



AL/EQ-TR-1993-0002
EPA/600/R-94/214b

AD-A286 808



0

ARMSTRONG

LABORATORY

DEMONSTRATION OF SPLIT-FLOW VENTILATION AND RECIRCULATION AS
FLOW-REDUCTION METHODS IN AN AIR FORCE PAINT SPRAY BOOTH

Volume 2.

S. Hughes, J. Ayer, R. Sutay

ARMSTRONG LABORATORY
ENVIRONICS DIRECTORATE
AL/EQS-OL

139 Barnes Drive, Suite 2
Tyndall AFB FL 32403-5323

SDTIC
ELECTE
MAY 10 1995
C D

Acurex Environmental Corporation
555 Clyde Avenue
P.O. Box 7044
Mountain View, CA 94039

US EPA/AEERL
MD-61
Research Triangle Park NC 27711

July 1994

Final Technical Report for Period February 1991 - October 1992

Approved for public release; distribution unlimited.

95-01376



AIR FORCE MATERIEL COMMAND
TYNDALL AIR FORCE BASE, FLORIDA 32403-5323

95 510 001

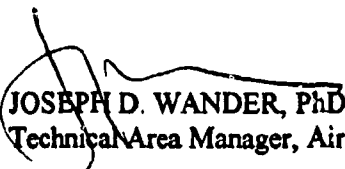
NOTICES

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any employees, nor any of their contractors, subcontractors, or their employees, make any warranty, express or implied, or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency, contractor, or subcontractor thereof. The views and opinions of the authors expressed herein do not necessarily state or reflect those of the United States Government or any agency, contractor, or subcontractor thereof.

When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely Government-related procurement, the United States Government incurs no responsibility or any obligation whatsoever. The fact that the Government may have formulated or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication, or otherwise in any manner construed, as licensing the holder or any other person or corporation, or as conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

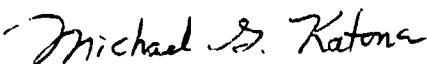
This technical report has been reviewed by the Public Affairs Office (PA) and is releasable to the National Technical Information Service (NTIS), where it will be available to the general public, including foreign nationals.

This report has been reviewed and is approved for publication.



