time for chloride, fluoride, and sulfate is 28 days where acid preservation is not allowed. Inspection of the chain-of-custody forms indicated that the anions samples were collected in one sample container from each location. Therefore, anion samples were not considered to be preserved at the time of collection. The holding-time criterion was met for chloride, fluoride, and sulfate.

Nitrite is an intermediate oxidation state of nitrogen, both in the oxidation of ammonia to nitrate and the reduction of nitrate. The nitrate values are estimated (flagged "J") at an unknown bias because not only nitrite, but also ammonia, can be oxidized to contribute to the nitrate population. Since ammonia was not measured, and both nitrite and nitrate analyses holding times were excessively violated, an approximation of bias cannot be made. Additionally, increased exposure time traditionally degrades chemical species. The former

argument would bias the reported nitrate concentration as high, while the latter would bias the reported nitrate concentration as low. Therefore, the resultant status of nitrate concentration can not be approximated. In contrast, the resultant impact of holding-time violation on all reported non-detected nitrite values is unusable data (flagged "R").

Quality control charts were plotted and submitted. However, control limits were not documented. Neither a warning limit of the mean (x) plus or minus ($\pm$) two standard deviations (SD) (x $\pm$2 SD), nor an action limit of x $\pm$3 SD were reported. Rather, spike recovery data were measured against what appeared to be an arbitrary 70 to 110-percent recovery range. In general terms, when no other means of recovery documentation can be found in the literature, and proper laboratory control charts are not kept, a 75 to 125-percent recovery criteria range is used to measure the data accuracy.

Several samples displayed recovery values outside of the 75 to 125-percent recovery general criteria range for the anion fluoride. Spike samples are listed with the percent recovery values in brackets. Affected samples include: 6-Tap Water (73.0 percent), 6-Tap Water-Dup (73.0 percent), 2-SW-3 (74.0 percent), 3-BH2-SS2 (71.0 percent) and 3-BH2-SS2 (72.5 percent). Because of low spike recovery and the absence of the dates of sample analyses, all reported fluoride values are validated as estimated (flagged "J").

In addition to low fluoride spike recovery, sample 2-SW-3-DUP also displayed low nitrite recovery of 71.0 percent. The RPD for nitrite in samples 2-SW-3 and 2-SW-3-DUP was 30 percent, which displayed poor laboratory precision. Duplicate samples were created in the laboratory from the environmental samples which were collected in the field.

All reported calibration curve correlation coefficients were greater than 0.995 for all target anions with the exception of chloride related to calibration curve number 7 (analyzed on July,

7, 1989), which displayed a value of 0.9944. The unknown samples analyzed under this curve are validated as estimated for chloride quantification (flagged "J").

INORGANICS

Samples were analyzed for the eight Resource Conservation and Recovery Act- (RCRA) listed metals using analytical methods from the EPA SW846 6010/7000 series. These metals include arsenic (As), barium (Ba), cadmium (Cd), chromium (Cr), lead (Pb), mercury (Hg), selenium (Se), and silver (Ag). Data were not validated against CLP QC criteria, therefore CLP laboratory flags were not assigned to the reported data on the Inorganic Analysis Data Sheet (IADS) Forms I-IN. However, CLP flags were assigned to the QC outliers on the Duplicates Forms IV - In and Standard Addition Results Forms VII-IN.

Many of the summary forms necessary to validate the data were not submitted by the laboratory. The missing QC information included the following:

- Documentation that the water matrix samples for dissolved metals analysis were filtered prior to preservation with nitric acid (HNO_3) upon receipt by the laboratory. All chain-of-custody (COC) reports which contained water matrix samples assigned to dissolved metals analysis were documented with instructions from the field for the laboratory to filter and acidify with HNO_3 upon receipt. Only one COC (sampling date 6/19/89) contained documentation by the sample custodian that filtering and addition of acid was completed.

- Initial calibration verification documentation for cadmium analyzed by graphite furnace AA - Form II (Part 1) - IN.

- All blanks QC data, initial calibration blank, continuing calibration blank, digestion blank, Form III-IN.

- All inductively-coupled plasma (ICP) spectroscopy interference check samples - Form IV-IN.

- All Post Digestion Spike Sample Recovery Form V (Part 2) - IN where applicable as determined by Form III-IN outliers.

- Documentation necessary to cross reference both digestion batches and instrument analysis sequence.

- Documentation to cross reference the specific instrument used to analyze each analyte for each sample and the respective instrument detection limits. One Form X - IN Instrument Detection Limits was provided. However, analytical instrument identification information was not supplied for each element analyzed.

Out-of-control flags were assigned to some of the QC data. Specifically, method of standard addition (MSA) correlation coefficients less than 0.995 were flagged (+) and duplicate analyses which were not within control limits were flagged (*). Continuing calibration percent recovery values which were outside the control limits were not flagged. Sample IADS Forms I-IN, were not flagged to indicate reported data results associated with deficient QC outliers.

Laboratory control charts contained reporting time and date rather than analysis time, date, and instrument information. Warning limits of x $\pm$2 SD and action limits of x $\pm$3 SD were not calculated from control data. Rather, it appears that arbitrary percent recovery values were measured for laboratory QC spike samples. It is not possible to match any given control blank with a specific date. This prevents a comparison between analytical results run on a certain date with the corresponding blank to determine if the instrument was in control on the date of the sample analysis and that corrective action was taken when appropriate.

The following data quality observations were made during the attempted review process.

Reporting Limits

The following table summarizes the reporting limits and chemical standard concentrations analyzed during the inorganic analyses for metals.

Analyte	Method Code	CRDL (µg/L)	IDL (µg/L)	IDL >CRDL	CRDL Std	Initial Cal Std	Continuing Cal Std (µg/L)	Reporting Limit Water (µg/L) (µg/L)	RL <IDL	Reporting Limit Soil (mg/Kg)
As	F	10	10		20	80	40	2	*	NR
Ba	P	200	10		100	2000	500	8	*	NR
Cd	F	5	2		NR	NR	4	2		0.1
Cr	P	10	35	*	100	2000	500	2	*	NR
Pb	F	3	5	*	20	100	40	5		NR
Hg	CV	0.2	0.5	*	1	20	5	0.5		0.025
Se	F	5	10	*	20	100	40	2	*	0.5
Ag	F	10	2		2	10	4	2		0.1

RL = reporting limit; µg/L = micrograms per liter; Std = standard; Cal = calibration; mg/Kg = millirams per kilogram; NR = Not Reported.

Based upon the laboratory-reported instrument detection limits (IDLs), inordinately low detection limits were reported for the non-detected results for elements As, Ba, Cr, and Se in the environmental samples. These elements were reported at concentration levels which were less than each respective IDL in the water matrix samples. The reporting limits for analytes in the water matrix samples should have been reported at concentrations no greater than each respective analyte IDL.

The IDL values should have been used along with the sample volume and weight to calculate the soil matrix reporting limits. Recalculation of the soil reporting limits using a factor of 100 ml per 1 gram sample in addition to the IDL values reported on Form X-IN yields elevated detection limits, at a factor of two times the reported limits, for the elements

Cd, Hg, Se, and Ag. The elements As, Ba, Cr, and Pb were reported as detected in all environmental samples. Additionally, blank sample results were not submitted by the laboratory. Therefore, a comparison of calculated soil matrix detection limits with laboratory detection limits could not be made for As, Ba, Cr, and Pb.

Reporting Limits Calculated From IDLs

Analyte	Water Matrix µg/L	Soil Matrix mg/Kg	Soil Net Increase Factor
As	10	1	NC
Ba	10	1	NC
Cd	2	0.2	2
Cr	35	3.5	NC
Pb	5	0.5	NC
Hg	0.5	0.05	2
Se	10	1	2
Ag	2	0.2	2

µg/L = micrograms per liter; mg/Kg = milligrams per kilogram; NC - Not Calculated.

All elements reported in water matrix samples as detected or non-detected at concentrations less than each respective IDL for the elements As, Ba, Cr, and Se are considered as estimated quantifications (flagged "J"). All elements reported in soil matrix samples reported as detected or non-detected at concentrations less than each respective reporting limit calculated from the laboratory reported IDL for the elements As, Ba, Cd, Cr, Pb, Hg, Se, and Ag are considered as estimated quantifications (flagged "J").

Holding Times

Digestion preparation and analysis dates were not reported for any of the samples submitted for metals analyses.

Environmental samples were collected for metals analyses beginning on June 19 and ending on June 26, 1989. The report date on the final data package presented by the laboratory was July 14, 1989. Based on this information and the assumption that the water matrix samples were acidified upon receipt by the laboratory, the allowable holding time criteria of six months for the elements As, Ba, Cd, Cr, Pb, Se, and Ag and 28 days for Hg have been met.

Initial Calibration Verification (ICV)

Interpretation of the data provided on the Initial and Continuing Calibration Verification Form II (Part 1) - IN, and the assumption that calibration blank requirements were met, indicate that the initial calibration standards met the acceptance criteria requirements. Standards were analyzed at one concentration level for the elements Ba and Cr, which were characterized by ICP. Standards were analyzed at three concentration levels for the elements As, Cd, Pb, Se, and Ag, which were characterized by graphite furnace atomic absorption (GFAA) spectroscopy. An additional assumption that the single concentration standard reported for Hg analysis represented the independent standard, which was run against the multicomponent concentration calibration curve, would indicate that Hg also met initial calibration acceptance criteria.

All reported ICV values were within 90 to 110 percent recovery.

Continuing Calibration Verification (CCV)

Calibration verification frequency of 10 percent or every two hours, whichever is more frequent, and at the end of the analytical run, could not be verified. Ba, Cr, and Hg values all fell within 90 to 110 percent recovery. As, Cd, Pb, Se, and Ag percent recovery values oscillated within 86 to 115 percent. Resultant impacts on the reported environmental data for

the elements As, Cd, Pb, Se, and Ag are estimated elevated detection limits for non-detected elements, and estimated quantification values for detected elements (flagged "J").

Method, Field, and Rinseate Blanks

No method blank information, consisting of initial calibration blanks, continuing calibration blanks, and digestion blanks, was supplied by the laboratory. Therefore possible method blank contamination contribution to the environmental samples could neither be assessed nor validated. However, no target elements were reported in any of the rinseate or field blanks which covered the water matrix samples. Rinseate blanks for soil samples were not collected.

Post-Digestion Spikes

The values for all target elements were within 75 to 125 percent recovery; therefore data were not required to be adversely validated for this QC criterion.

Duplicate Sample Analysis

The RPDs for duplicate sample analyses were outside the acceptance criteria for the target elements As, Cd, Cr, and Pb. Because analytical sequence cannot be determined from the reported data, all reported results for As, Cd, Cr, and Pb are considered as estimated quantifications (flagged "J").

Standard Addition Results

The elements As and Se were analyzed using MSA. All correlation coefficients were greater than the 0.995 criterion except the following:

Arsenic Results

Sample	Coefficient
LANGB-2-SD-1	0.988
LANGB-2-SD-3	0.992
LANGB-2-SD-7	0.993
LANGB-6-BH1-SS2	0.930
LANGB-6-BH1-SS3	0.982
LANGB-4-BH2-SS2	0.994
LANGB-2-SD-4	0.990
LANGB-2-SD-5	0.979
LANGB-2-SD-6	0.971
lANGB-2-SD-6DUP	0.965
LANGB-3-BH2-SS1DUP	0.993
LANGB-3-BH2-SS2	0.994
LANGB-3-BH4-SS1	0.970

Selenium Results

Sample	Coefficient
LANGB-2-SD-1	0.992
LANGB-2-SD-1DUP	0.961
LANGB-2-BH1-SS1	0.985
LANGB-6-BH1-SS2	0.991
LANGB-6-BH1-SS3	0.970
LANGB-6-BH1-SS3DUP	0.987
LANGB-4-BH3-SS1	0.985
LANGB-4-BH2-SS2	0.991
LANGB-4-BH1-SS2	0.963
LANGB-2-SD-4	0.987
LANGB-2-SD-5	0.991
LANGB-2-SD-6	0.993
LANGB-3-BH2-SS2	0.979
LANGB-5-BH1-SS-1DUP	0.976
LANGB-5-BH1-SS-2	0.971

Samples for which the MSA correlation coefficient was less than 0.995 for As and Se are validated as estimated values (flagged "J").

LANGB-4-BH2-SS2	0.994
LANGB-2-SD-4	0.990
LANGB-2-SD-5	0.979
LANGB-2-SD-6	0.971
lANGB-2-SD-6DUP	0.965
LANGB-3-BH2-SS1DUP	0.993
LANGB-3-BH2-SS2	0.994
LANGB-3-BH4-SS1	0.970

Selenium Results

Sample	Coefficient
LANGB-2-SD-1	0.992
LANGB-2-SD-1DUP	0.961
LANGB-2-BH1-SS1	0.985
LANGB-6-BH1-SS2	0.991
LANGB-6-BH1-SS3	0.970
LANGB-6-BH1-SS3DUP	0.987
LANGB-4-BH3-SS1	0.985
LANGB-4-BH2-SS2	0.991
LANGB-4-BH1-SS2	0.963
LANGB-2-SD-4	0.987
LANGB-2-SD-5	0.991
LANGB-2-SD-6	0.993
LANGB-3-BH2-SS2	0.979
LANGB-5-BH1-SS-1DUP	0.976
LANGB-5-BH1-SS-2	0.971

Samples for which the MSA correlation coefficient was less than 0.995 for As and Se are validated as estimated values (flagged "J").

REFERENCES

Engineering-Science, Inc. 1989. Final Site Inspection Work Plan, Revision 03, for Lincoln Air National Guard Base, Nebraska.

Oak Ridge Gaseous Diffusion Plant. 1988. Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data. Prepared for U.S. Department of Energy. DOE/HWP-65 HAZ-RAP-102-1. Oak Ridge, Tennessee.

U.S. Environmental Protection Agency. 1988. Contract Laboratory Program Statement of Work for Organic Analysis-Multi-media, Multi-concentration - 2/88. Washington, D.C.

APPENDIX E
ANALYTICAL RESULTS

APPENDIX E1
ANALYTICAL RESULTS SUMMARY

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 429. Anions in Environmental Water Sample

INORGANIC ANALYSIS DATA SHEET

HET Sample ID	E.E. Sample ID	Fluoride F^- (mg/L)	Chloride Cl^- (mg/L)	Nitrite NO_2^- (mg/L)	Nitrate $NO_3^=$ (mg/L)	Sulfate $SO_4^=$ (mg/L)
6603	LANGB-2-SW-1	0.74	68.0	<0.1	0.1	89.0
6604	LANGB-2-SW-2	1.19	175.5	<0.1	<0.1	137.2
6609	LANGB-2-SW-3	0.41	21.7	<0.1	<0.1	18.0
6613	LANGB-2-SW-7	0.41	20.6	<0.1	<0.1	18.1
6719	LANGB-2-SW-4	0.42	25.9	<0.1	0.3	45.4
6720	LANGB-2-SW-5	0.60	36.8	<0.1	2.7	158.8
6735	LANGB-2-SW-6	0.49	88.0	<0.1	2.4	19.2
6893	LANGB-1-MW1203-GW1	0.35	6.4	<0.1	<0.1	1.3
6894	LANGB-1-MW0209-GW1	1.03	33.6	<0.1	0.3	11.5
6895	LANGB-1-RINSATE BL	<0.05	<0.1	<0.1	<0.1	<0.1
6901	LANGB-1-MW0204-GW1	0.51	45.6	<0.1	1.7	30.8
6902	LANGB-1-MW0216-GW1	0.57	86.6	<0.1	11.2	51.2
6903	LANGB-1-MW0214-GW1	0.56	74.8	<0.1	5.2	63.8
6904	LANGB-1-MW0210-GW1	0.58	78.4	<0.1	19.2	45.2
6905	LANGB-1-Field BLAN	<0.05	<0.1	<0.1	<0.1	<0.1
6909	LANGB-1-MW0206-GW1	0.54	95.8	<0.1	8.7	69.8
6910	LANGB-1-MW0218-GW1	0.55	91.8	<0.1	8.6	68.8
6916	LANGB-6-TAP WATER	0.70	16.1	<0.1	2.3	94.3
6920	LANGB-2-MW1-GW1	0.52	47.4	<0.1	18.2	43.4
6921	-2-RINSATE BLANK	<0.05	<0.1	<0.1	<0.1	<0.1
6927	LANGB-5-MW1-GW1	1.00	32.0	<0.1	1.5	58.6
6928	-5-RINSATE BLANK	<0.05	<0.1	<0.1	<0.1	<0.1
6930	LANGB-3-MW1-GW1	0.73	100.4	<0.1	5.1	62.0
	D.L.*	0.05	0.1	0.1	0.1	0.1

*D.L. = Detection Limits

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: EPA SMA 375.2. Anions in Environmental Soil/Sediment

INORGANIC ANALYSIS DATA SHEET

HET Sample ID	E.E. Sample ID	Fluoride F^- (mg/Kg)	Chloride Cl^- (mg/Kg)	Nitrite NO_2^- (mg/Kg)	Nitrate $NO_3^=$ (mg/Kg)	Sulfate $SO_4^=$ (mg/Kg)
6627	LANGB-2-SD-1	68.5	529.6	<10.0	<10.0	4014.9
6628	LANGB-2-SD-3	65.1	517.1	<10.0	<10.0	8739.5
6629	LANGB-2-SD-7	57.2	493.4	<10.0	<10.0	3513.2
6705	LANGB-4-BH3-SS1	103.1	33.2	<10.0	47.0	621.7
6706	LANGB-4-BH3-SS2	49.6	15.7	<10.0	36.3	347.2
6707	LANGB-4-BH4-SS1	86.8	47.0	<10.0	36.1	560.2
6708	LANGB-4-BH2-SS1	72.4	108.0	<10.0	1232.2	1172.4
6709	LANGB-4-BH2-SS2	99.6	183.6	<10.0	1386.2	1151.7
6710	LANGB-4-BH1-SS1	152.3	637.2	<10.0	381.4	3774.4
6711	LANGB-4-BH1-SS2	82.8	835.2	<10.0	319.2	802.8
6714	LANGB-2-SD-4	75.0	531.4	<10.0	<10.0	8035.9
6731	LANGB-2-SD-5	60.7	166.5	<10.0	<10.0	3052.0
6732	LANGB-2-SD-6	44.2	383.8	<10.0	<10.0	2293.3
6741	LANGB-3-BH2-SS1	73.9	71.7	11.9	107.6	290.2
6742	LANGB-3-BH2-SS2	98.5	57.1	<10.0	17.9	988.4
6743	LANGB-3-BH4-SS1	50.6	42.9	<10.0	131.9	142.9
6744	LANGB-3-BH3-SS1	73.8	144.2	<10.0	986.5	534.2
6745	LANGB-3-BH3-SS2	53.2	<10.0	<10.0	81.5	98.0
6888	LANGB-3-BH1-SS-1	137.3	208.8	19.8	894.7	1657.3
6889	LANGB-3-BH1-SS-2	121.3	<10.0	<10.0	159.1	1308.2
6922	LANGB-5-BH1-SS-1	81.7	85.4	30.5	523.2	1157.3
6923	LANGB-5-BH1-SS-2	116.7	119.2	<10.0	<10.0	449.4
	D.L.*	10.0	10.0	10.0	10.0	10.0

*D.L. = Detection Limits

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: 418.1. Total Recoverable Petroleum Hydrocarbons (T.R.P.H.)