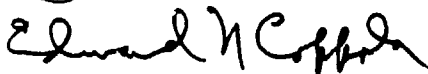
JOSEPH D. WANDER, PhD

Technical Area Manager, Air Pollution Control Technology



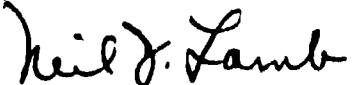
MICHAEL G. KATONA, PhD

Chief Scientist, Environics Directorate



EDWARD N. COPPOLA, Maj., USAF

Chief, Environmental Compliance Division



NEIL J. LAMB, Col, USAF, BSC

Director, Environics Directorate

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 940727		3. REPORT TYPE AND DATES COVERED Final, 910215 to 921009
4. TITLE AND SUBTITLE Demonstration of Split-flow Ventilation and Recirculation as Flow-reduction Methods in an Air Force Paint Spray Booth <i>Volume 2</i>			5. FUNDING NUMBERS Contract 68-D2-0063 Work Assignment 0/002 Program element 63723F Project 2103 Task 70 Work unit accession 97	
6. AUTHOR(S) S. Hughes and J. Ayer; R. Sutay, CIH (Section VI)				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Acurex Environmental Corporation 555 Clyde Avenue P.O. Box 7044 Mountain View, CA 94039			8. PERFORMING ORGANIZATION REPORT NUMBER FR-93-115	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. EPA AEERL MD-61 Research Triangle Park, NC 27711			10. SPONSORING/MONITORING AGENCY REPORT NUMBER AL/EQ-TR-1993-0002 EPA/600/R-94/214b	
11. SUPPLEMENTARY NOTES 1. Responsible individual: Joseph D. Wander, (904) 283-6240 2. Office symbol: AL/EQS-OL 3. Availability of report is specified on inside front cover.				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (Max'mum 200 words) During a series of painting operations in a horizontal-flow paint spray booth at Travis AFB, CA, baseline concentrations of four classes of toxic airborne pollutants were measured at 24 locations across a plane immediately forward of the exhaust filters, in the exhaust duct, and inside and outside the respirator in the painter's breathing zone (BZ). The resulting data were analyzed and used to design a modified ventilation system that (1) separates a portion of the exhaust exiting the lower portion of the booth, which contains a concentration of toxic pollutants greater than the average at the exhaust plane (split-flow); and (2) provides an option to return the flow from the upper portion of the exhaust to the intake plenum for mixing with fresh air and recirculation through the booth (recirculation). After critical review by cognizant Air Force offices, and an experimental demonstration showing that a flame ionization detector monitoring the air entering the booth is able to detect excursions above the equivalent exposure limit for the solvents in the paint, the exhaust duct was reconfigured for split-flow and recirculating ventilation. A volunteer painter was briefed on the increased risk of exposure during recirculation, and on the purposes and possible benefits of this study. He then signed an informed consent form before participating in the recirculation tests. A series of tests generally equivalent to the baseline series was conducted during split-flow and				
14. SUBJECT TERMS Air pollution, emission control technology, exhaust recirculation, paint spray booth, ventilation			15. NUMBER OF PAGES Vol. I, 132; Vol. II, 179	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT	

recirculating ventilation, and three tests were performed during only split-flow ventilation. Data from the two sets of tests show that pollutants concentrate toward the bottom of the booth during ordinary painting operations; that local processes associated with circulation near the paint spray gun contribute far more to the net exposure to the painter than do toxic pollutants in the recirculated air stream; and that, under well-ventilated conditions, including split-flow and recirculation of a large fraction of the exhaust air, equivalent exposures to airborne toxic pollutants (calculated as the sum of 8-hour, time-weighted concentrations of toxicants divided by their respective Permissible Exposure Limits) should not exceed 0.25 in the intake air. An economic analysis of costs to implement thermal or catalytic incineration, with and without flow reduction by split-flow and recirculating technologies, projects substantial savings, such that the payback periods for inclusion of flow-reduction technology during installation of the control device are about 1 year. The recirculation of air in the paint spray booth did not result in an increase in air contaminants that would exceed the capability of proper respiratory protection. The magnitude of the incremental increase in exposure derives primarily from particulates in the recirculated air. This is defined by the particulate removal efficiency of the particulate controls, which can be compromised by improper maintenance. However, with proper design, installation, and maintenance, the increment to risk is normally less than the round-off errors in the calculation of net job-related risk. Because the cost benefit is obtained at an increase of risk of exposure to painters, the acceptability of this cost-benefit tradeoff will have to be resolved by industrial hygiene functions at both policy and local levels before this advance can be implemented at Air Force installations.

SUMMARY

A. OBJECTIVE

The objective of this program was to demonstrate that split-flow and recirculating ventilation, individually and in combination, are safe and cost-effective methods of reducing paint spray booth exhaust flow rates to lower the costs both of conditioning intake air and of controlling volatile organic compound (VOC) emissions in exhaust air.

B. BACKGROUND

This study was part of an extended program of investigations into the cost and efficacy of innovative approaches for bringing U.S. Air Force industrial operations into compliance with current and anticipated air pollution environmental standards. Adequate ventilation of paint spray booths requires the movement of large quantities of air, which are slightly contaminated during passage through the booth. Air exhausted from this process requires decontamination, which, although technically achievable at operating flow rates, can be prohibitively expensive. Because emission-control costs depend on the volume of exhaust air being treated, considerable savings can be realized through the application of an acceptable flow-reduction method.

A first principle of industrial hygiene is to employ engineering controls to their limit before invoking personal protection. In dealing with exposures to airborne toxics, the mainstay engineering device is enhancement of ventilation. However, increased ventilation creates enormous volumes of slightly contaminated air, which must be treated before discharge and, in many situations, the cost of such treatment is excessive. In such circumstances, a judgment must be made about the relative cost in increased exposure compared to the economic benefit in decreased operating cost. The goal of this study was to provide experimental data to support the development of a general Air Force position and objective criteria for local decisions about the acceptability of using flow-reduction methods in paint spray booths, based on local health-risk/cost-benefit considerations.

C. SCOPE

This study comprised two sets of experimental measurements in Booth 2, Building 845, Travis Air Force Base (AFB), California, plus the results of an ancillary effort conducted at Research Triangle Institute (RTI) to verify experimentally that the flame ionization detector (FID) used in the ventilation control loop is within its linear response range at the equivalent exposure limit for the mixture of solvents present in the mixed topcoat. The first set of experimental measurements was a baseline characterization of the distribution of toxic pollutants at the exhaust face and in the exhaust duct of Booth 2. These data, the RTI results, and the test plan for the second set of tests were reviewed by HQ AFLC/SGBE before approval was given to proceed with the recirculation tests. The test plan and engineering drawings were reviewed by the Fire Department, Safety Office, and Civil Engineering Office at Travis AFB and approved before implementation. For the second set of tests, the ductwork in Booth 2 was reconfigured to separate exhaust streams from the top and bottom of the booth (split-flow) and to return the upper exhaust stream to the intake plenum for recirculation through the booth. The volunteer painter was briefed and signed an informed consent form before participating in the study. During separate painting sessions, several sets of concentration measurements were made of VOCs, particulates, heavy metals, and isocyanates. Equivalent exposures (E_m) were calculated from these data, and projections of E_m were made for a range of recirculation ratios, together

with an economic analysis of the corresponding costs to install flow reduction technology and apply VOC emission control devices.

D. METHODOLOGY

Per standard Travis AFB policy, painters in Booth 2 wear a protective jump suit, a separate hood, and an airline respirator. To determine exposure concentrations, sampling was performed simultaneously inside and outside the respirator, at 24 locations at the exhaust face, in the exhaust ducts, and, during the second set of tests, at three locations at the face of each of the two intake filters. To determine environmental contributions to the load of pollutants, background air samples were collected at the back of the booth prior to the release of any paint-derived materials. Standard sampling methods used were National Institute of Occupational Safety and Health (NIOSH) Method 1300 (integrated measurement of individual organic species), Bay Area Air Quality Management District (BAAQMD) Method ST-7 and U.S. Environmental Protection Agency (EPA) Method 25A (continuous measurement of total organic concentration), Occupational Safety and Health Administration (OSHA) Method 42 (filter faces and ducts) and NIOSH Method 5521 (painter and ducts) (isocyanates), EPA Method 5 and NIOSH Method 500 (particulate), and EPA Draft Multiple Metals and NIOSH Method 7300 (metals). Paint usage was determined by weighing the gun after each filling and at the end of each painting session. The percent volatile content of the paint was determined gravimetrically, as percent weight loss to evaporation. Airflows were measured with an anemometer (American Conference of Governmental Industrial Hygienists [ACGIH]) in the booth and with a pitot tube (EPA 2) in the exhaust ducts. Painting start and stop times were recorded manually by an observer, stationed at the rear of the booth, who also noted the dimensions and locations of workpieces painted, coatings applied, and other details. Projections of equivalent exposures at different recirculation ratios were calculated by a Lotus 1-2-3 program written at U.S. EPA-Air and Energy Engineering Research Laboratory (AEERL).

E. TEST DESCRIPTION

In both test series, representative workpieces were prepared and coated according to normal operating procedures. During each such painting run, measurements were made of one of the four pollutant classes using the methods specified in Section D. A typical painting session lasted 30 to 90 minutes, and included postpainting cleaning of the paint spray gun with methyl ethyl ketone (MEK) and tidying up of the area. In general, two sets of tests were accomplished during an 8-hour shift, corresponding to a typical workday. A complete series of blood chemistry parameters was determined for the painter at the conclusion of the testing.