T.R.P.H. In Environmental Water Samples

H.E.T. Sample I.D.	Client Sample I.D.	Concentration (mg/L)
6601	LANGB-2-SW-1	1.6
6602	LANGB-2-SW-2	<1.0
6607	LANGB-2-SW-3	<1.0
6612	LANGB-2-SW-7	1.3
6721	LANGB-2-SW-4	<1.0
6722	LANGB-2-SW-5	<1.0
6729	LANGB-2-SW-6	<1.0
6730	LANGB-2-SW-8	<1.0
6893	LANGB-1-MW1203-GW1	91.4
6894	LANGB-1-MW0209-GW1	39.6
6895	LANGB-1-RINSATE BL	<1.0
6901	LANGB-1-MW0204-GW1	<1.0
6902	LANGB-1-MW0216-GW1	<1.0
6903	LANGB-1-MW0214-GW1	<1.0
6904	LANGB-1-MW0210-GW1	1.8
6905	LANGB-1-FIELD BLAN	<1.0
6909	LANGB-1-MW0206-GW1	<1.0
6910	LANGB-1-MW0218-GW1	<1.0
6915	LANGB-6-MW1-GW1	<1.0
6916	LANGB-6-TAP WATER	<1.0
6920	LANGB-2-MW1-GW1	1.8
6921	-2-RINSATE BLANK	<1.0
6927	LANGB-5-MW1-GW1	<1.0
6928	-5- RINSATE BLANK	<1.0
6930	LANGB-3-MW1-GW1	<1.0

*D.L.= 1.0

*D.L. = Detection Limit

HET STUDY NO.: 51312
CLIENT: Engineering-Science, Inc.
METHOD: 418.1. Total Recoverable Petroleum Hydrocarbons (T.R.P.H.

T.R.P.H. In Environmental Soils/Sediments

H.E.T. Sample I.D.	Client Sample I.D.	Concentration (mg/Kg)
6624	LANGB-2-SD-1	447.0
6625	LANGB-2-SD-3	335.0
6626	LANGB-2-SD-7	489.0
6699	LANGB-6-BH1-SS1	84.9
6700	LANGB-6-BH1-SS2	<50.0
6701	LANGB-6-BH1-SS3	84.7
6705	LANGB-4-BH3-SS1	51.8
6706	LANGB-4-BH3-SS2	75.5
6707	LANGB-4-BH4-SS1	57.6
6708	LANGB-4-BH2-SS1	74.8
6709	LANGB-4-BH2-SS2	<50.0
6710	LANGB-4-BH1-SS1	190.0
6711	LANGB-4-BH1-SS2	74.9
6713	LANGB-2-SD-4	879.3
6727	LANGB-2-SD-5	2910.0
6728	LANGB-2-SD-6	538.0
6888	LANGB-3-BH1-SS-1	75.8
6889	LANGB-3-BH1-SS-2	107.0
6741	LANGB-3-BH2-SS1	<50.00
6742	LANGB-3-BH2-SS2	113.0
6743	LANGB-3-BH4-SS1	87.1
6744	LANGB-3-BH3-SS1	52.7
6745	LANGB-3-BH3-SS2	<50.00
6922	LANGB-5-BH1-SS-1	162.0
6923	LANGB-5-BH1-SS-2	104.0
		*D.L.= 50.0

*D.L. = Detection Limit

APPENDIX E2

SITE 1 ANALYTICAL RESULTS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-MW0204-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6901

Level (low/med): Low Date Received: 6/22/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.013			
7440-39-3	Barium	.103			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: ----

Color After: ----- Clarity After: ----- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1M204W

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1677

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. Date Analyzed: 6/29/89

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-MW0206-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Water Lab Sample ID: 6909

Level (low/med): Low Date Received: 6/22/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.006			
7440-39-3	Barium	.335			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ---- Texture: -----

Color After: ----- Clarity After: ---- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

1A

EPA SA

VOLATILE ORGANICS ANALYSIS DATA SHEET

1M206

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1635

Level: (low/med) LOW Date Received: 6/2

% Moisture: not dec.100. Date Analyzed: 6/23

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO: 1M206GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0929

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/30/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 2/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

1M206GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0929

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/30/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 2/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-MW0209-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6894

Level (low/med): Low Date Received: 6/22/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.048			
7440-39-3	Barium	.220			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ------ Clarity Before: ---- Texture: -----

Color After: ------ Clarity After: ---- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

1M2090

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 0. (g/mL) ML Lab File ID: A1672

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. Date Analyzed: 6/26/89

Column: (pack/cap) PACK Dilution Factor: 25.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	250.	U
74-83-9	Bromomethane	250.	U
75-01-4	Vinyl Chloride	250.	U
75-00-3	Chloroethane	250.	U
75-09-2	Methylene Chloride	130.	U
67-64-1	Acetone	250.	U
75-15-0	Carbon Disulfide	130.	U
75-35-4	1,1-Dichloroethene	130.	U
75-34-3	1,1-Dichloroethane	130.	U
540-59-0	1,2-Dichloroethene (total)	130.	U
67-66-3	Chloroform	130.	U
107-06-2	1,2-Dichloroethane	130.	U
78-93-3	2-Butanone	250.	U
71-55-6	1,1,1-Trichloroethane	130.	U
56-23-5	Carbon Tetrachloride	130.	U
108-05-4	Vinyl Acetate	250.	U
75-27-4	Bromodichloromethane	130.	U
78-87-5	1,2-Dichloropropane	130.	U
10061-01-5	cis-1,3-Dichloropropene	130.	U
79-01-6	Trichloroethene	130.	U
124-48-1	Dibromochloromethane	130.	U
79-00-5	1,1,2-Trichloroethane	130.	U
71-43-2	Benzene	510.	
10061-02-6	trans-1,3-Dichloropropene	130.	U
75-25-2	Bromoform	130.	U
108-10-1	4-Methyl-2-Pentanone	250.	U
591-78-6	2-Hexanone	250.	U
127-18-4	Tetrachloroethene	130.	U
79-34-5	1,1,2,2-Tetrachloroethane	130.	U
108-88-3	Toluene	42.	J
108-90-7	Chlorobenzene	130.	U
100-41-4	Ethylbenzene	150.	
100-42-5	Styrene	130.	U
1330-20-7	Xylene (total)	800.	

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-MW0210-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6904

Level (low/med): Low Date Received: 6/22/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.007			
7440-39-3	Barium	.248			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.004			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ---- Texture: ----

Color After: ----- Clarity After: ---- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

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1A

EPA SA

VOLATILE ORGANICS ANALYSIS DATA SHEET

1M21C

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1637

Level: (low/med) LOW Date Received: 6/2

% Moisture: not dec.100. Date Analyzed: 6/24

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	J
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	J
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	J
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	J
78-87-5	1,2-Dichloropropane	5.	J
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	J
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	62.	
10061-02-6	trans-1,3-Dichloropropene	5.	J
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	J
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	J
108-90-7	Chlorobenzene	5.	J
100-41-4	Ethylbenzene	24.	
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	140.	

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-MW0214-GW

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6903

Level (low/med): Low Date Received: 6/22/89

% Solids: ____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.007			
7440-39-3	Barium	.139			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.017			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ____ Clarity Before: ____ Texture: ____

Color After: ____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SA

1M214

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1632

Level: (low/med) LOW Date Received: 6/2

% Moisture: not dec.100. Date Analyzed: 6/23

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	J
67-66-3	Chloroform	5.	J
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	J
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	J
78-87-5	1,2-Dichloropropane	5.	J
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	J
124-48-1	Dibromochloromethane	5.	J
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	J
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	J
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	J
108-90-7	Chlorobenzene	5.	J
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	J
1330-20-7	Xylene (total)	5.	J

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-MW0216-GW

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6902

Level (low/med): Low Date Received: 6/22/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.004			
7440-39-3	Barium	.144			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ---- Clarity Before: ---- Texture: ----

Color After: ---- Clarity After: ---- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE No.: 1M216GW1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1633

Level: (low/med) LOW Date Received: 6/22/89

% Moisture: not dec.100. Date Analyzed: 6/23/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	14.	
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	10.	

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-1-MW1203-C

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6893

Level (low/med): Low Date Received: 6/22/89

% Solids: ____

Concentration Units (ug/L or mg/kg dry weight): ____

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.038			
7440-39-3	Barium	.428			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ____ Clarity Before: ____ Texture: ____

Color After: ____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

1M1203G1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 0. (g/mL) ML Lab File ID: A1667

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec.100. Date Analyzed: 6/26/89

Column: (pack/cap) PACK Dilution Factor: 25.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	250.	U	
74-83-9	Bromomethane	250.	U	
75-01-4	Vinyl Chloride	250.	U	
75-00-3	Chloroethane	250.	U	
75-09-2	Methylene Chloride	130.	U	
67-64-1	Acetone	250.	U	
75-15-0	Carbon Disulfide	130.	U	
75-35-4	1,1-Dichloroethene	130.	U	
75-34-3	1,1-Dichloroethane	130.	U	
540-59-0	1,2-Dichloroethene (total)	130.	U	
67-66-3	Chloroform	130.	U	
107-06-2	1,2-Dichloroethane	130.	U	
78-93-3	2-Butanone	250.	U	
71-55-6	1,1,1-Trichloroethane	130.	U	
56-23-5	Carbon Tetrachloride	130.	U	
108-05-4	Vinyl Acetate	250.	U	
75-27-4	Bromodichloromethane	130.	U	
78-87-5	1,2-Dichloropropane	130.	U	
10061-01-5	cis-1,3-Dichloropropene	130.	U	
79-01-6	Trichloroethene	130.	U	
124-48-1	Dibromochloromethane	130.	U	
79-00-5	1,1,2-Trichloroethane	130.	U	
71-43-2	Benzene	610.		
10061-02-6	trans-1,3-Dichloropropene	130.	U	
75-25-2	Bromoform	130.	U	
108-10-1	4-Methyl-2-Pentanone	250.	U	
591-78-6	2-Hexanone	250.	U	
127-18-4	Tetrachloroethene	130.	U	
79-34-5	1,1,2,2-Tetrachloroethane	130.	U	
108-88-3	Toluene	130.	U	
108-90-7	Chlorobenzene	130.	U	
100-41-4	Ethylbenzene	1100.		
100-42-5	Styrene	130.	U	
1330-20-7	Xylene (total)	4600.		

APPENDIX E3
SITE 2 ANALYTICAL RESULTS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-SD-1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Sediment Lab Sample ID: 6627

Level (low/med): Low Date Received: 6/19/89

% Solids: -------

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.9			
7440-39-3	Barium	126			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.5			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	9.3			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	18.2			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.049			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

2-SD-1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1586

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec. 46. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	19.	U
74-83-9	Bromomethane	19.	U
75-01-4	Vinyl Chloride	19.	U
75-00-3	Chloroethane	19.	U
75-09-2	Methylene Chloride	9.	U
67-64-1	Acetone	19.	U
75-15-0	Carbon Disulfide	9.	U
75-35-4	1,1-Dichloroethene	9.	U
75-34-3	1,1-Dichloroethane	9.	U
540-59-0	1,2-Dichloroethene (total)	9.	U
67-66-3	Chloroform	9.	U
107-06-2	1,2-Dichloroethane	9.	U
78-93-3	2-Butanone	19.	U
71-55-6	1,1,1-Trichloroethane	9.	U
56-23-5	Carbon Tetrachloride	9.	U
108-05-4	Vinyl Acetate	19.	U
75-27-4	Bromodichloromethane	9.	U
78-87-5	1,2-Dichloropropane	9.	U
10061-01-5	cis-1,3-Dichloropropene	9.	U
79-01-6	Trichloroethene	9.	U
124-48-1	Dibromochloromethane	9.	U
79-00-5	1,1,2-Trichloroethane	9.	U
71-43-2	Benzene	9.	U
10061-02-6	trans-1,3-Dichloropropene	9.	U
75-25-2	Bromoform	9.	U
108-10-1	4-Methyl-2-Pentanone	19.	U
591-78-6	2-Hexanone	19.	U
127-18-4	Tetrachloroethene	9.	U
79-34-5	1,1,2,2-Tetrachloroethane	9.	U
108-88-3	Toluene	9.	U
108-90-7	Chlorobenzene	9.	U
100-41-4	Ethylbenzene	9.	U
100-42-5	Styrene	9.	U
1330-20-7	Xylene (total)	9.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0871

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec. 46. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	310.	U
111-44-4	bis(2-Chloroethyl)ether	310.	U
95-57-8	2-Chlorophenol	310.	U
541-73-1	1,3-Dichlorobenzene	310.	U
106-46-7	1,4-Dichlorobenzene	310.	U
100-51-6	Benzyl alcohol	310.	U
95-50-1	1,2-Dichlorobenzene	310.	U
95-48-7	2-Methylphenol	310.	U
108-60-1	bis(2-Chloroisopropyl)ether	310.	U
106-44-5	4-Methylphenol	310.	U
621-64-7	N-Nitroso-di-n-propylamine	310.	U
67-72-1	Hexachloroethane	310.	U
98-95-3	Nitrobenzene	310.	U
78-59-1	Isophorone	310.	U
88-75-5	2-Nitrophenol	310.	U
105-67-9	2,4-Dimethylphenol	310.	U
65-85-0	Benzoic acid	1500.	U
111-91-1	bis(2-Chloroethoxy)methane	310.	U
120-83-2	2,4-Dichlorophenol	310.	U
120-82-1	1,2,4-Trichlorobenzene	310.	U
91-20-3	Naphthalene	310.	U
106-47-8	4-Chloroaniline	310.	U
87-68-3	Hexachlorobutadiene	310.	U
59-50-7	4-Chloro-3-methylphenol	310.	U
91-57-6	2-Methylnaphthalene	310.	U
77-47-4	Hexachlorocyclopentadiene	310.	U
88-06-2	2,4,6-Trichlorophenol	310.	U
95-95-4	2,4,5-Trichlorophenol	1500.	U
91-58-7	2-Chloronaphthalene	310.	U
88-74-4	2-Nitroaniline	1500.	U
131-11-3	Dimethylphthalate	310.	U
208-96-8	Acenaphthylene	310.	U
606-20-2	2,6-Dinitrotoluene	310.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0871

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec. 46. dec. 0. Date Extracted: 6/22/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1500.	U
83-32-9	Acenaphthene	310.	U
51-28-5	2,4-Dinitrophenol	1500.	U
100-02-7	4-Nitrophenol	1500.	U
132-64-9	Dibenzofuran	310.	U
121-14-2	2,4-Dinitrotoluene	310.	U
84-66-2	Diethylphthalate	310.	U
7005-72-3	4-Chlorophenyl-phenylether	310.	U
86-73-7	Fluorene	310.	U
100-01-6	4-Nitroaniline	1500.	U
534-52-1	4,6-Dinitro-2-methylphenol	310.	U
86-30-6	N-Nitrosodiphenylamine	310.	U
101-55-3	4-Bromophenyl-phenylether	310.	U
118-74-1	Hexachlorobenzene	310.	U
87-86-5	Pentachlorophenol	1500.	U
85-01-8	Phenanthrene	1900.	
120-12-7	Anthracene	310.	U
84-74-2	Di-n-Butylphthalate	310.	U
206-44-0	Fluoranthene	2700.	
129-00-0	Pyrene	2000.	
85-68-7	Butylbenzylphthalate	310.	U
91-94-1	3,3'-Dichlorobenzidine	620.	U
56-55-3	Benzo(a)Anthracene	840.	
218-01-9	Chrysene	1300.	
117-81-7	Bis(2-Ethylhexyl)Phthalate	1300.	
117-84-0	Di-n-octylphthalate	310.	U
205-99-2	Benzo(b)fluoranthene	910.	
207-08-9	Benzo(k)fluoranthene	890.	
50-32-8	Benzo(a)Pyrene	840.	
193-39-5	Indeno(1,2,3-cd)Pyrene	310.	U
53-70-3	Dibenzo(a,h)Anthracene	310.	U
191-24-2	Benzo(g,h,i)Perylene	310.	U

(1) - Cannot be separated from diphenylamine

1/8

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

2-SD-3

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0872

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec. 49. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	330.	U
111-44-4	bis(2-Chloroethyl)ether	330.	U
95-57-8	2-Chlorophenol	330.	U
541-73-1	1,3-Dichlorobenzene	330.	U
106-46-7	1,4-Dichlorobenzene	330.	U
100-51-6	Benzyl alcohol	330.	U
95-50-1	1,2-Dichlorobenzene	330.	U
95-48-7	2-Methylphenol	330.	U
108-60-1	bis(2-Chloroisopropyl)ether	330.	U
106-44-5	4-Methylphenol	330.	U
621-64-7	N-Nitroso-di-n-propylamine	330.	U
67-72-1	Hexachloroethane	330.	U
98-95-3	Nitrobenzene	330.	U
78-59-1	Isophorone	330.	U
88-75-5	2-Nitrophenol	330.	U
105-67-9	2,4-Dimethylphenol	330.	U
65-85-0	Benzoic acid	1600.	U
111-91-1	bis(2-Chloroethoxy)methane	330.	U
120-83-2	2,4-Dichlorophenol	330.	U
120-82-1	1,2,4-Trichlorobenzene	330.	U
91-20-3	Naphthalene	330.	U
106-47-8	4-Chloroaniline	330.	U
87-68-3	Hexachlorobutadiene	330.	U
59-50-7	4-Chloro-3-methylphenol	330.	U
91-57-6	2-Methylnaphthalene	330.	U
77-47-4	Hexachlorocyclopentadiene	330.	U
88-06-2	2,4,6-Trichlorophenol	330.	U
95-95-4	2,4,5-Trichlorophenol	1600.	U
91-58-7	2-Chloronaphthalene	330.	U
88-74-4	2-Nitroaniline	1600.	U
131-11-3	Dimethylphthalate	330.	U
208-96-8	Acenaphthylene	330.	U
606-20-2	2,6-Dinitrotoluene	330.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-3

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0872

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec. 49. dec. 0. Date Extracted: 6/22/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1600.	U
83-32-9	Acenaphthene	330.	U
51-28-5	2,4-Dinitrophenol	1600.	U
100-02-7	4-Nitrophenol	1600.	U
132-64-9	Dibenzofuran	330.	U
121-14-2	2,4-Dinitrotoluene	330.	U
84-66-2	Diethylphthalate	330.	U
7005-72-3	4-Chlorophenyl-phenylether	330.	U
86-73-7	Fluorene	330.	U
100-01-6	4-Nitroaniline	1600.	U
534-52-1	4,6-Dinitro-2-methylphenol	330.	U
86-30-6	N-Nitrosodiphenylamine	330.	U
101-55-3	4-Bromophenyl-phenylether	330.	U
118-74-1	Hexachlorobenzene	330.	U
87-86-5	Pentachlorophenol	1600.	U
85-01-8	Phenanthrene	330.	U
120-12-7	Anthracene	330.	U
84-74-2	Di-n-Butylphthalate	330.	U
206-44-0	Fluoranthene	330.	U
129-00-0	Pyrene	330.	U
85-68-7	Butylbenzylphthalate	330.	U
91-94-1	3,3'-Dichlorobenzidine	660.	U
56-55-3	Benzo(a)Anthracene	330.	U
218-01-9	Chrysene	330.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	870.	
117-84-0	Di-n-octylphthalate	330.	U
205-99-2	Benzo(b)fluoranthene	330.	U
207-08-9	Benzo(k)fluoranthene	330.	U
50-32-8	Benzo(a)Pyrene	330.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	330.	U
53-70-3	Dibenzo(a,h)Anthracene	330.	U
191-24-2	Benzo(g,h,i)Perylene	330.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-SD-4

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Sediment Lab Sample ID: 6714

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.3			
7440-39-3	Barium	10.8			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.6			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	9			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	92			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.063			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.2			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-4

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1603

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 53. Date Analyzed: 6/21/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	21.	U
74-83-9	Bromomethane	21.	U
75-01-4	Vinyl Chloride	21.	U
75-00-3	Chloroethane	21.	U
75-09-2	Methylene Chloride	11.	U
67-64-1	Acetone	21.	U
75-15-0	Carbon Disulfide	11.	U
75-35-4	1,1-Dichloroethene	11.	U
75-34-3	1,1-Dichloroethane	11.	U
540-59-0	1,2-Dichloroethene (total)	11.	U
67-66-3	Chloroform	11.	U
107-06-2	1,2-Dichloroethane	11.	U
78-93-3	2-Butanone	21.	U
71-55-6	1,1,1-Trichloroethane	11.	U
56-23-5	Carbon Tetrachloride	11.	U
108-05-4	Vinyl Acetate	21.	U
75-27-4	Bromodichloromethane	11.	U
78-87-5	1,2-Dichloropropane	11.	U
10061-01-5	cis-1,3-Dichloropropene	11.	U
79-01-6	Trichloroethene	11.	U
124-48-1	Dibromochloromethane	11.	U
79-00-5	1,1,2-Trichloroethane	11.	U
71-43-2	Benzene	11.	U
10061-02-6	trans-1,3-Dichloropropene	11.	U
75-25-2	Bromoform	11.	U
108-10-1	4-Methyl-2-Pentanone	21.	U
591-78-6	2-Hexanone	21.	U
127-18-4	Tetrachloroethene	11.	U
79-34-5	1,1,2,2-Tetrachloroethane	11.	U
108-88-3	Toluene	11.	U
108-90-7	Chlorobenzene	11.	U
100-41-4	Ethylbenzene	11.	U
100-42-5	Styrene	11.	U
1330-20-7	Xylene (total)	11.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-4

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0852

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 53. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360.	U
111-44-4	bis(2-Chloroethyl)ether	360.	U
95-57-8	2-Chlorophenol	360.	U
541-73-1	1,3-Dichlorobenzene	360.	U
106-46-7	1,4-Dichlorobenzene	360.	U
100-51-6	Benzyl alcohol	360.	U
95-50-1	1,2-Dichlorobenzene	360.	U
95-48-7	2-Methylphenol	360.	U
108-60-1	bis(2-Chloroisopropyl)ether	360.	U
106-44-5	4-Methylphenol	360.	U
621-64-7	N-Nitroso-di-n-propylamine	360.	U
67-72-1	Hexachloroethane	360.	U
98-95-3	Nitrobenzene	360.	U
78-59-1	Isophorone	360.	U
88-75-5	2-Nitrophenol	360.	U
105-67-9	2,4-Dimethylphenol	360.	U
65-85-0	Benzoic acid	1800.	U
111-91-1	bis(2-Chloroethoxy)methane	360.	U
120-83-2	2,4-Dichlorophenol	360.	U
120-82-1	1,2,4-Trichlorobenzene	360.	U
91-20-3	Naphthalene	360.	U
106-47-8	4-Chloroaniline	360.	U
87-68-3	Hexachlorobutadiene	360.	U
59-50-7	4-Chloro-3-methylphenol	360.	U
91-57-6	2-Methylnaphthalene	360.	U
77-47-4	Hexachlorocyclopentadiene	360.	U
88-06-2	2,4,6-Trichlorophenol	360.	U
95-95-4	2,4,5-Trichlorophenol	1800.	U
91-58-7	2-Chloronaphthalene	360.	U
88-74-4	2-Nitroaniline	1800.	U
131-11-3	Dimethylphthalate	360.	U
208-96-8	Acenaphthylene	360.	U
606-20-2	2,6-Dinitrotoluene	360.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-4

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0852

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 53. dec. 0. Date Extracted: 6/21/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800.	U
83-32-9	Acenaphthene	360.	U
51-28-5	2,4-Dinitrophenol	1800.	U
100-02-7	4-Nitrophenol	1800.	U
132-64-9	Dibenzofuran	360.	U
121-14-2	2,4-Dinitrotoluene	360.	U
84-66-2	Diethylphthalate	360.	U
7005-72-3	4-Chlorophenyl-phenylether	360.	U
86-73-7	Fluorene	360.	U
100-01-6	4-Nitroaniline	1800.	U
534-52-1	4,6-Dinitro-2-methylphenol	360.	U
86-30-6	N-Nitrosodiphenylamine	360.	U
101-55-3	4-Bromophenyl-phenylether	360.	U
118-74-1	Hexachlorobenzene	360.	U
87-86-5	Pentachlorophenol	1800.	U
85-01-8	Phenanthrene	360.	U
120-12-7	Anthracene	360.	U
84-74-2	Di-n-Butylphthalate	360.	U
206-44-0	Fluoranthene	360.	U
129-00-0	Pyrene	360.	U
85-68-7	Butylbenzylphthalate	360.	U
91-94-1	3,3'-Dichlorobenzidine	710.	U
56-55-3	Benzo(a)Anthracene	360.	U
218-01-9	Chrysene	360.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	750.	
117-84-0	Di-n-octylphthalate	360.	U
205-99-2	Benzo(b)fluoranthene	360.	U
207-08-9	Benzo(k)fluoranthene	360.	U
50-32-8	Benzo(a)Pyrene	360.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	360.	U
53-70-3	Dibenzo(a,h)Anthracene	360.	U
191-24-2	Benzo(g,h,i)Perylene	360.	U

(1) - Cannot be separated from diphenylamine

1/8

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-SD-5

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Sediment Lab Sample ID: 6731

Level (low/med): Low Date Received: 6/20/89

% Solids: -----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	5.1			
7440-39-3	Barium	128			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	3.7			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	29			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	58			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.089			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	2.7			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

EPA SAMPLE

VOLATILE ORGANICS ANALYSIS DATA SHEET

2-SD-5

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1604

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 42. Date Analyzed: 6/21/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17.	U
74-83-9	Bromomethane	17.	U
75-01-4	Vinyl Chloride	17.	U
75-00-3	Chloroethane	17.	U
75-09-2	Methylene Chloride	9.	U
67-64-1	Acetone	17.	U
75-15-0	Carbon Disulfide	9.	U
75-35-4	1,1-Dichloroethene	9.	U
75-34-3	1,1-Dichloroethane	9.	U
540-59-0	1,2-Dichloroethene (total)	9.	U
67-66-3	Chloroform	9.	U
107-06-2	1,2-Dichloroethane	9.	U
78-93-3	2-Butanone	17.	U
71-55-6	1,1,1-Trichloroethane	9.	U
56-23-5	Carbon Tetrachloride	9.	U
108-05-4	Vinyl Acetate	17.	U
75-27-4	Bromodichloromethane	9.	U
78-87-5	1,2-Dichloropropane	9.	U
10061-01-5	cis-1,3-Dichloropropene	9.	U
79-01-6	Trichloroethene	9.	U
124-48-1	Dibromochloromethane	9.	U
79-00-5	1,1,2-Trichloroethane	9.	U
71-43-2	Benzene	9.	U
10061-02-6	trans-1,3-Dichloropropene	9.	U
75-25-2	Bromoform	9.	U
108-10-1	4-Methyl-2-Pentanone	17.	U
591-78-6	2-Hexanone	17.	U
127-18-4	Tetrachloroethene	9.	U
79-34-5	1,1,2,2-Tetrachloroethane	9.	U
108-88-3	Toluene	9.	U
108-90-7	Chlorobenzene	9.	U
100-41-4	Ethylbenzene	9.	U
100-42-5	Styrene	9.	U
1330-20-7	Xylene (total)	9.	U

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

2-SD-5

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0853

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 42. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	290.	U
111-44-4	bis(2-Chloroethyl)ether	290.	U
95-57-8	2-Chlorophenol	290.	U
541-73-1	1,3-Dichlorobenzene	290.	U
106-46-7	1,4-Dichlorobenzene	290.	U
100-51-6	Benzyl alcohol	290.	U
95-50-1	1,2-Dichlorobenzene	290.	U
95-48-7	2-Methylphenol	290.	U
108-60-1	bis(2-Chloroisopropyl)ether	290.	U
106-44-5	4-Methylphenol	290.	U
621-64-7	N-Nitroso-di-n-propylamine	290.	U
67-72-1	Hexachloroethane	290.	U
98-95-3	Nitrobenzene	290.	U
78-59-1	Isophorone	290.	U
88-75-5	2-Nitrophenol	290.	U
105-67-9	2,4-Dimethylphenol	290.	U
65-85-0	Benzoic acid	1400.	U
111-91-1	bis(2-Chloroethoxy)methane	290.	U
120-83-2	2,4-Dichlorophenol	290.	U
120-82-1	1,2,4-Trichlorobenzene	290.	U
91-20-3	Naphthalene	290.	U
106-47-8	4-Chloroaniline	290.	U
87-68-3	Hexachlorobutadiene	290.	U
59-50-7	4-Chloro-3-methylphenol	290.	U
91-57-6	2-Methylnaphthalene	290.	U
77-47-4	Hexachlorocyclopentadiene	290.	U
88-06-2	2,4,6-Trichlorophenol	290.	U
95-95-4	2,4,5-Trichlorophenol	1400.	U
91-58-7	2-Chloronaphthalene	290.	U
88-74-4	2-Nitroaniline	1400.	U
131-11-3	Dimethylphthalate	290.	U
208-96-8	Acenaphthylene	290.	U
606-20-2	2,6-Dinitrotoluene	290.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-5

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0853

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 42. dec. 0. Date Extracted: 6/21/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1400.	IU
83-32-9	Acenaphthene	290.	IU
51-28-5	2,4-Dinitrophenol	1400.	IU
100-02-7	4-Nitrophenol	1400.	IU
132-64-9	Dibenzofuran	290.	IU
121-14-2	2,4-Dinitrotoluene	290.	IU
84-66-2	Diethylphthalate	290.	IU
7005-72-3	4-Chlorophenyl-phenylether	290.	IU
86-73-7	Fluorene	290.	IU
100-01-6	4-Nitroaniline	1400.	IU
534-52-1	4,6-Dinitro-2-methylphenol	290.	IU
86-30-6	N-Nitrosodiphenylamine	290.	IU
101-55-3	4-Bromophenyl-phenylether	290.	IU
118-74-1	Hexachlorobenzene	290.	IU
87-86-5	Pentachlorophenol	1400.	IU
85-01-8	Phenanthrene	2500.	
120-12-7	Anthracene	290.	IU
84-74-2	Di-n-Butylphthalate	290.	IU
206-44-0	Fluoranthene	2800.	
129-00-0	Pyrene	2300.	
85-68-7	Butylbenzylphthalate	290.	IU
91-94-1	3,3'-Dichlorobenzidine	580.	IU
56-55-3	Benzo(a)Anthracene	900.	
218-01-9	Chrysene	1200.	
117-81-7	Bis(2-Ethylhexyl)Phthalate	2500.	
117-84-0	Di-n-octylphthalate	290.	IU
205-99-2	Benzo(b)fluoranthene	1100.	
207-08-9	Benzo(k)fluoranthene	660.	
50-32-8	Benzo(a)Pyrene	750.	
193-39-5	Indeno(1,2,3-cd)Pyrene	290.	IU
53-70-3	Dibenzo(a,h)Anthracene	290.	IU
191-24-2	Benzo(g,h,i)Perylene	290.	IU

(1) - Cannot be separated from diphenylamine

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-SD-6

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Sediment Lab Sample ID: 6732

Level (low/med): Low Date Received: 6/20/89

% Solids: -----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	2.3			
7440-39-3	Barium	127			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.7			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	17			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	12			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.035			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	1.0			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-6

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1616

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 34. Date Analyzed: 6/22/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15.	U
74-83-9	Bromomethane	15.	U
75-01-4	Vinyl Chloride	15.	U
75-00-3	Chloroethane	15.	U
75-09-2	Methylene Chloride	8.	U
67-64-1	Acetone	15.	U
75-15-0	Carbon Disulfide	8.	U
75-35-4	1,1-Dichloroethene	8.	U
75-34-3	1,1-Dichloroethane	8.	U
540-59-0	1,2-Dichloroethene (total)	8.	U
67-66-3	Chloroform	8.	U
107-06-2	1,2-Dichloroethane	8.	U
78-93-3	2-Butanone	15.	U
71-55-6	1,1,1-Trichloroethane	8.	U
56-23-5	Carbon Tetrachloride	8.	U
108-05-4	Vinyl Acetate	15.	U
75-27-4	Bromodichloromethane	8.	U
78-87-5	1,2-Dichloropropane	8.	U
10061-01-5	cis-1,3-Dichloropropene	8.	U
79-01-6	Trichloroethene	8.	U
124-48-1	Dibromochloromethane	8.	U
79-00-5	1,1,2-Trichloroethane	8.	U
71-43-2	Benzene	8.	U
10061-02-6	trans-1,3-Dichloropropene	8.	U
75-25-2	Bromoform	8.	U
108-10-1	4-Methyl-2-Pentanone	15.	U
591-78-6	2-Hexanone	15.	U
127-18-4	Tetrachloroethene	8.	U
79-34-5	1,1,2,2-Tetrachloroethane	8.	U
108-88-3	Toluene	45.	
108-90-7	Chlorobenzene	8.	U
100-41-4	Ethylbenzene	8.	U
100-42-5	Styrene	8.	U
1330-20-7	Xylene (total)	8.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

2-SD-6

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0854

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 34. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	250.	U
111-44-4	bis(2-Chloroethyl)ether	250.	U
95-57-8	2-Chlorophenol	250.	U
541-73-1	1,3-Dichlorobenzene	250.	U
106-46-7	1,4-Dichlorobenzene	250.	U
100-51-6	Benzyl alcohol	250.	U
95-50-1	1,2-Dichlorobenzene	250.	U
95-48-7	2-Methylphenol	250.	U
108-60-1	bis(2-Chloroisopropyl)ether	250.	U
106-44-5	4-Methylphenol	250.	U
621-64-7	N-Nitroso-di-n-propylamine	250.	U
67-72-1	Hexachloroethane	250.	U
98-95-3	Nitrobenzene	250.	U
78-59-1	Isophorone	250.	U
88-75-5	2-Nitrophenol	250.	U
105-67-9	2,4-Dimethylphenol	250.	U
65-85-0	Benzoic acid	1300.	U
111-91-1	bis(2-Chloroethoxy)methane	250.	U
120-83-2	2,4-Dichlorophenol	250.	U
120-82-1	1,2,4-Trichlorobenzene	250.	U
91-20-3	Naphthalene	250.	U
106-47-8	4-Chloroaniline	250.	U
87-68-3	Hexachlorobutadiene	250.	U
59-50-7	4-Chloro-3-methylphenol	250.	U
91-57-6	2-Methylnaphthalene	250.	U
77-47-4	Hexachlorocyclopentadiene	250.	U
88-06-2	2,4,6-Trichlorophenol	250.	U
95-95-4	2,4,5-Trichlorophenol	1300.	U
91-58-7	2-Chloronaphthalene	250.	U
88-74-4	2-Nitroaniline	1300.	U
131-11-3	Dimethylphthalate	250.	U
208-96-8	Acenaphthylene	250.	U
606-20-2	2,6-Dinitrotoluene	250.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SD-6

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0854

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 34. dec. 0. Date Extracted: 6/21/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1300.	U
83-32-9	Acenaphthene	250.	U
51-28-5	2,4-Dinitrophenol	1300.	U
100-02-7	4-Nitrophenol	1300.	U
132-64-9	Dibenzofuran	250.	U
121-14-2	2,4-Dinitrotoluene	250.	U
84-66-2	Diethylphthalate	250.	U
7005-72-3	4-Chlorophenyl-phenylether	250.	U
86-73-7	Fluorene	250.	U
100-01-6	4-Nitroaniline	1300.	U
534-52-1	4,6-Dinitro-2-methylphenol	250.	U
86-30-6	N-Nitrosodiphenylamine	250.	U
101-55-3	4-Bromophenyl-phenylether	250.	U
118-74-1	Hexachlorobenzene	250.	U
87-86-5	Pentachlorophenol	1300.	U
85-01-8	Phenanthrene	250.	U
120-12-7	Anthracene	250.	U
84-74-2	Di-n-Butylphthalate	250.	U
206-44-0	Fluoranthene	250.	U
129-00-0	Pyrene	250.	U
85-68-7	Butylbenzylphthalate	250.	U
91-94-1	3,3'-Dichlorobenzidine	510.	U
56-55-3	Benzo(a)Anthracene	250.	U
218-01-9	Chrysene	250.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	250.	U
117-84-0	Di-n-octylphthalate	250.	U
205-99-2	Benzo(b)fluoranthene	250.	U
207-08-9	Benzo(k)fluoranthene	250.	U
50-32-8	Benzo(a)Pyrene	250.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	250.	U
53-70-3	Dibenzo(a,h)Anthracene	250.	U
191-24-2	Benzo(g,h,i)Perylene	250.	U

(1) - Cannot be separated from diphenylamine

1/E

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-SD-7

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ------ Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Sediment Lab Sample ID: 6629

Level (low/med): Low Date Received: 6/19/89

% Solids: -------

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	2.9			
7440-39-3	Barium	103			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.3			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	9.3			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	15.4			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.038			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5			
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-SW-1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6614

Level (low/med): Low Date Received: 6/19/89

% Solids: -----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.008			
7440-39-3	Barium	.073			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ------ Clarity Before: ------ Texture: ------

Color After: ------ Clarity After: ------ Artifacts: ------

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

2-SW-1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1573

Level: (low/med) LOW Date Received: 6/19/8

% Moisture: not dec.100. Date Analyzed: 6/19/8

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

2-SW-1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0836

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0836

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-SW-2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6615

Level (low/med): Low Date Received: 6/19/89

% Solids: ____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.006			
7440-39-3	Barium	.060			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.005			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ____ Clarity Before: ____ Texture: ____

Color After: ____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

2-SW-2

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1576

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	C
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: 2-SW-2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0837

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0837

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-SW-3

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6616

Level (low/med): Low Date Received: 6/19/89

% Solids: ____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.017			
7440-39-3	Barium	.037			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.005			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ____ Clarity Before: ____ Texture: ____

Color After: ____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-3

Lab Name: HARRIS Contract: IF8

Lab Code: HARRIS Case No.: ENVSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1577

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane		10.	U
74-83-9	Bromomethane		10.	U
75-01-4	Vinyl Chloride		10.	U
75-00-3	Chloroethane		10.	U
75-09-2	Methylene Chloride		5.	U
67-64-1	Acetone		10.	U
75-15-0	Carbon Disulfide		5.	U
75-35-4	1,1-Dichloroethene		5.	U
75-34-3	1,1-Dichloroethane		5.	U
540-59-0	1,2-Dichloroethene (total)		5.	U
67-66-3	Chloroform		5.	U
107-06-2	1,2-Dichloroethane		5.	U
78-93-3	2-Butanone		10.	U
71-55-6	1,1,1-Trichloroethane		5.	U
56-23-5	Carbon Tetrachloride		5.	U
108-05-4	Vinyl Acetate		10.	U
75-27-4	Bromodichloromethane		5.	U
78-87-5	1,2-Dichloropropane		5.	U
10061-01-5	cis-1,3-Dichloropropene		5.	U
79-01-6	Trichloroethene		5.	U
124-48-1	Dibromochloromethane		5.	U
79-00-5	1,1,2-Trichloroethane		5.	U
71-43-2	Benzene		5.	U
10061-02-6	trans-1,3-Dichloropropene		5.	U
75-25-2	Bromoform		5.	U
108-10-1	4-Methyl-2-Pentanone		10.	U
591-78-6	2-Hexanone		10.	U
127-18-4	Tetrachloroethene		5.	U
79-34-5	1,1,2,2-Tetrachloroethane		5.	U
108-88-3	Toluene		5.	U
108-90-7	Chlorobenzene		5.	U
100-41-4	Ethylbenzene		5.	U
100-42-5	Styrene		5.	U
1330-20-7	Xylene (total)		5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-3