F. RESULTS

Concentrations of airborne toxic pollutants are recorded in the tables of the report. Strontium chromate occurs as the major contaminant during primer coating and was the largest contributing factor to the E_m . Organic exposures were minor during all painting exercises, except that high isocyanate exposure occurred outside, but not inside, the painter's respirator during topcoat application inside a comfort pallet (caused by airflow restrictions in the closed space, and unrelated to the mode of ventilation in the booth). The newly constructed recirculation duct was a source of several metals. These metals were included in E_m calculations, but the concentrations are expected to decrease after the newly constructed surfaces are blown clean. Contributions to E_m from recirculation are significantly less than the Air Force criterion of 0.25 imposed by HQ AFLC/SGBE for these tests, and much less, in

general, than the contribution from the painting process. The painter showed no evidence of overexposure during the posttest medical evaluation.

G. CONCLUSIONS

Data support the prediction that workplace exposure levels during recirculation of paint spray booth exhausts, especially combined with split-flow extraction of the pollutant-enriched lower portion of the exhaust stream, can be maintained less than an arbitrarily selected criterion (here, $E_m = 0.25$). Flow splitting as a technology is only marginally effective; however, in combination with recirculation, it acts to lower the concentrations in the recirculated stream at a given rate of recirculation. Computational projection of E_m to larger recirculation rates, and interpolation of results of an earlier economic analysis of scale-related costs to decontaminate exhaust air, indicate that available cost savings allow projected payback periods on the order of 1 year for thermal or catalytic incineration.

H. RECOMMENDATIONS

Improvements should be examined to augment or replace present-generation filter and water particulate control systems. Concurrently, or when the improved technologies satisfy local standards, a combination of flow reduction and VOC control should be implemented in an area of intense regulatory pressure as the definitive prototype. A standardized set of criteria should be established to guide site selection, design, installation, and maintenance.

Accession For	
NTIS CRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

PREFACE

This final report was prepared by Acurex Environmental Corporation, 555 Clyde Avenue, Mountain View, CA 94043, under Contract No. 68-D2-0063, for the U.S. Environmental Protection Agency (EPA), Air and Energy Engineering Research Laboratory (AEERL), and the Armstrong Laboratory Environics Directorate (AL/EQ), 139 Barnes Drive, Tyndall Air Force Base (AFB) FL 32403-5323. The industrial hygiene evaluation was performed by Clayton Environmental Consultants, 1252 Quarry Lake, Pleasanton, CA 94566.

This report describes measurements of background concentrations of airborne toxic pollutants in Booth 2, Building 845, Travis AFB, CA; design and construction of modifications to the booth ventilation system; measurements of airborne toxic pollutants in the modified booth during split-flow and concurrent split-flow and recirculating ventilation; and a projective analysis of equivalent personnel exposures and net costs to operate flow reduction and emission control systems at varying recirculation ratios. The work was performed between February 1991 and September 1992. The Air Force project officer was Dr. Joseph D. Wander. EPA project managers were Charles H. Darwin and Jamie K. Whitfield.

Indispensable cooperation and support were provided by a number of Air Force functions. Ted Liston (60 EMS/MAEFP) provided facilities in Building 845 and practical advice; Terry Kirkbride (60 EMS/MAEFP) and Mark Sandy (60 ABG/EM) managed coordination with cognizant Travis functions and solicited volunteer painters; Sgt. Bill Fleming and Bill Harrison painted during the baseline and split-flow tests, respectively; Richard Smith painted during the recirculating ventilation tests; TSgt. Haugen (DGMC/SGPM) saw to the posttest evaluation of Mr. Smith and secured his release of the test results; Det 6 AL/SAO, Brooks AFB TX, performed metals and isocyanate analyses; Major John Seibert, Det 6 AL/EHI and the designee of Col. Bruce Poltrast, AL/OE-CA, was an active contributor to discussions of baseline data and the test plan for the recirculation tests; Col. Phil Brown, HQ AFLC/SGBE, accepted responsibility for authorizing the performance of the recirculation tests, after several iterative discussions of these baseline results plus data and conclusions from experimental verification of the capability of flame ionization detector (FID) technology to reliably detect equivalent exposure limit of a complex (specified) mixture of paint solvents. Major Steve Bakalyar, AL/OEMI, offered constructive suggestions and contributed to the final version of this document.