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0838

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

2-SW-3

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0838

Level: (low/med) LOW Date Received: 6/19/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/20/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
99-09-2	3-Nitroaniline	50.	IU	
83-32-9	Acenaphthene	10.	IU	
51-28-5	2,4-Dinitrophenol	50.	IU	
100-02-7	4-Nitrophenol	50.	IU	
132-64-9	Dibenzofuran	10.	IU	
121-14-2	2,4-Dinitrotoluene	10.	IU	
84-66-2	Diethylphthalate	10.	IU	
7005-72-3	4-Chlorophenyl-phenylether	10.	IU	
86-73-7	Fluorene	10.	IU	
100-01-6	4-Nitroaniline	50.	IU	
534-52-1	4,6-Dinitro-2-methylphenol	10.	IU	
86-30-6	N-Nitrosodiphenylamine	10.	IU	
101-55-3	4-Bromophenyl-phenylether	10.	IU	
118-74-1	Hexachlorobenzene	10.	IU	
87-86-5	Pentachlorophenol	50.	IU	
85-01-8	Phenanthrene	10.	IU	
120-12-7	Anthracene	10.	IU	
84-74-2	Di-n-Butylphthalate	10.	IU	
206-44-0	Fluoranthene	10.	IU	
129-00-0	Pyrene	10.	IU	
85-68-7	Butylbenzylphthalate	10.	IU	
91-94-1	3,3'-Dichlorobenzidine	20.	IU	
56-55-3	Benzo(a)Anthracene	10.	IU	
218-01-9	Chrysene	10.	IU	
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	IU	
117-84-0	Di-n-octylphthalate	10.	IU	
205-99-2	Benzo(b)fluoranthene	10.	IU	
207-08-9	Benzo(k)fluoranthene	10.	IU	
50-32-8	Benzo(a)Pyrene	10.	IU	
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	IU	
53-70-3	Dibenzo(a,h)Anthracene	10.	IU	
191-24-2	Benzo(g,h,i)Perylene	10.	IU	

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO: LANGB-2-SW-4

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6717

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.011			
7440-39-3	Barium	.085			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ---- Clarity Before: --- Texture: ----

Color After: ---- Clarity After: --- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

2-SW-4

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1591

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

2-SW-4

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0831

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/8

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

2-SW-4

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0831

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE N

LANGB-2-SW-5

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6718

Level (low/med): Low Date Received: 6/20/89

% Solids: ____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.006			
7440-39-3	Barium	.141			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.003			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ____ Clarity Before: ____ Texture: ____

Color After: ____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-5

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1592

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-5

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0832

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

2-SW-5

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0832

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO: LANGB-2-SW-6

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6733

Level (low/med): Low Date Received: 6/20/89

% Solids: ____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.012			
7440-39-3	Barium	.054			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.004			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ____ Clarity Before: ____ Texture: ____

Color After: ____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-6

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1615

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec.100. Date Analyzed: 6/22/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-6

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0833

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/8

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE : 2-SW-6

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0833

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 8.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

Lab Name: Harris Environmental Tech. Contract: 51312 LANGB-2-SW-8

Lab Code: --- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6734

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.002		U	
7440-39-3	Barium	.008		U	
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

2-SW-8

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1594

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. Date Analyzed: 6/21/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2-SW-8

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0834

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

2-SW-8

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0834

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-2-MW1-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: --- Case No.: ---- SAS No.: ----- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6920

Level (low/med): Low Date Received: 6/23/89

% Solids: ---

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.004			
7440-39-3	Barium	.197			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.003			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ------ Clarity Before: ----- Texture: ----

Color After: ------ Clarity After: ---- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP: 2MW1GW1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1651

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. Date Analyzed: 6/24/89

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

2MW1GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0901

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

2MW1GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0901

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

APPENDIX E4
SITE 3 ANALYTICAL RESULTS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-3-BH1-SS-1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Soil Lab Sample ID: 6888

Level (low/med): Low Date Received: 6/21/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	4.8			
7440-39-3	Barium	216			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.4			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	23			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	7.2			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.034			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.7			
7440-22-4	Silver	0.1			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: ----

Color After: ----- Clarity After: ----- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

3BH1SS1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1620

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 24. Date Analyzed: 6/23/89

Column: (pack/cap) PACK Dilution Factor: 1.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13.	U
74-83-9	Bromomethane	13.	U
75-01-4	Vinyl Chloride	13.	U
75-00-3	Chloroethane	13.	U
75-09-2	Methylene Chloride	7.	U
67-64-1	Acetone	13.	U
75-15-0	Carbon Disulfide	7.	U
75-35-4	1,1-Dichloroethene	7.	U
75-34-3	1,1-Dichloroethane	7.	U
540-59-0	1,2-Dichloroethene (total)	7.	U
67-66-3	Chloroform	7.	U
107-06-2	1,2-Dichloroethane	7.	U
78-93-3	2-Butanone	13.	U
71-55-6	1,1,1-Trichloroethane	7.	U
56-23-5	Carbon Tetrachloride	7.	U
108-05-4	Vinyl Acetate	13.	U
75-27-4	Bromodichloromethane	7.	U
78-87-5	1,2-Dichloropropane	7.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U
79-01-6	Trichloroethene	7.	U
124-48-1	Dibromochloromethane	7.	U
79-00-5	1,1,2-Trichloroethane	7.	U
71-43-2	Benzene	7.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U
75-25-2	Bromoform	7.	U
108-10-1	4-Methyl-2-Pentanone	13.	U
591-78-6	2-Hexanone	13.	U
127-18-4	Tetrachloroethene	7.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U
108-88-3	Toluene	7.	U
108-90-7	Chlorobenzene	7.	U
100-41-4	Ethylbenzene	7.	U
100-42-5	Styrene	7.	U
1330-20-7	Xylene (total)	7.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

3BH1SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0869

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 24. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	220.	U
111-44-4	bis(2-Chloroethyl)ether	220.	U
95-57-8	2-Chlorophenol	220.	U
541-73-1	1,3-Dichlorobenzene	220.	U
106-46-7	1,4-Dichlorobenzene	220.	U
100-51-6	Benzyl alcohol	220.	U
95-50-1	1,2-Dichlorobenzene	220.	U
95-48-7	2-Methylphenol	220.	U
108-60-1	bis(2-Chloroisopropyl)ether	220.	U
106-44-5	4-Methylphenol	220.	U
621-64-7	N-Nitroso-di-n-propylamine	220.	U
67-72-1	Hexachloroethane	220.	U
98-95-3	Nitrobenzene	220.	U
78-59-1	Isophorone	220.	U
88-75-5	2-Nitrophenol	220.	U
105-67-9	2,4-Dimethylphenol	220.	U
65-85-0	Benzoic acid	1100.	U
111-91-1	bis(2-Chloroethoxy)methane	220.	U
120-83-2	2,4-Dichlorophenol	220.	U
120-82-1	1,2,4-Trichlorobenzene	220.	U
91-20-3	Naphthalene	220.	U
106-47-8	4-Chloroaniline	220.	U
87-68-3	Hexachlorobutadiene	220.	U
59-50-7	4-Chloro-3-methylphenol	220.	U
91-57-6	2-Methylnaphthalene	220.	U
77-47-4	Hexachlorocyclopentadiene	220.	U
88-06-2	2,4,6-Trichlorophenol	220.	U
95-95-4	2,4,5-Trichlorophenol	1100.	U
91-58-7	2-Chloronaphthalene	220.	U
88-74-4	2-Nitroaniline	1100.	U
131-11-3	Dimethylphthalate	220.	U
208-96-8	Acenaphthylene	220.	U
606-20-2	2,6-Dinitrotoluene	220.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH1SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0869

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 24. dec. 0. Date Extracted: 6/22/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 6.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1100.	U
83-32-9	Acenaphthene	220.	U
51-28-5	2,4-Dinitrophenol	1100.	U
100-02-7	4-Nitrophenol	1100.	U
132-64-9	Dibenzofuran	220.	U
121-14-2	2,4-Dinitrotoluene	220.	U
84-66-2	Diethylphthalate	220.	U
7005-72-3	4-Chlorophenyl-phenylether	220.	U
86-73-7	Fluorene	220.	U
100-01-6	4-Nitroaniline	1100.	U
534-52-1	4,6-Dinitro-2-methylphenol	220.	U
86-30-6	N-Nitrosodiphenylamine	220.	U
101-55-3	4-Bromophenyl-phenylether	220.	U
118-74-1	Hexachlorobenzene	220.	U
87-86-5	Pentachlorophenol	1100.	U
85-01-8	Phenanthrene	220.	U
120-12-7	Anthracene	220.	U
84-74-2	Di-n-Butylphthalate	220.	U
206-44-0	Fluoranthene	220.	U
129-00-0	Pyrene	220.	U
85-68-7	Butylbenzylphthalate	220.	U
91-94-1	3,3'-Dichlorobenzidine	440.	U
56-55-3	Benzo(a)Anthracene	220.	U
218-01-9	Chrysene	220.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	220.	U
117-84-0	Di-n-octylphthalate	220.	U
205-99-2	Benzo(b)fluoranthene	220.	U
207-08-9	Benzo(k)fluoranthene	220.	U
50-32-8	Benzo(a)Pyrene	220.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	220.	U
53-70-3	Dibenzo(a,h)Anthracene	220.	U
191-24-2	Benzo(g,h,i)Perylene	220.	U

(1) - Cannot be separated from diphenylamine

1/8

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-3-BH1-SS-2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6889

Level (low/med): Low Date Received: 6/21/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	4.4			
7440-39-3	Barium	200			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.4			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	21			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	6.7			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.037			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.2			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: ----

Color After: ----- Clarity After: ----- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SA[redacted] L

3BH1S[redacted]

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 1. (g/mL) G Lab File ID: A1657

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 23. Date Analyzed: 6/25/[redacted]

Column: (pack/cap) PACK Dilution Factor: 5.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	65.	U
74-83-9	Bromomethane	65.	U
75-01-4	Vinyl Chloride	65.	U
75-00-3	Chloroethane	65.	U
75-09-2	Methylene Chloride	33.	U
67-64-1	Acetone	65.	U
75-15-0	Carbon Disulfide	33.	U
75-35-4	1,1-Dichloroethene	33.	U
75-34-3	1,1-Dichloroethane	33.	U
540-59-0	1,2-Dichloroethene (total)	33.	U
67-66-3	Chloroform	33.	U
107-06-2	1,2-Dichloroethane	33.	U
78-93-3	2-Butanone	65.	U
71-55-6	1,1,1-Trichloroethane	33.	U
56-23-5	Carbon Tetrachloride	33.	U
108-05-4	Vinyl Acetate	65.	U
75-27-4	Bromodichloromethane	33.	U
78-87-5	1,2-Dichloropropane	33.	U
10061-01-5	cis-1,3-Dichloropropene	33.	U
79-01-6	Trichloroethene	33.	U
124-48-1	Dibromochloromethane	33.	U
79-00-5	1,1,2-Trichloroethane	33.	U
71-43-2	Benzene	33.	U
10061-02-6	trans-1,3-Dichloropropene	33.	U
75-25-2	Bromoform	33.	U
108-10-1	4-Methyl-2-Pentanone	65.	U
591-78-6	2-Hexanone	65.	U
127-18-4	Tetrachloroethene	33.	U
79-34-5	1,1,2,2-Tetrachloroethane	33.	U
108-88-3	Toluene	33.	U
108-90-7	Chlorobenzene	33.	U
100-41-4	Ethylbenzene	33.	U
100-42-5	Styrene	33.	U
1330-20-7	Xylene (total)	33.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

3BH1SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0870

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 23. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	220.	U
111-44-4	bis(2-Chloroethyl)ether	220.	U
95-57-8	2-Chlorophenol	220.	U
541-73-1	1,3-Dichlorobenzene	220.	U
106-46-7	1,4-Dichlorobenzene	220.	U
100-51-6	Benzyl alcohol	220.	U
95-50-1	1,2-Dichlorobenzene	220.	U
95-48-7	2-Methylphenol	220.	U
108-60-1	bis(2-Chloroisopropyl)ether	220.	U
106-44-5	4-Methylphenol	220.	U
621-64-7	N-Nitroso-di-n-propylamine	220.	U
67-72-1	Hexachloroethane	220.	U
98-95-3	Nitrobenzene	220.	U
78-59-1	Isophorone	220.	U
88-75-5	2-Nitrophenol	220.	U
105-67-9	2,4-Dimethylphenol	220.	U
65-85-0	Benzoic acid	1100.	U
111-91-1	bis(2-Chloroethoxy)methane	220.	U
120-83-2	2,4-Dichlorophenol	220.	U
120-82-1	1,2,4-Trichlorobenzene	220.	U
91-20-3	Naphthalene	220.	U
106-47-8	4-Chloroaniline	220.	U
87-68-3	Hexachlorobutadiene	220.	U
59-50-7	4-Chloro-3-methylphenol	220.	U
91-57-6	2-Methylnaphthalene	220.	U
77-47-4	Hexachlorocyclopentadiene	220.	U
88-06-2	2,4,6-Trichlorophenol	220.	U
95-95-4	2,4,5-Trichlorophenol	1100.	U
91-58-7	2-Chloronaphthalene	220.	U
88-74-4	2-Nitroaniline	1100.	U
131-11-3	Dimethylphthalate	220.	U
208-96-8	Acenaphthylene	220.	U
606-20-2	2,6-Dinitrotoluene	220.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH1SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0870

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 23. dec. 0. Date Extracted: 6/22/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1100.	U
83-32-9	Acenaphthene	220.	U
51-28-5	2,4-Dinitrophenol	1100.	U
100-02-7	4-Nitrophenol	1100.	U
132-64-9	Dibenzofuran	220.	U
121-14-2	2,4-Dinitrotoluene	220.	U
84-66-2	Diethylphthalate	220.	U
7005-72-3	4-Chlorophenyl-phenylether	220.	U
86-73-7	Fluorene	220.	U
100-01-6	4-Nitroaniline	1100.	U
534-52-1	4,6-Dinitro-2-methylphenol	220.	U
86-30-6	N-Nitrosodiphenylamine	220.	U
101-55-3	4-Bromophenyl-phenylether	220.	U
118-74-1	Hexachlorobenzene	220.	U
87-86-5	Pentachlorophenol	1100.	U
85-01-8	Phenanthrene	220.	U
120-12-7	Anthracene	220.	U
84-74-2	Di-n-Butylphthalate	220.	U
206-44-0	Fluoranthene	220.	U
129-00-0	Pyrene	220.	U
85-68-7	Butylbenzylphthalate	220.	U
91-94-1	3,3'-Dichlorobenzidine	430.	U
56-55-3	Benzo(a)Anthracene	220.	U
218-01-9	Chrysene	220.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	220.	U
117-84-0	Di-n-octylphthalate	220.	U
205-99-2	Benzo(b)fluoranthene	220.	U
207-08-9	Benzo(k)fluoranthene	220.	U
50-32-8	Benzo(a)Pyrene	220.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	220.	U
53-70-3	Dibenzo(a,h)Anthracene	220.	U
191-24-2	Benzo(g,h,i)Perylene	220.	U

(1) - Cannot be separated from diphenylamine

1/8

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH1SS3

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1622

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 27. Date Analyzed: 6/23/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14.	U
74-83-9	Bromomethane	14.	U
75-01-4	Vinyl Chloride	14.	U
75-00-3	Chloroethane	14.	U
75-09-2	Methylene Chloride	7.	U
67-64-1	Acetone	14.	U
75-15-0	Carbon Disulfide	7.	U
75-35-4	1,1-Dichloroethene	7.	U
75-34-3	1,1-Dichloroethane	7.	U
540-59-0	1,2-Dichloroethene (total)	7.	U
67-66-3	Chloroform	7.	U
107-06-2	1,2-Dichloroethane	7.	U
78-93-3	2-Butanone	14.	U
71-55-6	1,1,1-Trichloroethane	7.	U
56-23-5	Carbon Tetrachloride	7.	U
108-05-4	Vinyl Acetate	14.	U
75-27-4	Bromodichloromethane	7.	U
78-87-5	1,2-Dichloropropane	7.	U
10061-01-5	cis-1,3-Dichloropropene	7.	U
79-01-6	Trichloroethene	7.	U
124-48-1	Dibromochloromethane	7.	U
79-00-5	1,1,2-Trichloroethane	7.	U
71-43-2	Benzene	7.	U
10061-02-6	trans-1,3-Dichloropropene	7.	U
75-25-2	Bromoform	7.	U
108-10-1	4-Methyl-2-Pentanone	14.	U
591-78-6	2-Hexanone	14.	U
127-18-4	Tetrachloroethene	7.	U
79-34-5	1,1,2,2-Tetrachloroethane	7.	U
108-88-3	Toluene	7.	U
108-90-7	Chlorobenzene	7.	U
100-41-4	Ethylbenzene	7.	U
100-42-5	Styrene	7.	U
1330-20-7	Xylene (total)	7.	U

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-3-BH2-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6741

Level (low/med): Low Date Received: 6/21/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	4.4			
7440-39-3	Barium	199			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.4			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	24			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	9.2			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.030			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.2			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ---- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

3BH2SS1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1624

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 11. Date Analyzed: 6/23/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	11.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
108-05-4	Vinyl Acetate	11.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
1330-20-7	Xylene (total)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPL

3BH2SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0856

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 8. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	180.	U
111-44-4	bis(2-Chloroethyl)ether	180.	U
95-57-8	2-Chlorophenol	180.	U
541-73-1	1,3-Dichlorobenzene	180.	U
106-46-7	1,4-Dichlorobenzene	180.	U
100-51-6	Benzyl alcohol	180.	U
95-50-1	1,2-Dichlorobenzene	180.	U
95-48-7	2-Methylphenol	180.	U
108-60-1	bis(2-Chloroisopropyl)ether	180.	U
106-44-5	4-Methylphenol	180.	U
621-64-7	N-Nitroso-di-n-propylamine	180.	U
67-72-1	Hexachloroethane	180.	U
98-95-3	Nitrobenzene	180.	U
78-59-1	Isophorone	180.	U
88-75-5	2-Nitrophenol	180.	U
105-67-9	2,4-Dimethylphenol	180.	U
65-85-0	Benzoic acid	910.	U
111-91-1	bis(2-Chloroethoxy)methane	180.	U
120-83-2	2,4-Dichlorophenol	180.	U
120-82-1	1,2,4-Trichlorobenzene	180.	U
91-20-3	Naphthalene	180.	U
106-47-8	4-Chloroaniline	180.	U
87-68-3	Hexachlorobutadiene	180.	U
59-50-7	4-Chloro-3-methylphenol	180.	U
91-57-6	2-Methylnaphthalene	180.	U
77-47-4	Hexachlorocyclopentadiene	180.	U
88-06-2	2,4,6-Trichlorophenol	180.	U
95-95-4	2,4,5-Trichlorophenol	910.	U
91-58-7	2-Chloronaphthalene	180.	U
88-74-4	2-Nitroaniline	910.	U
131-11-3	Dimethylphthalate	180.	U
208-96-8	Acenaphthylene	180.	U
606-20-2	2,6-Dinitrotoluene	180.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

3BH2SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0856

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 8. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.1 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	910.	U
83-32-9	Acenaphthene	180.	U
51-28-5	2,4-Dinitrophenol	910.	U
100-02-7	4-Nitrophenol	910.	U
132-64-9	Dibenzofuran	180.	U
121-14-2	2,4-Dinitrotoluene	180.	U
84-66-2	Diethylphthalate	180.	U
7005-72-3	4-Chlorophenyl-phenylether	180.	U
86-73-7	Fluorene	180.	U
100-01-6	4-Nitroaniline	910.	U
534-52-1	4,6-Dinitro-2-methylphenol	180.	U
86-30-6	N-Nitrosodiphenylamine	180.	U
101-55-3	4-Bromophenyl-phenylether	180.	U
118-74-1	Hexachlorobenzene	180.	U
87-86-5	Pentachlorophenol	910.	U
85-01-8	Phenanthrene	180.	U
120-12-7	Anthracene	180.	U
84-74-2	Di-n-Butylphthalate	180.	U
206-44-0	Fluoranthene	180.	U
129-00-0	Pyrene	180.	U
85-68-7	Butylbenzylphthalate	180.	U
91-94-1	3,3'-Dichlorobenzidine	360.	U
56-55-3	Benzo(a)Anthracene	180.	U
218-01-9	Chrysene	180.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	180.	U
117-84-0	Di-n-octylphthalate	180.	U
205-99-2	Benzo(b)fluoranthene	180.	U
207-08-9	Benzo(k)fluoranthene	180.	U
50-32-8	Benzo(a)Pyrene	180.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	180.	U
53-70-3	Dibenzo(a,h)Anthracene	180.	U
191-24-2	Benzo(g,h,i)Perylene	180.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

LANGB-3-BH2-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6742

Level (low/med): Low Date Received: 6/21/89

% Solids: -----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	4.5			
7440-39-3	Barium	179			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.3			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	27			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	6.9			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	0.025		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.6			
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE I

3BH2SS2

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1623

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 11. Date Analyzed: 6/23/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	11.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	11.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
108-05-4	Vinyl Acetate	11.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	11.	U
591-78-6	2-Hexanone	11.	U
127-18-4	Tetrachloroethene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
1330-20-7	Xylene (total)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH2SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0865

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 11. dec. 0. Date Extracted: 6/22/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
108-95-2	Phenol	190.	U
111-44-4	bis(2-Chloroethyl)ether	190.	U
95-57-8	2-Chlorophenol	190.	U
541-73-1	1,3-Dichlorobenzene	190.	U
106-46-7	1,4-Dichlorobenzene	190.	U
100-51-6	Benzyl alcohol	190.	U
95-50-1	1,2-Dichlorobenzene	190.	U
95-48-7	2-Methylphenol	190.	U
108-60-1	bis(2-Chloroisopropyl)ether	190.	U
106-44-5	4-Methylphenol	190.	U
621-64-7	N-Nitroso-di-n-propylamine	190.	U
67-72-1	Hexachloroethane	190.	U
98-95-3	Nitrobenzene	190.	U
78-59-1	Isophorone	190.	U
88-75-5	2-Nitrophenol	190.	U
105-67-9	2,4-Dimethylphenol	190.	U
65-85-0	Benzoic acid	930.	U
111-91-1	bis(2-Chloroethoxy)methane	190.	U
120-83-2	2,4-Dichlorophenol	190.	U
120-82-1	1,2,4-Trichlorobenzene	190.	U
91-20-3	Naphthalene	190.	U
106-47-8	4-Chloroaniline	190.	U
87-68-3	Hexachlorobutadiene	190.	U
59-50-7	4-Chloro-3-methylphenol	190.	U
91-57-6	2-Methylnaphthalene	190.	U
77-47-4	Hexachlorocyclopentadiene	190.	U
88-06-2	2,4,6-Trichlorophenol	190.	U
95-95-4	2,4,5-Trichlorophenol	930.	U
91-58-7	2-Chloronaphthalene	190.	U
88-74-4	2-Nitroaniline	930.	U
131-11-3	Dimethylphthalate	190.	U
208-96-8	Acenaphthylene	190.	U
606-20-2	2,6-Dinitrotoluene	190.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3BH2SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0865

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 11. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	930.	U
83-32-9	Acenaphthene	190.	U
51-28-5	2,4-Dinitrophenol	930.	U
100-02-7	4-Nitrophenol	930.	U
132-64-9	Dibenzofuran	190.	U
121-14-2	2,4-Dinitrotoluene	190.	U
84-66-2	Diethylphthalate	190.	U
7005-72-3	4-Chlorophenyl-phenylether	190.	U
86-73-7	Fluorene	190.	U
100-01-6	4-Nitroaniline	930.	U
534-52-1	4,6-Dinitro-2-methylphenol	190.	U
86-30-6	N-Nitrosodiphenylamine	190.	U
101-55-3	4-Bromophenyl-phenylether	190.	U
118-74-1	Hexachlorobenzene	190.	U
87-86-5	Pentachlorophenol	930.	U
85-01-8	Phenanthrene	190.	U
120-12-7	Anthracene	190.	U
84-74-2	Di-n-Butylphthalate	190.	U
206-44-0	Fluoranthene	190.	U
129-00-0	Pyrene	190.	U
85-68-7	Butylbenzylphthalate	190.	U
91-94-1	3,3'-Dichlorobenzidine	370.	U
56-55-3	Benzo(a)Anthracene	190.	U
218-01-9	Chrysene	190.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	190.	U
117-84-0	Di-n-octylphthalate	190.	U
205-99-2	Benzo(b)fluoranthene	190.	U
207-08-9	Benzo(k)fluoranthene	190.	U
50-32-8	Benzo(a)Pyrene	190.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	190.	U
53-70-3	Dibenzo(a,h)Anthracene	190.	U
191-24-2	Benzo(g,h,i)Perylene	190.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-3-BH3-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6744

Level (low/med): Low Date Received: 6/21/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.7			
7440-39-3	Barium	194			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.9			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	24			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	81			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.036			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.1			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH3SS1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 1. (g/mL) G Lab File ID: A1656

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 13. Date Analyzed: 6/25/89

Column: (pack/cap) PACK Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	58.	U
74-83-9	Bromomethane	58.	U
75-01-4	Vinyl Chloride	58.	U
75-00-3	Chloroethane	58.	U
75-09-2	Methylene Chloride	29.	U
67-64-1	Acetone	58.	U
75-15-0	Carbon Disulfide	29.	U
75-35-4	1,1-Dichloroethene	29.	U
75-34-3	1,1-Dichloroethane	29.	U
540-59-0	1,2-Dichloroethene (total)	29.	U
67-66-3	Chloroform	29.	U
107-06-2	1,2-Dichloroethane	29.	U
78-93-3	2-Butanone	58.	U
71-55-6	1,1,1-Trichloroethane	29.	U
56-23-5	Carbon Tetrachloride	29.	U
108-05-4	Vinyl Acetate	58.	U
75-27-4	Bromodichloromethane	29.	U
78-87-5	1,2-Dichloropropane	29.	U
10061-01-5	cis-1,3-Dichloropropene	29.	U
79-01-6	Trichloroethene	29.	U
124-48-1	Dibromochloromethane	29.	U
79-00-5	1,1,2-Trichloroethane	29.	U
71-43-2	Benzene	29.	U
10061-02-6	trans-1,3-Dichloropropene	29.	U
75-25-2	Bromoform	29.	U
108-10-1	4-Methyl-2-Pentanone	58.	U
591-78-6	2-Hexanone	58.	U
127-18-4	Tetrachloroethene	29.	U
79-34-5	1,1,2,2-Tetrachloroethane	29.	U
108-88-3	Toluene	29.	U
108-90-7	Chlorobenzene	29.	U
100-41-4	Ethylbenzene	29.	U
100-42-5	Styrene	29.	U
1330-20-7	Xylene (total)	29.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE: 3BH3SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0867

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 13. dec. 0. Date Extracted: 6/22/8

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	190.	U
111-44-4	bis(2-Chloroethyl)ether	190.	U
95-57-8	2-Chlorophenol	190.	U
541-73-1	1,3-Dichlorobenzene	190.	U
106-46-7	1,4-Dichlorobenzene	190.	U
100-51-6	Benzyl alcohol	190.	U
95-50-1	1,2-Dichlorobenzene	190.	U
95-48-7	2-Methylphenol	190.	U
108-60-1	bis(2-Chloroisopropyl)ether	190.	U
106-44-5	4-Methylphenol	190.	U
621-64-7	N-Nitroso-di-n-propylamine	190.	U
67-72-1	Hexachloroethane	190.	U
98-95-3	Nitrobenzene	190.	U
78-59-1	Isophorone	190.	U
88-75-5	2-Nitrophenol	190.	U
105-67-9	2,4-Dimethylphenol	190.	U
65-85-0	Benzoic acid	960.	U
111-91-1	bis(2-Chloroethoxy)methane	190.	U
120-83-2	2,4-Dichlorophenol	190.	U
120-82-1	1,2,4-Trichlorobenzene	190.	U
91-20-3	Naphthalene	190.	U
106-47-8	4-Chloroaniline	190.	U
87-68-3	Hexachlorobutadiene	190.	U
59-50-7	4-Chloro-3-methylphenol	190.	U
91-57-6	2-Methylnaphthalene	190.	U
77-47-4	Hexachlorocyclopentadiene	190.	U
88-06-2	2,4,6-Trichlorophenol	190.	U
95-95-4	2,4,5-Trichlorophenol	960.	U
91-58-7	2-Chloronaphthalene	190.	U
88-74-4	2-Nitroaniline	960.	U
131-11-3	Dimethylphthalate	190.	U
208-96-8	Acenaphthylene	190.	U
606-20-2	2,6-Dinitrotoluene	190.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE No.: 3BH3SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0867

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 13. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	960.	U
83-32-9	Acenaphthene	190.	U
51-28-5	2,4-Dinitrophenol	960.	U
100-02-7	4-Nitrophenol	960.	U
132-64-9	Dibenzofuran	190.	U
121-14-2	2,4-Dinitrotoluene	190.	U
84-66-2	Diethylphthalate	190.	U
7005-72-3	4-Chlorophenyl-phenylether	190.	U
86-73-7	Fluorene	190.	U
100-01-6	4-Nitroaniline	960.	U
534-52-1	4,6-Dinitro-2-methylphenol	190.	U
86-30-6	N-Nitrosodiphenylamine	190.	U
101-55-3	4-Bromophenyl-phenylether	190.	U
118-74-1	Hexachlorobenzene	190.	U
87-86-5	Pentachlorophenol	960.	U
85-01-8	Phenanthrene	190.	U
120-12-7	Anthracene	190.	U
84-74-2	Di-n-Butylphthalate	190.	U
206-44-0	Fluoranthene	190.	U
129-00-0	Pyrene	190.	U
85-68-7	Butylbenzylphthalate	190.	U
91-94-1	3,3'-Dichlorobenzidine	380.	U
56-55-3	Benzo(a)Anthracene	190.	U
218-01-9	Chrysene	190.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	190.	U
117-84-0	Di-n-octylphthalate	190.	U
205-99-2	Benzo(b)fluoranthene	190.	U
207-08-9	Benzo(k)fluoranthene	190.	U
50-32-8	Benzo(a)Pyrene	190.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	190.	U
53-70-3	Dibenzo(a,h)Anthracene	190.	U
191-24-2	Benzo(g,h,i)Perylene	190.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-3-BH3-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6745

Level (low/med): Low Date Received: 6/21/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.2			
7440-39-3	Barium	175			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.2			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	5.3			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	0.025		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.8			
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH3SS2

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1609

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 15. Date Analyzed: 6/22/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
108-05-4	Vinyl Acetate	12.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
1330-20-7	Xylene (total)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH3SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0868

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 15. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	200.	U
111-44-4	bis(2-Chloroethyl)ether	200.	U
95-57-8	2-Chlorophenol	200.	U
541-73-1	1,3-Dichlorobenzene	200.	U
106-46-7	1,4-Dichlorobenzene	200.	U
100-51-6	Benzyl alcohol	200.	U
95-50-1	1,2-Dichlorobenzene	200.	U
95-48-7	2-Methylphenol	200.	U
108-60-1	bis(2-Chloroisopropyl)ether	200.	U
106-44-5	4-Methylphenol	200.	U
621-64-7	N-Nitroso-di-n-propylamine	200.	U
67-72-1	Hexachloroethane	200.	U
98-95-3	Nitrobenzene	200.	U
78-59-1	Isophorone	200.	U
88-75-5	2-Nitrophenol	200.	U
105-67-9	2,4-Dimethylphenol	200.	U
65-85-0	Benzoic acid	980.	U
111-91-1	bis(2-Chloroethoxy)methane	200.	U
120-83-2	2,4-Dichlorophenol	200.	U
120-82-1	1,2,4-Trichlorobenzene	200.	U
91-20-3	Naphthalene	200.	U
106-47-8	4-Chloroaniline	200.	U
87-68-3	Hexachlorobutadiene	200.	U
59-50-7	4-Chloro-3-methylphenol	200.	U
91-57-6	2-Methylnaphthalene	200.	U
77-47-4	Hexachlorocyclopentadiene	200.	U
88-06-2	2,4,6-Trichlorophenol	200.	U
95-95-4	2,4,5-Trichlorophenol	980.	U
91-58-7	2-Chloronaphthalene	200.	U
88-74-4	2-Nitroaniline	980.	U
131-11-3	Dimethylphthalate	200.	U
208-96-8	Acenaphthylene	200.	U
606-20-2	2,6-Dinitrotoluene	200.	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

3BH3SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0868

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 15. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	980.	U
83-32-9	Acenaphthene	200.	U
51-28-5	2,4-Dinitrophenol	980.	U
100-02-7	4-Nitrophenol	980.	U
132-64-9	Dibenzofuran	200.	U
121-14-2	2,4-Dinitrotoluene	200.	U
84-66-2	Diethylphthalate	200.	U
7005-72-3	4-Chlorophenyl-phenylether	200.	U
86-73-7	Fluorene	200.	U
100-01-6	4-Nitroaniline	980.	U
534-52-1	4,6-Dinitro-2-methylphenol	200.	U
86-30-6	N-Nitrosodiphenylamine	200.	U
101-55-3	4-Bromophenyl-phenylether	200.	U
118-74-1	Hexachlorobenzene	200.	U
87-86-5	Pentachlorophenol	980.	U
85-01-8	Phenanthrene	200.	U
120-12-7	Anthracene	200.	U
84-74-2	Di-n-Butylphthalate	200.	U
206-44-0	Fluoranthene	200.	U
129-00-0	Pyrene	200.	U
85-68-7	Butylbenzylphthalate	200.	U
91-94-1	3,3'-Dichlorobenzidine	390.	U
56-55-3	Benzo(a)Anthracene	200.	U
218-01-9	Chrysene	200.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	200.	U
117-84-0	Di-n-octylphthalate	200.	U
205-99-2	Benzo(b)fluoranthene	200.	U
207-08-9	Benzo(k)fluoranthene	200.	U
50-32-8	Benzo(a)Pyrene	200.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	200.	U
53-70-3	Dibenzo(a,h)Anthracene	200.	U
191-24-2	Benzo(g,h,i)Perylene	200.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-3-BH4-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6743

Level (low/med): Low Date Received: 6/21/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	5.8			
7440-39-3	Barium	204			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.4			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	25			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	9.9			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.039			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.2			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH4SS1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 1. (g/mL) G Lab File ID: A1655

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 9. Date Analyzed: 6/25/89

Column: (pack/cap) PACK Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	55.	U
74-83-9	Bromomethane	55.	U
75-01-4	Vinyl Chloride	55.	U
75-00-3	Chloroethane	55.	U
75-09-2	Methylene Chloride	27.	U
67-64-1	Acetone	55.	U
75-15-0	Carbon Disulfide	27.	U
75-35-4	1,1-Dichloroethene	27.	U
75-34-3	1,1-Dichloroethane	27.	U
540-59-0	1,2-Dichloroethene (total)	27.	U
67-66-3	Chloroform	27.	U
107-06-2	1,2-Dichloroethane	27.	U
78-93-3	2-Butanone	55.	U
71-55-6	1,1,1-Trichloroethane	27.	U
56-23-5	Carbon Tetrachloride	27.	U
108-05-4	Vinyl Acetate	55.	U
75-27-4	Bromodichloromethane	27.	U
78-87-5	1,2-Dichloropropane	27.	U
10061-01-5	cis-1,3-Dichloropropene	27.	U
79-01-6	Trichloroethene	27.	U
124-48-1	Dibromochloromethane	27.	U
79-00-5	1,1,2-Trichloroethane	27.	U
71-43-2	Benzene	27.	U
10061-02-6	trans-1,3-Dichloropropene	27.	U
75-25-2	Bromoform	27.	U
108-10-1	4-Methyl-2-Pentanone	55.	U
591-78-6	2-Hexanone	55.	U
127-18-4	Tetrachloroethene	27.	U
79-34-5	1,1,2,2-Tetrachloroethane	27.	U
108-88-3	Toluene	27.	U
108-90-7	Chlorobenzene	27.	U
100-41-4	Ethylbenzene	27.	U
100-42-5	Styrene	27.	U
1330-20-7	Xylene (total)	27.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3BH4SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0866

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 9. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	180.	U
111-44-4	bis(2-Chloroethyl)ether	180.	U
95-57-8	2-Chlorophenol	180.	U
541-73-1	1,3-Dichlorobenzene	180.	U
106-46-7	1,4-Dichlorobenzene	180.	U
100-51-6	Benzyl alcohol	180.	U
95-50-1	1,2-Dichlorobenzene	180.	U
95-48-7	2-Methylphenol	180.	U
108-60-1	bis(2-Chloroisopropyl)ether	180.	U
106-44-5	4-Methylphenol	180.	U
621-64-7	N-Nitroso-di-n-propylamine	180.	U
67-72-1	Hexachloroethane	180.	U
98-95-3	Nitrobenzene	180.	U
78-59-1	Isophorone	180.	U
88-75-5	2-Nitrophenol	180.	U
105-67-9	2,4-Dimethylphenol	180.	U
65-85-0	Benzoic acid	920.	U
111-91-1	bis(2-Chloroethoxy)methane	180.	U
120-83-2	2,4-Dichlorophenol	180.	U
120-82-1	1,2,4-Trichlorobenzene	180.	U
91-20-3	Naphthalene	180.	U
106-47-8	4-Chloroaniline	180.	U
87-68-3	Hexachlorobutadiene	180.	U
59-50-7	4-Chloro-3-methylphenol	180.	U
91-57-6	2-Methylnaphthalene	180.	U
77-47-4	Hexachlorocyclopentadiene	180.	U
88-06-2	2,4,6-Trichlorophenol	180.	U
95-95-4	2,4,5-Trichlorophenol	920.	U
91-58-7	2-Chloronaphthalene	180.	U
88-74-4	2-Nitroaniline	920.	U
131-11-3	Dimethylphthalate	180.	U
208-96-8	Acenaphthylene	180.	U
606-20-2	2,6-Dinitrotoluene	180.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

3BH4SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 3

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0866

Level: (low/med) LOW Date Received: 6/21/89

% Moisture: not dec. 9. dec. 0. Date Extracted: 6/22/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/23/89

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	920.	U
83-32-9	Acenaphthene	180.	U
51-28-5	2,4-Dinitrophenol	920.	U
100-02-7	4-Nitrophenol	920.	U
132-64-9	Dibenzofuran	180.	U
121-14-2	2,4-Dinitrotoluene	180.	U
84-66-2	Diethylphthalate	180.	U
7005-72-3	4-Chlorophenyl-phenylether	180.	U
86-73-7	Fluorene	180.	U
100-01-6	4-Nitroaniline	920.	U
534-52-1	4,6-Dinitro-2-methylphenol	180.	U
86-30-6	N-Nitrosodiphenylamine	180.	U
101-55-3	4-Bromophenyl-phenylether	180.	U
118-74-1	Hexachlorobenzene	180.	U
87-86-5	Pentachlorophenol	920.	U
85-01-8	Phenanthrene	180.	U
120-12-7	Anthracene	180.	U
84-74-2	Di-n-Butylphthalate	180.	U
206-44-0	Fluoranthene	180.	U
129-00-0	Pyrene	180.	U
85-68-7	Butylbenzylphthalate	180.	U
91-94-1	3,3'-Dichlorobenzidine	370.	U
56-55-3	Benzo(a)Anthracene	180.	U
218-01-9	Chrysene	180.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	180.	U
117-84-0	Di-n-octylphthalate	180.	U
205-99-2	Benzo(b)fluoranthene	180.	U
207-08-9	Benzo(k)fluoranthene	180.	U
50-32-8	Benzo(a)Pyrene	180.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	180.	U
53-70-3	Dibenzo(a,h)Anthracene	180.	U
191-24-2	Benzo(g,h,i)Perylene	180.	U

(1) - Cannot be separated from diphenylamine

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE No.: LANGB-3-MW1-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6930

Level (low/med): Low Date Received: 6/26/89

% Solids: _____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.004			
7440-39-3	Barium	.309			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.005			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.010			
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: _____ Clarity Before: ____ Texture: ____

Color After: _____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3MW1GW1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 7

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1671

Level: (low/med) LOW Date Received: 6/26/89

% Moisture: not dec.100. Date Analyzed: 6/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

3MW1GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0948

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

3MW1GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0948

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

APPENDIX E5
SITE 4 ANALYTICAL RESULTS

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH1-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Soil Lab Sample ID: 6710

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	10.4			
7440-39-3	Barium	246			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	1.5			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	22			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	40			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.026			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	1.0			
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ---- Clarity Before: ---- Texture: ----

Color After: ---- Clarity After: ---- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH1-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ------ Case No.: DE-072 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) Soil Lab Sample ID: 6710

Sample wt/vol: 30 (g/mL) g Lab File ID: LANGB-4-BH1-SS1

Level: (low/med) Low Date Received: 6/20/89

% Moisture: not dec. ------ dec. 13.9 Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 6/27/89

GPC Cleanup: (Y/N) N pH: 6.95 Dilution Factor: ------

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
319-84-6	alpha-BHC	ND*	
319-85-7	beta-BHC	ND*	
319-86-8	delta-BHC	ND*	
58-89-9	gamma-BHC (Lindane)	ND*	
76-44-8	Heptachlor	ND*	
309-00-2	Aldrin	ND*	
1024-57-3	Heptachlor epoxide	ND*	
959-98-8	Endosulfan I	ND*	
60-57-1	Dieldrin	ND*	
72-55-9	4,4'-DDE	ND*	
72-20-8	Endrin	ND*	
33213-65-9	Endosulfan II	ND*	
72-54-8	4,4'-DDD	ND*	
1031-07-8	Endosulfan sulfate	ND*	
50-29-3	4,4'-DDT	ND*	
72-43-5	Methoxychlor	ND*	
53494-70-5	Endrin ketone	ND*	
5103-71-9	alpha-Chlordane	ND*	
5103-74-2	gamma-Chlordane	ND*	
8001-35-2	Toxaphene	ND*	
12674-11-2	Aroclor-1016	1.9	U
11104-28-2	Aroclor-1221	1.9	U
11141-16-5	Aroclor-1232	1.9	U
53469-21-9	Aroclor-1242	1.9	U
12672-29-6	Aroclor-1248	1.9	U
11097-69-1	Aroclor-1254	3.7	U
11096-82-5	Aroclor-1260	3.7	U

*ND = Not Determined for this study.