TABLE OF CONTENTS

Section	Title	Page
	APPENDIX D — BOOTH MODIFICATION DESIGN AND CONSTRUCTION PACKAGE	1
	APPENDIX E — ORGANIC DESORPTION STUDY	25
	APPENDIX F — REDUCED DATA FOR THE BASELINE TEST SERIES	30
	APPENDIX G -- REDUCED DATA FOR THE POSTMODIFICATION TEST SERIES	47
	APPENDIX H — QUALITY ASSURANCE/QUALITY CONTROL EVALUATION	158
	APPENDIX I — ECONOMIC CALCULATIONS	163
	APPENDIX J — EXAMPLE CALCULATION WORKSHEET FOR PERCENT RECIRCULATION VERSUS PERCENT PARTICULATE REMOVAL EFFICIENCY	168

APPENDIX D

BOOTH MODIFICATION DESIGN AND CONSTRUCTION PACKAGE

The booth modifications are illustrated in the accompanying schematics and described briefly below.

A. DUCT MODIFICATIONS

Downstream of the existing exhaust blower (exhaust fan 1) a 48-inch-diameter sheetmetal tee was installed in the existing duct. Two motor-operated, 48-inch-diameter air dampers were installed on the exhaust ports of the tee (dampers 1 and 2). Damper 2 was installed on the downstream side of the tee and between the tee and the continuation of the existing 48-inch-diameter duct. It controls the flow of exhausted gases to the atmosphere outside the building. Damper 1 was installed on the branch side of the tee and controls the flow of exhausted gases to the inlet duct for recirculation. A new 48-inch-diameter sheetmetal duct was installed between damper 1 and the existing fresh air supply duct.

Control of the two damper air motors is regulated by Analysis Safety Valve (ASV)-1 (ASCO Model 834911), a four-way dual solenoid valve, which allows plant air to flow to or vent from the air motors according to the feedback control system (discussed below). In the event of power loss, the solenoid valve fails to the fail-safe mode, *i.e.*, the single-pass position, which closes damper 1 and opens damper 2, thus diverting all exhaust gases to the atmosphere outside the building.

In addition to modifications to the existing ducts, a new 30-inch-diameter axial blower and duct was installed to vent the lower chamber of the plenum.

B. FEEDBACK CONTROL SYSTEM

A failsafe damper interlock control system was designed to respond to an instantaneous emission peak exceeding the STEL action level and to a 60-second emission level at or above the TLV.