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH1-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6711

Level (low/med): Low Date Received: 6/20/89

% Solids: -----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	4.1			
7440-39-3	Barium	180			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.2			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	22			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	5.8			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	0.025		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ---- Texture: ----

Color After: ----- Clarity After: ---- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: LANGB-4-BH1-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ------ Case No.: DE-072 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) soil Lab Sample ID: 6711

Sample wt/vol: 30 (g/mL) g Lab File ID: LANGB-4-BH1-SS

Level: (low/med) Low Date Received: 6/20/89

% Moisture: not dec. ------ dec. 16.8 Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 6/27/89

GPC Cleanup: (Y/N) N pH: 7.65 Dilution Factor: -----

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
319-84-6	alpha-BHC	ND*	
319-85-7	beta-BHC	ND*	
319-86-8	delta-BHC	ND*	
58-89-9	gamma-BHC (Lindane)	ND*	
76-44-8	Heptachlor	ND*	
309-00-2	Aldrin	ND*	
1024-57-3	Heptachlor epoxide	ND*	
959-98-8	Endosulfan I	ND*	
60-57-1	Dieldrin	ND*	
72-55-9	4,4'-DDE	ND*	
72-20-8	Endrin	ND*	
33213-65-9	Endosulfan II	ND*	
72-54-8	4,4'-DDD	ND*	
1031-07-8	Endosulfan sulfate	ND*	
50-29-3	4,4'-DDT	ND*	
72-43-5	Methoxychlor	ND*	
53494-70-5	Endrin ketone	ND*	
5103-71-9	alpha-Chlordane	ND*	
5103-74-2	gamma-Chlordane	ND*	
8001-35-2	Toxaphene	ND*	
12674-11-2	Aroclor-1016	1.9	U
11104-28-2	Aroclor-1221	1.9	U
11141-16-5	Aroclor-1232	1.9	U
53469-21-9	Aroclor-1242	1.9	U
12672-29-6	Aroclor-1248	1.9	U
11097-69-1	Aroclor-1254	3.8	U
11096-82-5	Aroclor-1260	3.8	U

*ND = Not Determined for this study.

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH2-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Soil Lab Sample ID: 6708

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	5.9			
7440-39-3	Barium	802			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.4			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	25			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	143			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.029			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.7			
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ---- Texture: -----

Color After: ----- Clarity After: ---- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH2-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ------ Case No.: DE-072 SAS No.: ------ SDG No.: -----

Matrix: (soil/water) soil Lab Sample ID: 6708

Sample wt/vol: 30 (g/mL) g Lab File ID: LANGB-4-BH2-SS1

Level: (low/med) Low Date Received: 6/20/89

% Moisture: not dec. _____ dec. 13.0 Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 6/27/89

GPC Cleanup: (Y/N) N pH: 7.34 Dilution Factor: ------

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
319-84-6	alpha-BHC	ND*	
319-85-7	beta-BHC	ND*	
319-86-8	delta-BHC	ND*	
58-89-9	gamma-BHC (Lindane)	ND*	
76-44-8	Heptachlor	ND*	
309-00-2	Aldrin	ND*	
1024-57-3	Heptachlor epoxide	ND*	
959-98-8	Endosulfan I	ND*	
60-57-1	Dieldrin	ND*	
72-55-9	4,4'-DDE	ND*	
72-20-8	Endrin	ND*	
33213-65-9	Endosulfan II	ND*	
72-54-8	4,4'-DDD	ND*	
1031-07-8	Endosulfan sulfate	ND*	
50-29-3	4,4'-DDT	ND*	
72-43-5	Methoxychlor	ND*	
53494-70-5	Endrin ketone	ND*	
5103-71-9	alpha-Chlordane	ND*	
5103-74-2	gamma-Chlordane	ND*	
8001-35-2	Toxaphene	ND*	
12674-11-2	Aroclor-1016	1.8	U
11104-28-2	Aroclor-1221	1.8	U
11141-16-5	Aroclor-1232	1.8	U
53469-21-9	Aroclor-1242	1.8	U
12672-29-6	Aroclor-1248	1.8	U
11097-69-1	Aroclor-1254	3.7	U
11096-82-5	Aroclor-1260	3.7	U

*ND = Not Determined for this study.

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH2-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6709

Level (low/med): Low Date Received: 6/20/89

% Solids: ---

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	6.9			
7440-39-3	Barium	284			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.32			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	28			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	12			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.035			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.9			
7440-22-4	Silver	0.1			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ---- Texture: ----

Color After: ----- Clarity After: ---- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH2-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: DE-072 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) soil Lab Sample ID: 6709

Sample wt/vol: 30 (g/mL) g Lab File ID: LANGB-4-BH2-SS2

Level: (low/med) low Date Received: 6/20/89

% Moisture: not dec. ------ dec. 22.8 Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 6/27/89

GPC Cleanup: (Y/N) N pH: 6.95 Dilution Factor: ------

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
319-84-6	alpha-BHC	ND*	
319-85-7	beta-BHC	ND*	
319-86-8	delta-BHC	ND*	
58-89-9	gamma-BHC (Lindane)	ND*	
76-44-8	Heptachlor	ND*	
309-00-2	Aldrin	ND*	
1024-57-3	Heptachlor epoxide	ND*	
959-98-8	Endosulfan I	ND*	
60-57-1	Dieldrin	ND*	
72-55-9	4,4'-DDE	ND*	
72-20-8	Endrin	ND*	
33213-65-9	Endosulfan II	ND*	
72-54-8	4,4'-DDD	ND*	
1031-07-8	Endosulfan sulfate	ND*	
50-29-3	4,4'-DDT	ND*	
72-43-5	Methoxychlor	ND*	
53494-70-5	Endrin ketone	ND*	
5103-71-9	alpha-Chlordane	ND*	
5103-74-2	gamma-Chlordane	ND*	
8001-35-2	Toxaphene	ND*	
12674-11-2	Aroclor-1016	2.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	2.1	U
53469-21-9	Aroclor-1242	2.1	U
12672-29-6	Aroclor-1248	2.1	U
11097-69-1	Aroclor-1254	4.1	U
11096-82-5	Aroclor-1260	4.1	U

*ND = Not Determined for this study.

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH3-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6706

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.8			
7440-39-3	Barium	164			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.2			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	17			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	6.9			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	0.025		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: LANGB-4-BH3-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: DE-072 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) Soil Lab Sample ID: 6705

Sample wt/vol: 30 (g/mL) g Lab File ID: LANGB-4-BH3-SS1

Level: (low/med) Low Date Received: 6/20/89

% Moisture: not dec. _____ dec. 12.7 Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 6/27/89

GPC Cleanup: (Y/N) N pH: 7.55 Dilution Factor: --------

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
319-84-6	alpha-BHC	ND*	
319-85-7	beta-BHC	ND*	
319-86-8	delta-BHC	ND*	
58-89-9	gamma-BHC (Lindane)	ND*	
76-44-8	Heptachlor	ND*	
309-00-2	Aldrin	ND*	
1024-57-3	Heptachlor epoxide	ND*	
959-98-8	Endosulfan I	ND*	
60-57-1	Dieldrin	ND*	
72-55-9	4,4'-DDE	ND*	
72-20-8	Endrin	ND*	
33213-65-9	Endosulfan II	ND*	
72-54-8	4,4'-DDD	ND*	
1031-07-8	Endosulfan sulfate	ND*	
50-29-3	4,4'-DDT	ND*	
72-43-5	Methoxychlor	ND*	
53494-70-5	Endrin ketone	ND*	
5103-71-9	alpha-Chlordane	ND*	
5103-74-2	gamma-Chlordane	ND*	
8001-35-2	Toxaphene	ND*	
12674-11-2	Aroclor-1016	1.8	U
11104-28-2	Aroclor-1221	1.8	U
11141-16-5	Aroclor-1232	1.8	U
53469-21-9	Aroclor-1242	1.8	U
12672-29-6	Aroclor-1248	1.8	U
11097-69-1	Aroclor-1254	6.9	U
11096-82-5	Aroclor-1260	6.9	U

*ND = Not Determined for this study.

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH3-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6706

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.8			
7440-39-3	Barium	164			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.2			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	17			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	6.9			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.017			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.1		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N.

LANGB-4-BH3-SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ------ Case No.: DE-072 SAS No.: ------ SDG No.: ------

Matrix: (soil/water) Soil Lab Sample ID: 6706

Sample wt/vol: 30 (g/mL) g Lab File ID: LANGB-4-BH3-SS2

Level: (low/med) Low Date Received: 6/20/89

% Moisture: not dec. ------ dec. 17.5 Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 6/27/89

GPC Cleanup: (Y/N) N pH: 7.67 Dilution Factor: -------

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
319-84-6	alpha-BHC	ND*	
319-85-7	beta-BHC	ND*	
319-86-8	delta-BHC	ND*	
58-89-9	gamma-BHC (Lindane)	ND*	
76-44-8	Heptachlor	ND*	
309-00-2	Aldrin	ND*	
1024-57-3	Heptachlor epoxide	ND*	
959-98-8	Endosulfan I	ND*	
60-57-1	Dieldrin	ND*	
72-55-9	4,4'-DDE	ND*	
72-20-8	Endrin	ND*	
33213-65-9	Endosulfan II	ND*	
72-54-8	4,4'-DDD	ND*	
1031-07-8	Endosulfan sulfate	ND*	
50-29-3	4,4'-DDT	ND*	
72-43-5	Methoxychlor	ND*	
53494-70-5	Endrin ketone	ND*	
5103-71-9	alpha-Chlordane	ND*	
5103-74-2	gamma-Chlordane	ND*	
8001-35-2	Toxaphene	ND*	
12674-11-2	Aroclor-1016	1.9	U
11104-28-2	Aroclor-1221	1.9	U
11141-16-5	Aroclor-1232	1.9	U
53469-21-9	Aroclor-1242	1.9	U
12672-29-6	Aroclor-1248	1.9	U
11097-69-1	Aroclor-1254	3.9	U
11096-82-5	Aroclor-1260	3.9	U

*ND = Not Determined for this study.

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-4-BH4-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6707

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.4			
7440-39-3	Barium	190			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.2			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	5			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	6.2			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	0.025		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

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APPENDIX E6
SITE 5 ANALYTICAL RESULTS

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-5-MW1-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6927

Level (low/med): Low Date Received: 6/24/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.025			
7440-39-3	Barium	.465			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ---- Clarity Before: ---- Texture: ----

Color After: ---- Clarity After: ---- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA S[redacted]

5MW1[redacted] J

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 6[redacted]

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1664[redacted]

Level: (low/med) LOW Date Received: 6/24[redacted]

% Moisture: not dec.100. Date Analyzed: 6/26[redacted]

Column: (pack/cap) PACK Dilution Factor:[redacted]

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	[redacted]
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	U
67-66-3	Chloroform	5.	U
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	U
1330-20-7	Xylene (total)	5.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

5MW1GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0946

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

5MW1GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0946

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/27/89

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 7/ 3/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50.	U
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-methylphenol	10.	U
86-30-6	N-Nitrosodiphenylamine	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
218-01-9	Chrysene	10.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	U
117-84-0	Di-n-octylphthalate	10.	U
205-99-2	Benzo(b)fluoranthene	10.	U
207-08-9	Benzo(k)fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1) - Cannot be separated from diphenylamine

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-5-BH1-SS-1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Soil Lab Sample ID: 6922

Level (low/med): Low Date Received: 6/23/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	2.6			
7440-39-3	Barium	157			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.8			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	21.1			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	4.9			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.025			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.7			
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: ----

Color After: ----- Clarity After: ----- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-5-BH1-SS-2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6923

Level (low/med): Low Date Received: 6/23/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.8			
7440-39-3	Barium	200			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.5			
7440-70-2	Calcium	~~ND*~~			
7440-47-3	Chromium	7.0			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	6.4			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	0.025		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.2			
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: ----

Color After: ----- Clarity After: ----- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-5-MW1-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6927

Level (low/med): Low Date Received: 6/24/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.025			
7440-39-3	Barium	.465			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ------ Clarity Before: ---- Texture: -----

Color After: ------ Clarity After: ---- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

5BH1S9

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 1. (g/mL) G Lab File ID: A1669

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec. 18. Date Analyzed: 6/26/89

Column: (pack/cap) PACK Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
74-87-3	Chloromethane	61.	U
74-83-9	Bromomethane	61.	U
75-01-4	Vinyl Chloride	61.	U
75-00-3	Chloroethane	61.	U
75-09-2	Methylene Chloride	31.	U
67-64-1	Acetone	61.	U
75-15-0	Carbon Disulfide	31.	U
75-35-4	1,1-Dichloroethene	31.	U
75-34-3	1,1-Dichloroethane	31.	U
540-59-0	1,2-Dichloroethene (total)	31.	U
67-66-3	Chloroform	31.	U
107-06-2	1,2-Dichloroethane	31.	U
78-93-3	2-Butanone	61.	U
71-55-6	1,1,1-Trichloroethane	31.	U
56-23-5	Carbon Tetrachloride	31.	U
108-05-4	Vinyl Acetate	61.	U
75-27-4	Bromodichloromethane	31.	U
78-87-5	1,2-Dichloropropane	31.	U
10061-01-5	cis-1,3-Dichloropropene	31.	U
79-01-6	Trichloroethene	31.	U
124-48-1	Dibromochloromethane	31.	U
79-00-5	1,1,2-Trichloroethane	31.	U
71-43-2	Benzene	31.	U
10061-02-6	trans-1,3-Dichloropropene	31.	U
75-25-2	Bromoform	31.	U
108-10-1	4-Methyl-2-Pentanone	61.	U
591-78-6	2-Hexanone	61.	U
127-18-4	Tetrachloroethene	31.	U
79-34-5	1,1,2,2-Tetrachloroethane	31.	U
108-88-3	Toluene	31.	U
108-90-7	Chlorobenzene	31.	U
100-41-4	Ethylbenzene	31.	U
100-42-5	Styrene	31.	U
1330-20-7	Xylene (total)	31.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

5BH1SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0903

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec. 18. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	200.	U
111-44-4	bis(2-Chloroethyl)ether	200.	U
95-57-8	2-Chlorophenol	200.	U
541-73-1	1,3-Dichlorobenzene	200.	U
106-46-7	1,4-Dichlorobenzene	200.	U
100-51-6	Benzyl alcohol	200.	U
95-50-1	1,2-Dichlorobenzene	200.	U
95-48-7	2-Methylphenol	200.	U
108-60-1	bis(2-Chloroisopropyl)ether	200.	U
106-44-5	4-Methylphenol	200.	U
621-64-7	N-Nitroso-di-n-propylamine	200.	U
67-72-1	Hexachloroethane	200.	U
98-95-3	Nitrobenzene	200.	U
78-59-1	Isophorone	200.	U
88-75-5	2-Nitrophenol	200.	U
105-67-9	2,4-Dimethylphenol	200.	U
65-85-0	Benzoic acid	1000.	U
111-91-1	bis(2-Chloroethoxy)methane	200.	U
120-83-2	2,4-Dichlorophenol	200.	U
120-82-1	1,2,4-Trichlorobenzene	200.	U
91-20-3	Naphthalene	200.	U
106-47-8	4-Chloroaniline	200.	U
87-68-3	Hexachlorobutadiene	200.	U
59-50-7	4-Chloro-3-methylphenol	200.	U
91-57-6	2-Methylnaphthalene	200.	U
77-47-4	Hexachlorocyclopentadiene	200.	U
88-06-2	2,4,6-Trichlorophenol	200.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	200.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	200.	U
208-96-8	Acenaphthylene	200.	U
606-20-2	2,6-Dinitrotoluene	200.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

5BH1SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0903

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec. 18. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	200.	U
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	1000.	U
132-64-9	Dibenzofuran	200.	U
121-14-2	2,4-Dinitrotoluene	200.	U
84-66-2	Diethylphthalate	200.	U
7005-72-3	4-Chlorophenyl-phenylether	200.	U
86-73-7	Fluorene	200.	U
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	200.	U
86-30-6	N-Nitrosodiphenylamine	200.	U
101-55-3	4-Bromophenyl-phenylether	200.	U
118-74-1	Hexachlorobenzene	200.	U
87-86-5	Pentachlorophenol	1000.	U
85-01-8	Phenanthrene	200.	U
120-12-7	Anthracene	200.	U
84-74-2	Di-n-Butylphthalate	200.	U
206-44-0	Fluoranthene	200.	U
129-00-0	Pyrene	200.	U
85-68-7	Butylbenzylphthalate	200.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U
56-55-3	Benzo(a)Anthracene	200.	U
218-01-9	Chrysene	200.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	200.	U
117-84-0	Di-n-octylphthalate	200.	U
205-99-2	Benzo(b)fluoranthene	200.	U
207-08-9	Benzo(k)fluoranthene	200.	U
50-32-8	Benzo(a)Pyrene	200.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	200.	U
53-70-3	Dibenzo(a,h)Anthracene	200.	U
191-24-2	Benzo(g,h,i)Perylene	200.	U

(1) - Cannot be separated from diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

5BH1SS2

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 5

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 1. (g/mL) G Lab File ID: A1670

Level: (low/med) LOW Date Received: 6/24/89

% Moisture: not dec. 20. Date Analyzed: 6/26/89

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	63.	U
74-83-9	Bromomethane	63.	U
75-01-4	Vinyl Chloride	63.	U
75-00-3	Chloroethane	63.	U
75-09-2	Methylene Chloride	31.	U
67-64-1	Acetone	63.	U
75-15-0	Carbon Disulfide	31.	U
75-35-4	1,1-Dichloroethene	31.	U
75-34-3	1,1-Dichloroethane	31.	U
540-59-0	1,2-Dichloroethene (total)	31.	U
67-66-3	Chloroform	31.	U
107-06-2	1,2-Dichloroethane	31.	U
78-93-3	2-Butanone	63.	U
71-55-6	1,1,1-Trichloroethane	31.	U
56-23-5	Carbon Tetrachloride	31.	U
108-05-4	Vinyl Acetate	63.	U
75-27-4	Bromodichloromethane	31.	U
78-87-5	1,2-Dichloropropane	31.	U
10061-01-5	cis-1,3-Dichloropropene	31.	U
79-01-6	Trichloroethene	31.	U
124-48-1	Dibromochloromethane	31.	U
79-00-5	1,1,2-Trichloroethane	31.	U
71-43-2	Benzene	31.	U
10061-02-6	trans-1,3-Dichloropropene	31.	U
75-25-2	Bromoform	31.	U
108-10-1	4-Methyl-2-Pentanone	63.	U
591-78-6	2-Hexanone	63.	U
127-18-4	Tetrachloroethene	31.	U
79-34-5	1,1,2,2-Tetrachloroethane	31.	U
108-88-3	Toluene	31.	U
108-90-7	Chlorobenzene	31.	U
100-41-4	Ethylbenzene	31.	U
100-42-5	Styrene	31.	U
1330-20-7	Xylene (total)	31.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

5BH1SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0904

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec. 20. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	210.	U
111-44-4	bis(2-Chloroethyl)ether	210.	U
95-57-8	2-Chlorophenol	210.	U
541-73-1	1,3-Dichlorobenzene	210.	U
106-46-7	1,4-Dichlorobenzene	210.	U
100-51-6	Benzyl alcohol	210.	U
95-50-1	1,2-Dichlorobenzene	210.	U
95-48-7	2-Methylphenol	210.	U
108-60-1	bis(2-Chloroisopropyl)ether	210.	U
106-44-5	4-Methylphenol	210.	U
621-64-7	N-Nitroso-di-n-propylamine	210.	U
67-72-1	Hexachloroethane	210.	U
98-95-3	Nitrobenzene	210.	U
78-59-1	Isophorone	210.	U
88-75-5	2-Nitrophenol	210.	U
105-67-9	2,4-Dimethylphenol	210.	U
65-85-0	Benzoic acid	1000.	U
111-91-1	bis(2-Chloroethoxy)methane	210.	U
120-83-2	2,4-Dichlorophenol	210.	U
120-82-1	1,2,4-Trichlorobenzene	210.	U
91-20-3	Naphthalene	210.	U
106-47-8	4-Chloroaniline	210.	U
87-68-3	Hexachlorobutadiene	210.	U
59-50-7	4-Chloro-3-methylphenol	210.	U
91-57-6	2-Methylnaphthalene	210.	U
77-47-4	Hexachlorocyclopentadiene	210.	U
88-06-2	2,4,6-Trichlorophenol	210.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	210.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	210.	U
208-96-8	Acenaphthylene	210.	U
606-20-2	2,6-Dinitrotoluene	210.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

5BH1SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0904

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec. 20. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/26/89

GPC Cleanup: (Y/N) N pH: 7.6 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	210.	U
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	1000.	U
132-64-9	Dibenzofuran	210.	U
121-14-2	2,4-Dinitrotoluene	210.	U
84-66-2	Diethylphthalate	210.	U
7005-72-3	4-Chlorophenyl-phenylether	210.	U
86-73-7	Fluorene	210.	U
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	210.	U
86-30-6	N-Nitrosodiphenylamine	210.	U
101-55-3	4-Bromophenyl-phenylether	210.	U
118-74-1	Hexachlorobenzene	210.	U
87-86-5	Pentachlorophenol	1000.	U
85-01-8	Phenanthrene	210.	U
120-12-7	Anthracene	210.	U
84-74-2	Di-n-Butylphthalate	210.	U
206-44-0	Fluoranthene	210.	U
129-00-0	Pyrene	210.	U
85-68-7	Butylbenzylphthalate	210.	U
91-94-1	3,3'-Dichlorobenzidine	420.	U
56-55-3	Benzo(a)Anthracene	210.	U
218-01-9	Chrysene	210.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	210.	U
117-84-0	Di-n-octylphthalate	210.	U
205-99-2	Benzo(b)fluoranthene	210.	U
207-08-9	Benzo(k)fluoranthene	210.	U
50-32-8	Benzo(a)Pyrene	210.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	210.	U
53-70-3	Dibenzo(a,h)Anthracene	210.	U
191-24-2	Benzo(g,h,i)Perylene	210.	U

(1) - Cannot be separated from diphenylamine

APPENDIX E7
SITE 6 ANALYTICAL RESULTS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-6-BH1-SS1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6702

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	5.3			
7440-39-3	Barium	193			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.4			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	25			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	9.5			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	0.025		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

6BH1SS1

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1590

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 23. Date Analyzed: 6/20/89

Column: (pack/cap) PACK Dilution Factor: 1.

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13.	U
74-83-9	Bromomethane	13.	U
75-01-4	Vinyl Chloride	13.	U
75-00-3	Chloroethane	13.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	13.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	13.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
108-05-4	Vinyl Acetate	13.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	13.	U
591-78-6	2-Hexanone	13.	U
127-18-4	Tetrachloroethene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
1330-20-7	Xylene (total)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

6BH1SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0849

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 23. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	220.	U
111-44-4	bis(2-Chloroethyl)ether	220.	U
95-57-8	2-Chlorophenol	220.	U
541-73-1	1,3-Dichlorobenzene	220.	U
106-46-7	1,4-Dichlorobenzene	220.	U
100-51-6	Benzyl alcohol	220.	U
95-50-1	1,2-Dichlorobenzene	220.	U
95-48-7	2-Methylphenol	220.	U
108-60-1	bis(2-Chloroisopropyl)ether	220.	U
106-44-5	4-Methylphenol	220.	U
621-64-7	N-Nitroso-di-n-propylamine	220.	U
67-72-1	Hexachloroethane	220.	U
98-95-3	Nitrobenzene	220.	U
78-59-1	Isophorone	220.	U
88-75-5	2-Nitrophenol	220.	U
105-67-9	2,4-Dimethylphenol	220.	U
65-85-0	Benzoic acid	1100.	U
111-91-1	bis(2-Chloroethoxy)methane	220.	U
120-83-2	2,4-Dichlorophenol	220.	U
120-82-1	1,2,4-Trichlorobenzene	220.	U
91-20-3	Naphthalene	220.	U
106-47-8	4-Chloroaniline	220.	U
87-68-3	Hexachlorobutadiene	220.	U
59-50-7	4-Chloro-3-methylphenol	220.	U
91-57-6	2-Methylnaphthalene	220.	U
77-47-4	Hexachlorocyclopentadiene	220.	U
88-06-2	2,4,6-Trichlorophenol	220.	U
95-95-4	2,4,5-Trichlorophenol	1100.	U
91-58-7	2-Chloronaphthalene	220.	U
88-74-4	2-Nitroaniline	1100.	U
131-11-3	Dimethylphthalate	220.	U
208-96-8	Acenaphthylene	220.	U
606-20-2	2,6-Dinitrotoluene	220.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAM

6BH1SS1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0849

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 23. dec. 0. Date Extracted: 6/21/

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	
99-09-2	3-Nitroaniline	1100.	U
83-32-9	Acenaphthene	220.	U
51-28-5	2,4-Dinitrophenol	1100.	U
100-02-7	4-Nitrophenol	1100.	U
132-64-9	Dibenzofuran	220.	U
121-14-2	2,4-Dinitrotoluene	220.	U
84-66-2	Diethylphthalate	220.	U
7005-72-3	4-Chlorophenyl-phenylether	220.	U
86-73-7	Fluorene	220.	U
100-01-6	4-Nitroaniline	1100.	U
534-52-1	4,6-Dinitro-2-methylphenol	220.	U
86-30-6	N-Nitrosodiphenylamine	220.	U
101-55-3	4-Bromophenyl-phenylether	220.	U
118-74-1	Hexachlorobenzene	220.	U
87-86-5	Pentachlorophenol	1100.	U
85-01-8	Phenanthrene	220.	U
120-12-7	Anthracene	220.	U
84-74-2	Di-n-Butylphthalate	220.	U
206-44-0	Fluoranthene	220.	U
129-00-0	Pyrene	220.	U
85-68-7	Butylbenzylphthalate	220.	U
91-94-1	3,3'-Dichlorobenzidine	430.	U
56-55-3	Benzo(a)Anthracene	220.	U
218-01-9	Chrysene	220.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	220.	U
117-84-0	Di-n-octylphthalate	220.	U
205-99-2	Benzo(b)fluoranthene	220.	U
207-08-9	Benzo(k)fluoranthene	220.	U
50-32-8	Benzo(a)Pyrene	220.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	220.	U
53-70-3	Dibenzo(a,h)Anthracene	220.	U
191-24-2	Benzo(g,h,i)Perylene	220.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. LANGB-6-BH1 & SS2

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6703

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	3.8			
7440-39-3	Barium	172			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.2			
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	20			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	9.1			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	0.034			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ---- Texture: -----

Color After: ----- Clarity After: ---- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

6BH1SS2

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1595

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 19. Date Analyzed: 6/21/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
108-05-4	Vinyl Acetate	12.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
1330-20-7	Xylene (total)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

6BH1SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0850

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	210.	U
111-44-4	bis(2-Chloroethyl)ether	210.	U
95-57-8	2-Chlorophenol	210.	U
541-73-1	1,3-Dichlorobenzene	210.	U
106-46-7	1,4-Dichlorobenzene	210.	U
100-51-6	Benzyl alcohol	210.	U
95-50-1	1,2-Dichlorobenzene	210.	U
95-48-7	2-Methylphenol	210.	U
108-60-1	bis(2-Chloroisopropyl)ether	210.	U
106-44-5	4-Methylphenol	210.	U
621-64-7	N-Nitroso-di-n-propylamine	210.	U
67-72-1	Hexachloroethane	210.	U
98-95-3	Nitrobenzene	210.	U
78-59-1	Isophorone	210.	U
88-75-5	2-Nitrophenol	210.	U
105-67-9	2,4-Dimethylphenol	210.	U
65-85-0	Benzoic acid	1000.	U
111-91-1	bis(2-Chloroethoxy)methane	210.	U
120-83-2	2,4-Dichlorophenol	210.	U
120-82-1	1,2,4-Trichlorobenzene	210.	U
91-20-3	Naphthalene	210.	U
106-47-8	4-Chloroaniline	210.	U
87-68-3	Hexachlorobutadiene	210.	U
59-50-7	4-Chloro-3-methylphenol	210.	U
91-57-6	2-Methylnaphthalene	210.	U
77-47-4	Hexachlorocyclopentadiene	210.	U
88-06-2	2,4,6-Trichlorophenol	210.	U
95-95-4	2,4,5-Trichlorophenol	1000.	U
91-58-7	2-Chloronaphthalene	210.	U
88-74-4	2-Nitroaniline	1000.	U
131-11-3	Dimethylphthalate	210.	U
208-96-8	Acenaphthylene	210.	U
606-20-2	2,6-Dinitrotoluene	210.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE I

6BH1SS2

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0850

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 19. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1000.	U
83-32-9	Acenaphthene	210.	U
51-28-5	2,4-Dinitrophenol	1000.	U
100-02-7	4-Nitrophenol	1000.	U
132-64-9	Dibenzofuran	210.	U
121-14-2	2,4-Dinitrotoluene	210.	U
84-66-2	Diethylphthalate	210.	U
7005-72-3	4-Chlorophenyl-phenylether	210.	U
86-73-7	Fluorene	210.	U
100-01-6	4-Nitroaniline	1000.	U
534-52-1	4,6-Dinitro-2-methylphenol	210.	U
86-30-6	N-Nitrosodiphenylamine	210.	U
101-55-3	4-Bromophenyl-phenylether	210.	U
118-74-1	Hexachlorobenzene	210.	U
87-86-5	Pentachlorophenol	1000.	U
85-01-8	Phenanthrene	210.	U
120-12-7	Anthracene	210.	U
84-74-2	Di-n-Butylphthalate	210.	U
206-44-0	Fluoranthene	210.	U
129-00-0	Pyrene	210.	U
85-68-7	Butylbenzylphthalate	210.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U
56-55-3	Benzo(a)Anthracene	210.	U
218-01-9	Chrysene	210.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	210.	U
117-84-0	Di-n-octylphthalate	210.	U
205-99-2	Benzo(b)fluoranthene	210.	U
207-08-9	Benzo(k)fluoranthene	210.	U
50-32-8	Benzo(a)Pyrene	210.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	210.	U
53-70-3	Dibenzo(a,h)Anthracene	210.	U
191-24-2	Benzo(g,h,i)Perylene	210.	U

(1) - Cannot be separated from diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-6-BH1-SS3

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ----- Case No.: ---- SAS No.: ----- SDG No.: -----

Matrix (soil/water): Soil Lab Sample ID: 6704

Level (low/med): Low Date Received: 6/20/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/Kg

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	1.5			
7440-39-3	Barium	47			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	0.1		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	12			
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	4.2			
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.029			
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	0.5		U	
7440-22-4	Silver	0.1		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ----- Clarity Before: ----- Texture: -----

Color After: ----- Clarity After: ----- Artifacts: -----

Comments:

*ND = Not Determined for this Study.

FORM I - IN

7/88

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE N

6BH1SS3

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 5. (g/mL) G Lab File ID: A1596

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 14. Date Analyzed: 6/21/89

Column: (pack/cap) PACK Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
540-59-0	1,2-Dichloroethene (total)	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
108-05-4	Vinyl Acetate	12.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroetnene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
1330-20-7	Xylene (total)	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE: 6BH1SS3

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0851

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 14. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	190.	U
111-44-4	bis(2-Chloroethyl)ether	190.	U
95-57-8	2-Chlorophenol	190.	U
541-73-1	1,3-Dichlorobenzene	190.	U
106-46-7	1,4-Dichlorobenzene	190.	U
100-51-6	Benzyl alcohol	190.	U
95-50-1	1,2-Dichlorobenzene	190.	U
95-48-7	2-Methylphenol	190.	U
108-60-1	bis(2-Chloroisopropyl)ether	190.	U
106-44-5	4-Methylphenol	190.	U
621-64-7	N-Nitroso-di-n-propylamine	190.	U
67-72-1	Hexachloroethane	190.	U
98-95-3	Nitrobenzene	190.	U
78-59-1	Isophorone	190.	U
88-75-5	2-Nitrophenol	190.	U
105-67-9	2,4-Dimethylphenol	190.	U
65-85-0	Benzoic acid	970.	U
111-91-1	bis(2-Chloroethoxy)methane	190.	U
120-83-2	2,4-Dichlorophenol	190.	U
120-82-1	1,2,4-Trichlorobenzene	190.	U
91-20-3	Naphthalene	190.	U
106-47-8	4-Chloroaniline	190.	U
87-68-3	Hexachlorobutadiene	190.	U
59-50-7	4-Chloro-3-methylphenol	190.	U
91-57-6	2-Methylnaphthalene	190.	U
77-47-4	Hexachlorocyclopentadiene	190.	U
88-06-2	2,4,6-Trichlorophenol	190.	U
95-95-4	2,4,5-Trichlorophenol	970.	U
91-58-7	2-Chloronaphthalene	190.	U
88-74-4	2-Nitroaniline	970.	U
131-11-3	Dimethylphthalate	190.	U
208-96-8	Acenaphthylene	190.	U
606-20-2	2,6-Dinitrotoluene	190.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

6BH1SS3

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 2

Matrix: (soil/water) SOIL Lab Sample ID:

Sample wt/vol: 30. (g/mL) G Lab File ID: B0851

Level: (low/med) LOW Date Received: 6/20/89

% Moisture: not dec. 14. dec. 0. Date Extracted: 6/21/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/22/89

GPC Cleanup: (Y/N) N pH: 7.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	970.	U
83-32-9	Acenaphthene	190.	U
51-28-5	2,4-Dinitrophenol	970.	U
100-02-7	4-Nitrophenol	970.	U
132-64-9	Dibenzofuran	190.	U
121-14-2	2,4-Dinitrotoluene	190.	U
84-66-2	Diethylphthalate	190.	U
7005-72-3	4-Chlorophenyl-phenylether	190.	U
86-73-7	Fluorene	190.	U
100-01-6	4-Nitroaniline	970.	U
534-52-1	4,6-Dinitro-2-methylphenol	190.	U
86-30-6	N-Nitrosodiphenylamine	190.	U
101-55-3	4-Bromophenyl-phenylether	190.	U
118-74-1	Hexachlorobenzene	190.	U
87-86-5	Pentachlorophenol	970.	U
85-01-8	Phenanthrene	190.	U
120-12-7	Anthracene	190.	U
84-74-2	Di-n-Butylphthalate	190.	U
206-44-0	Fluoranthene	190.	U
129-00-0	Pyrene	190.	U
85-68-7	Butylbenzylphthalate	190.	U
91-94-1	3,3'-Dichlorobenzidine	390.	U
56-55-3	Benzo(a)Anthracene	190.	U
218-01-9	Chrysene	190.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	190.	U
117-84-0	Di-n-octylphthalate	190.	U
205-99-2	Benzo(b)fluoranthene	190.	U
207-08-9	Benzo(k)fluoranthene	190.	U
50-32-8	Benzo(a)Pyrene	190.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	190.	U
53-70-3	Dibenzo(a,h)Anthracene	190.	U
191-24-2	Benzo(g,h,i)Perylene	190.	U

(1) - Cannot be separated from diphenylamine

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SA[redacted]

6MW1[redacted]

Lab Name: HARRIS Contract: IFB

Lab Code: HARRIS Case No.: ENGSCI SAS No.: SDG No.: [redacted]

Matrix: (soil/water) WATER Lab Sample ID: [redacted]

Sample wt/vol: 5. (g/mL) ML Lab File ID: A1652

Level: (low/med) LOW Date Received: 6/2[redacted]

% Moisture: not dec.100. Date Analyzed: 6/24/[redacted]

Column: (pack/cap) PACK Dilution Factor: [redacted]

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
74-87-3	Chloromethane	10.	[redacted]
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	[redacted]
75-09-2	Methylene Chloride	5.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	5.	[redacted]
75-35-4	1,1-Dichloroethene	5.	[redacted]
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	1,2-Dichloroethene (total)	5.	[redacted]
67-66-3	Chloroform	5.	[redacted]
107-06-2	1,2-Dichloroethane	5.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	5.	[redacted]
56-23-5	Carbon Tetrachloride	5.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	5.	[redacted]
78-87-5	1,2-Dichloropropane	5.	[redacted]
10061-01-5	cis-1,3-Dichloropropene	5.	U
79-01-6	Trichloroethene	5.	[redacted]
124-48-1	Dibromochloromethane	5.	[redacted]
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	[redacted]
75-25-2	Bromoform	5.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	[redacted]
127-18-4	Tetrachloroethene	5.	[redacted]
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	[redacted]
108-90-7	Chlorobenzene	5.	[redacted]
100-41-4	Ethylbenzene	5.	U
100-42-5	Styrene	5.	[redacted]
1330-20-7	Xylene (total)	5.	[redacted]

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

6MW1GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0899

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10.	U
111-44-4	bis(2-Chloroethyl)ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
108-60-1	bis(2-Chloroisopropyl)ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-di-n-propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic acid	50.	U
111-91-1	bis(2-Chloroethoxy)methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethylphthalate	10.	U
208-96-8	Acenaphthylene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE: 6MW1GW1

Lab Name: HET Contract:

Lab Code: HET Case No.: ENGSCI SAS No.: SDG No.: 1

Matrix: (soil/water) WATER Lab Sample ID:

Sample wt/vol: 1000. (g/mL) ML Lab File ID: B0899

Level: (low/med) LOW Date Received: 6/23/89

% Moisture: not dec.100. dec. 0. Date Extracted: 6/24/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 6/25/89

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
99-09-2	3-Nitroaniline	50.	IU	
83-32-9	Acenaphthene	10.	IU	
51-28-5	2,4-Dinitrophenol	50.	IU	
100-02-7	4-Nitrophenol	50.	IU	
132-64-9	Dibenzofuran	10.	IU	
121-14-2	2,4-Dinitrotoluene	10.	IU	
84-66-2	Diethylphthalate	10.	IU	
7005-72-3	4-Chlorophenyl-phenylether	10.	IU	
86-73-7	Fluorene	10.	IU	
100-01-6	4-Nitroaniline	50.	IU	
534-52-1	4,6-Dinitro-2-methylphenol	10.	IU	
86-30-6	N-Nitrosodiphenylamine	10.	IU	
101-55-3	4-Bromophenyl-phenylether	10.	IU	
118-74-1	Hexachlorobenzene	10.	IU	
87-86-5	Pentachlorophenol	50.	IU	
85-01-8	Phenanthrene	10.	IU	
120-12-7	Anthracene	10.	IU	
84-74-2	Di-n-Butylphthalate	10.	IU	
206-44-0	Fluoranthene	10.	IU	
129-00-0	Pyrene	10.	IU	
85-68-7	Butylbenzylphthalate	10.	IU	
91-94-1	3,3'-Dichlorobenzidine	20.	IU	
56-55-3	Benzo(a)Anthracene	10.	IU	
218-01-9	Chrysene	10.	IU	
117-81-7	Bis(2-Ethylhexyl)Phthalate	10.	IU	
117-84-0	Di-n-octylphthalate	10.	IU	
205-99-2	Benzo(b)fluoranthene	10.	IU	
207-08-9	Benzo(k)fluoranthene	10.	IU	
50-32-8	Benzo(a)Pyrene	10.	IU	
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	IU	
53-70-3	Dibenzo(a,h)Anthracene	10.	IU	
191-24-2	Benzo(g,h,i)Perylene	10.	IU	

(1) - Cannot be separated from diphenylamine

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-6-MW1-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ---- Case No.: ---- SAS No.: ---- SDG No.: ----

Matrix (soil/water): Water Lab Sample ID: 6915

Level (low/med): Low Date Received: 6/23/89

% Solids: ----

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.003			
7440-39-3	Barium	.197			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ------ Clarity Before: ---- Texture: ----

Color After: ------ Clarity After: ---- Artifacts: ----

Comments:

*ND = Not Determined for this Study.

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

LANGB-6-MW1-GW1

Lab Name: Harris Environmental Tech. Contract: 51312

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Matrix (soil/water): Water Lab Sample ID: 6915

Level (low/med): Low Date Received: 6/23/89

% Solids: ____

Concentration Units (ug/L or mg/kg dry weight): mg/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	ND*			
7440-36-0	Antimony	ND*			
7440-38-2	Arsenic	.003			
7440-39-3	Barium	.197			
7440-41-7	Beryllium	ND*			
7440-43-9	Cadmium	.002		U	
7440-70-2	Calcium	ND*			
7440-47-3	Chromium	.002		U	
7440-48-4	Cobalt	ND*			
7440-50-8	Copper	ND*			
7439-89-6	Iron	ND*			
7439-92-1	Lead	.005		U	
7439-95-4	Magnesium	ND*			
7439-96-5	Manganese	ND*			
7439-97-6	Mercury	.0005		U	
7440-02-0	Nickel	ND*			
7440-09-7	Potassium	ND*			
7782-49-2	Selenium	.002		U	
7440-22-4	Silver	.002		U	
7440-23-5	Sodium	ND*			
7440-28-0	Thallium	ND*			
7440-62-2	Vanadium	ND*			
7440-66-6	Zinc	ND*			
	Cyanide	ND*			

Color Before: ____ Clarity Before: ____ Texture: ____

Color After: ____ Clarity After: ____ Artifacts: ____

Comments:

*ND = Not Determined for this Study.

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APPENDIX E8

SAMPLE HOLDING TIME SUMMARY

TABLE 1
SUMMARY OF HOLDING TIMES FOR SOIL SAMPLES
LINCOLN AIR NATIONAL GUARD BASE, NEBRASKA

ES Identifier	Laboratory ID #	Date of Collection	Volatiles (SW8240) Analyzed (14 days)	Semivolatiles (SW8270) Extracted (7 days)	Semivolatiles (SW8270) Analyzed (40 days)	Metals (SW6010) Analyzed (120 days)	Mercury (SW7471) Analyzed (28 days)	Common Anions (A429) Analyzed (28 days)	Total Petroleum Hydrocarbons (E418.1) Analyzed (28 days)	Chlorinated Pesticides/PCBs (SW8080) Extracted (7 days)	Chlorinated Pesticides/PCBs (SW8080) Analyzed (40 days)
--Site 3											
LANGB-3-BH1-SS1	3BH1SS1	6/21/89	6/23/89(2)	6/22/89(1)	6/23/89(1)	6/30/89(9)	6/30/89(9)	6/30/89(9)	6/30/89(9)	NR	
LANGB-3-BH1-SS2	3BH1SS2	6/21/89	6/25/89(4)	6/22/89(1)	6/23/89(1)	6/30/89(9)	6/30/89(9)	6/30/89(9)	6/30/89(9)	NR	
LANGB-3-BH1-SS3	3BH1SS3	6/21/89	6/23/89(2)	NR	NR	6/30/89(9)	6/30/89(9)	NR	6/30/89(9)	NR	
LANGB-3-BH2-SS1	3BH2SS1	6/21/89	6/23/89(2)	6/22/89(1)	6/23/89(1)	6/30/89(9)	6/30/89(9)	6/29/89(8)	6/30/89(9)	NR	
LANGB-3-BH2-SS2	3BH2SS2	6/21/89	6/23/89(2)	6/22/89(1)	6/23/89(1)	6/30/89(9)	6/30/89(9)	6/30/89(9)	6/30/89(9)	NR	
LANGB-3-BH3-SS1	3BH3SS1	6/21/89	6/25/89(4)	6/22/89(1)	6/23/89(1)	6/30/89(9)	6/30/89(9)	6/30/89(9)	6/30/89(9)	NR	
LANGB-3-BH3-SS2	3BH3SS2	6/21/89	6/22/89(1)	6/22/89(1)	6/23/89(1)	6/30/89(9)	6/30/89(9)	6/29/89(8)	6/30/89(9)	NR	
LANGB-3-BH4-SS1	3BH4SS1	6/21/89	6/25/89(4)	6/22/89(1)	6/23/89(1)	6/30/89(9)	6/30/89(9)	6/29/89(8)	6/30/89(9)		
--Site 4											
LANGB-4-BH1-SS1	LANGB-4-BH1-SS1	6-20-89	NR	NR		6/30/89(10)	6/30/89(10)	6/30/89(10)	6/30/89(10)	6/21/89(1)	6/27/89(6)
LANGB-4-BH1-SS2	LANGB-4-BH1-SS2	6-20-89	NR	NR		6/30/89(10)	6/30/89(10)	7/6/89(16)	6/30/89(10)	6/21/89(1)	6/27/89(6)
LANGB-4-BH2-SS1	LANGB-4-BH2-SS1	6-20-89	NR	NR		6/30/89(10)	6/30/89(10)	6/30/89(10)	6/30/89(10)	6/21/89(1)	6/27/89(6)
LANGB-4-BH2-SS2	LANGB-4-BH2-SS2	6-20-89	NR	NR		6/30/89(10)	6/30/89(10)	6/30/89(10)	6/30/89(10)	6/21/89(1)	6/27/89(6)
LANGB-4-BH3-SS1	LANGB-4-BH3-SS1	6-20-89	NR	NR		6/30/89(10)	6/30/89(10)	7/5/89(15)	6/30/89(10)	6/21/89(1)	6/27/89(6)
LANGB-4-BH3-SS2	LANGB-4-BH3-SS2	6-20-89	NR	NR		6/30/89(10)	6/30/89(10)	6/29/89(9)	6/30/89(10)	6/21/89(1)	6/27/89(6)
LANGB-4-BH4-SS1	LANGB-4-BH4-SS1	6-20-89	NR	NR		6/30/89(10)	6/30/89(10)	6/30/89(10)	6/30/89(10)	6/21/89(1)	6/27/89(6)

TABLE 1
SUMMARY OF HOLDING TIMES FOR SOIL SAMPLES
LINCOLN AIR NATIONAL GUARD BASE, NEBRASKA

ES Identifier	Laboratory ID #	Date of Collection	Volatiles (SW8240) Analyzed (14 days)	Semivolatiles (SW8270) Extracted (7 days)	Semivolatiles (SW8270) Analyzed (40 days)	Metals (SW6010) Analyzed (120 days)	Mercury (SW7471) Analyzed (28 days)	Common Anions (A429) Analyzed (28 days)	Total Petroleum Hydrocarbons (E418.1) Analyzed (28 days)	Chlorinated Pesticides/PCBs (SW8080) Extracted (7 days)	Chlorinated Pesticides/PCBs (SW8080) Analyzed (40 days)
--Site 5											
LANGB-5-BH1-SS1	SBH1SS1	6/23/89	6/26/89(3)	6/24/89(1)	6/26/89(2)	6/30/89(7)	6/30/89(7)	6/30/89(7)	6/30/89(7)	NR	
LANGB-5-BH1-SS2	SBH1SS2	6/23/89	6/26/89(3)	6/24/89(1)	6/26/89(2)	6/30/89(7)	6/30/89(7)	6/29/89(6)	6/30/89(7)	NR	
--Site 6											
LANGB-6-BH1-SS1	6BH1SS1	6/20/89	6/20/89(0)	6/21/89(1)	6/22/89(1)	6/30/89(10)	6/30/89(10)	NR	6/30/89(10)	NR	
LANGB-6-BH1-SS2	6BH1SS2	6/20/89	6/21/89(1)	6/21/89(1)	6/22/89(1)	6/30/89(10)	6/30/89(10)	NR	6/30/89(10)	NR	
LANGB-6-BH1-SS3	6BH1SS3	6/20/89	6/21/89(1)	6/21/89(1)	6/22/89(1)	6/30/89(10)	6/30/89(10)	NR	6/30/89(10)	NR	

TABLE 2
SUMMARY OF HOLDING TIMES FOR WATER AND SEDIMENT SAMPLES
LINCOLN AIR NATIONAL GUARD BASE, NEBRASKA

ES Identifier	Laboratory ID #	Date of Collection	Volatiles (E624) Analyzed (14 days)	Semivolatiles (E625) Extracted (7 days)	Semivolatiles (E625) Analyzed (40 days)	Metals (SW6010) Analyzed (120 days)	Mercury (SW7471) Analyzed (28 days)	Common Anions (A429) Analyzed (28 days)	Total Petroleum Hydrocarbons (E418.1) Analyzed (28 days)	Volatiles (SW8240) Analyzed (14 days)	Semivolatile (SW8270) Extracted (7 days)	Semivolatile (SW8270) Analyzed (40 days)
--Groundwater												
--Site 1												
LANGB-1-MW0206-GW1	1H206GW1	6/22/89	6/23/89(1)	6/30/89(8)	7/2/89(2)	6/30/89(8)	6/28/89(6)	7/7/89(15)	6/30/89(8)	NR	NR	
LANGB-1-MW0218-GW1	1H218GW1	6/22/89	6/24/89(2)	6/30/89(8)	7/2/89(2)	6/30/89(8)	6/28/89(6)	7/7/89(15)	6/30/89(8)	NR	NR	
LANGB-1-MW0204-GW1	1H204GW1	6/22/89	6/29/89(7)	NR	NR	6/30/89(8)	6/28/89(6)	6/27/89(5)	6/30/89(8)	NR	NR	
LANGB-1-MW0216-GW1	1H216GW1	6/22/89	6/23/89(1)	NR	NR	6/30/89(8)	6/28/89(6)	7/7/89(15)	6/30/89(8)	NR	NR	
LANGB-1-MW0214-GW1	1H214GW1	6/22/89	6/23/89(1)	NR	NR	6/30/89(8)	6/28/89(6)	6/27/89(5)	6/30/89(8)	NR	NR	
LANGB-1-MW0210-GW1	1H210GW1	6/22/89	6/24/89(2)	NR	NR	6/30/89(8)	6/28/89(6)	7/5/89(13)	6/30/89(8)	NR	NR	
LANGB-1-MW1203-GW1	1H1203GW1	6/22/89	6/26/89(4)	NR	NR	6/30/89(8)	6/28/89(6)	7/7/89(15)	6/30/89(8)	NR	NR	
LANGB-1-MW0209-GW1	1H209GW1	6/22/89	6/26/89(4)	NR	NR	6/30/89(8)	6/28/89(6)	7/7/89(15)	6/30/89(8)	NR	NR	
--Site 2												
LANGB-2-MW1-GW1	2MW1GW1	6/23/89	6/24/89(1)	6/24/89(1)	6/25/89(1)	6/30/89(7)	6/28/89(5)	7/7/89(14)	6/30/89(7)	NR	NR	
--Site 3												
LANGB-3-MW1-GW1	3MW1GW1	6/26/89	6/26/89(0)	6/27/89(1)	7/3/89(6)	6/30/89(4)	6/28/89(2)	7/5/89(9)	6/30/89(4)	NR	NR	
--Site 5												
LANGB-5-MW1-GW1	5MW1GW1	6/24/89	6/26/89(2)	6/27/89(3)	7/3/89(6)	6/30/89(6)	6/28/89(4)	7/7/89(13)	6/30/89(6)	NR	NR	

TABLE 2
SUMMARY OF HOLDING TIMES FOR WATER AND SEDIMENT SAMPLES
LINCOLN AIR NATIONAL GUARD BASE, NEBRASKA

ES Identifier	Laboratory ID #	Date of Collection	Volatiles (E624) Analyzed (14 days)	Semivolatiles (E625) Extracted (7 days)	Semivolatiles (E625) Analyzed (40 days)	Metals (SW6010) Analyzed (120 days)	Mercury (SW7471) Analyzed (28 days)	Common Anions (A429) Analyzed (28 days)	Total Petroleum Hydrocarbons (E418.1) Analyzed (28 days)	Volatiles (SW8240) Analyzed (14 days)	Semivolatile (SW8270) Extracted (7 days)	Semivolatile (SW8270) Analyzed (40 days)
--Groundwater												
--Site 6												
LANGB-6-MW1-GW1	6MW1GW1	6/23/89	6/24/89(1)	6/24/89(1)	6/25/89(1)	6/30/89(7)	6/28/89(5)	NR	6/30/89(7)	NR	NR	
--Surface Waters												
LANGB-2-SW1	25W1	6/19/89	6/19/89(0)	6/20/89(1)	6/22/89(2)	6/30/89(11)	6/28/89(9)	7/7/89(18)	6/30/89(11)	NR	NR	
LANGB-2-SW2	25W2	6/19/89	6/20/89(1)	6/20/89(1)	6/22/89(2)	6/30/89(11)	6/28/89(9)	7/6/89(17)	6/30/89(11)	NR	NR	
LANGB-2-SW3	25W3	6/19/89	6/20/89(1)	6/20/89(1)	6/22/89(2)	6/30/89(11)	6/28/89(9)	7/7/89(18)	6/30/89(11)	NR	NR	
LANGB-2-SW7	25W7	6/19/89	6/20/89(1)	6/20/89(1)	6/22/89(2)	6/30/89(11)	6/28/89(9)	7/7/89(18)	6/30/89(11)	NR	NR	
LANGB-2-SW4	25W4	6/20/89	6/20/89(0)	6/21/89(1)	6/22/89(1)	6/30/89(10)	6/28/89(8)	6/27/89(7)	6/30/89(10)	NR	NR	
LANGB-2-SW5	25W5	6/20/89	6/20/89(0)	6/21/89(1)	6/22/89(1)	6/30/89(10)	6/28/89(8)	6/27/89(7)	6/30/89(10)	NR	NR	
LANGB-2-SW6	25W6	6/20/89	6/22/89(2)	6/21/89(1)	6/22/89(1)	6/30/89(10)	6/28/89(8)	6/27/89(7)	6/30/89(10)			
--Sediments												
LANGB-2-SD1	2SD1	6/19/89	NR	NR		6/30/89(11)	6/28/89(9)	6/30/89(11)	6/30/89(11)	6/20/89(1)	6/22/89(3)	6/23/89(1)
LANGB-2-SD3	2SD3	6/19/89	NR	NR		6/30/89(11)	6/28/89(9)	6/30/89(11)	6/30/89(11)	6/20/89(1)	6/22/89(3)	6/23/89(1)
LANGB-2-SD7	2SD7	6/19/89	NR	NR		6/30/89(11)	6/28/89(9)	6/30/89(11)	6/30/89(11)	6/20/89(1)	6/22/89(3)	6/23/89(1)
LANGB-2-SD4	2SD4	6/20/89	NR	NR		6/30/89(10)	6/28/89(8)	6/30/89(10)	6/30/89(10)	6/21/89(1)	6/21/89(1)	6/22/89(1)
LANGB-2-SD5	2SD5	6/20/89	NR	NR		6/30/89(10)	6/28/89(8)	6/30/89(10)	6/30/89(10)	6/21/89(1)	6/21/89(1)	6/23/89(2)
LANGB-2-SD6	2SD6	6/20/89	NR	NR		6/30/89(10)	6/28/89(8)	6/30/89(10)	6/30/89(10)	6/22/89(2)	6/21/89(1)	6/23/89(2)

TABLE 3
SUMMARY OF HOLDING TIMES FOR FIELD QUALITY CONTROL SAMPLES
LINCOLN AIR NATIONAL GUARD BASE, NEBRASKA

ES Identifier	Laboratory ID #	Date of Collection	Volatiles E624 Analyzed (14 days)	Semivolatiles E625 Extracted (7 days)	Semivolatiles E625 Analyzed (40 days)	Metals (SW6010) Analyzed (120 days)	Mercury (SW7471) Analyzed (28 days)	Common Anions (A429) Analyzed (28 days)	Total Petroleum Hydrocarbons (E418.1) Analyzed (28 days)
--Trip Blanks									
LANGB-1-Trip Blank	TB 6/19-2	6/22/89	6/23/89(1)	NR		NR	NR	NR	NR
LANGB-2-Trip Blank	S2TRPBLK	6/23/89	6/24/89(1)	NR		NR	NR	NR	NR
TRIP BLANK	TB 6/19	6/20/89	6/22/89(2)	NR		NR	NR	NR	NR
LANGB-5-Trip Blank	TBLK 6/24	6/24/89	6/26/89(2)	NR		NR	NR	NR	NR
--Field Blanks									
LANGB-1-Field Blank	1 FIELDBL	6/22/89	6/23/89(1)	6/23/89(1)	7/3/89(11)	6/30/89(8)	6/28/89(6)	7/7/89(15)	6/30/89(8)
--Rinseate Blanks									
LANGB-1-Rinseate Blank	1 RINSATE	6/22/89	6/23/89(1)	6/23/89(1)	7/3/89(11)	6/30/89(8)	6/28/89(6)	7/7/89(15)	6/30/89(8)
LANGB-2-Rinseate Blank	2RBK 6/23	6/23/89	6/29/89(6)	6/24/89(1)	6/26/89(2)	6/30/89(7)	6/28/89(5)	7/7/89(14)	6/30/89(7)
LANGB-5-Rinseate Blank	5RBK 6/24	6/24/89	6/26/89(2)	6/27/89(3)	7/3/89(11)	6/30/89(6)	6/28/89(4)	7/7/89(13)	6/30/89(6)
LANGB-2-SW8	2SW8	6/20/89	6/21/89(1)	6/21/89(0)	6/22/89(1)	6/30/89(10)	6/28/89(8)	NR	6/30/89(10)
--Sources Water Blanks									
LANGB-6-Tap Water	6TPA 6/23	6/23/89	6/24/89(1)	6/24/89(1)	6/25/89(2)	6/30/89(7)	6/28/89(3)	7/7/89(14)	6/30/89(7)