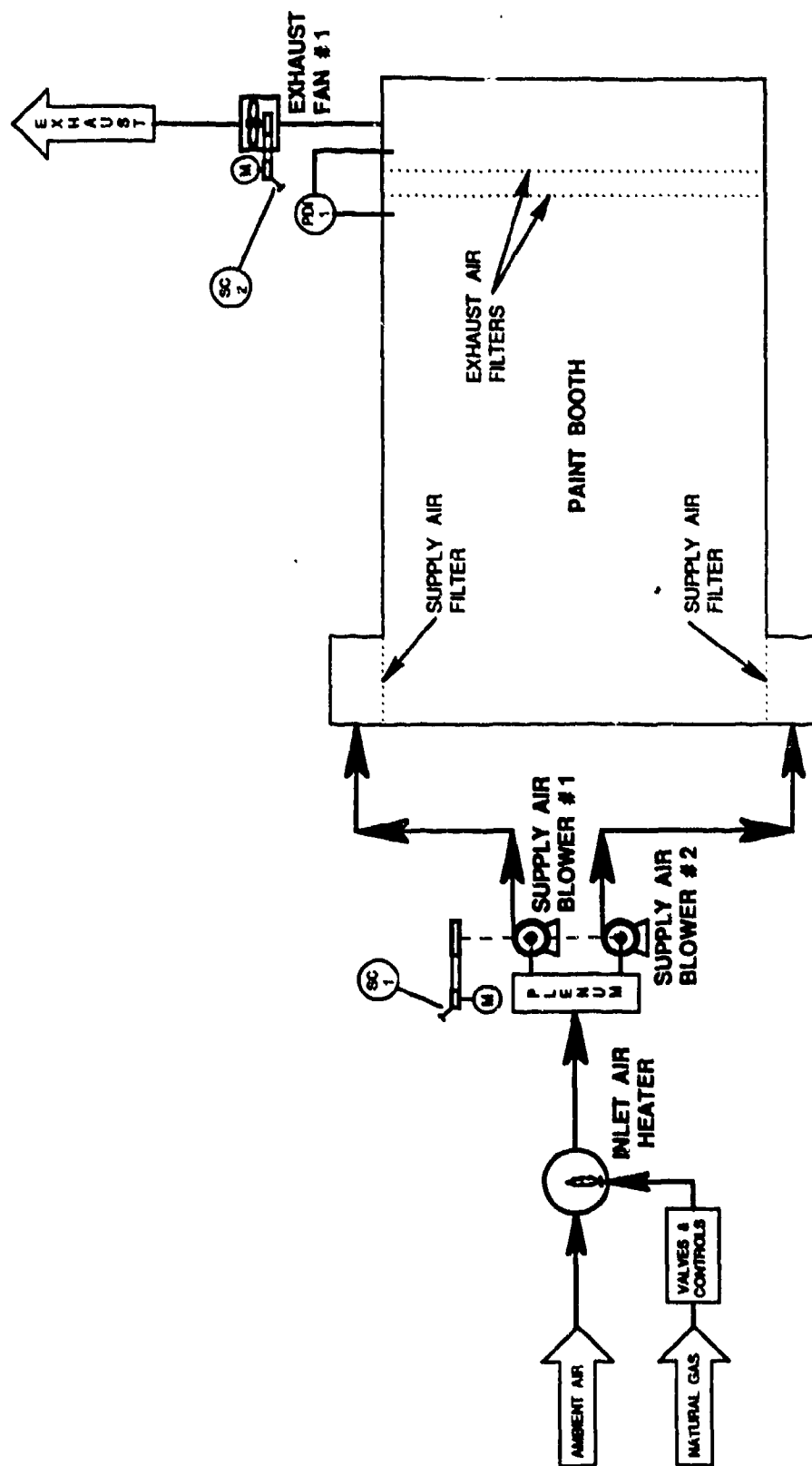
The interlock system (see drawings 8380E100 and 8380E101) was equipped with the following features:

- Total unburned hydrocarbon (TUHC) analyzer (Ratfish Instruments type RS 55CA heated total hydrocarbon analyzer FID) (ASE-1/AST-1).
- Failsafe controls (ASA-1/ASV-1):
 - An instantaneous interlock to begin single-pass operation when STEL concentration action level is exceeded.
 - An adjustable timer (set at 5 minutes) to ensure single-pass operation for a predetermined time after STEL or TLV interlock activation, prior to converting back into the recirculation configuration.

- An adjustable timer (set at 60 seconds) to delay operation of the TLV concentration interlock for 1 minute while continuing monitoring operations. If, after 1 minute, the concentration is still above TLV, the system initiates the single-pass mode.
- An indicator light to indicate that the 60-second TLV concentration timer is "on."
- An interlock to convert the system to single-pass mode if the hydrocarbon analyzer power is turned off or its flame goes out.
- A solenoid valve wired and plumbed to return to the single-pass operation mode whenever there is a power loss.

C. PERMIT VARIANCES

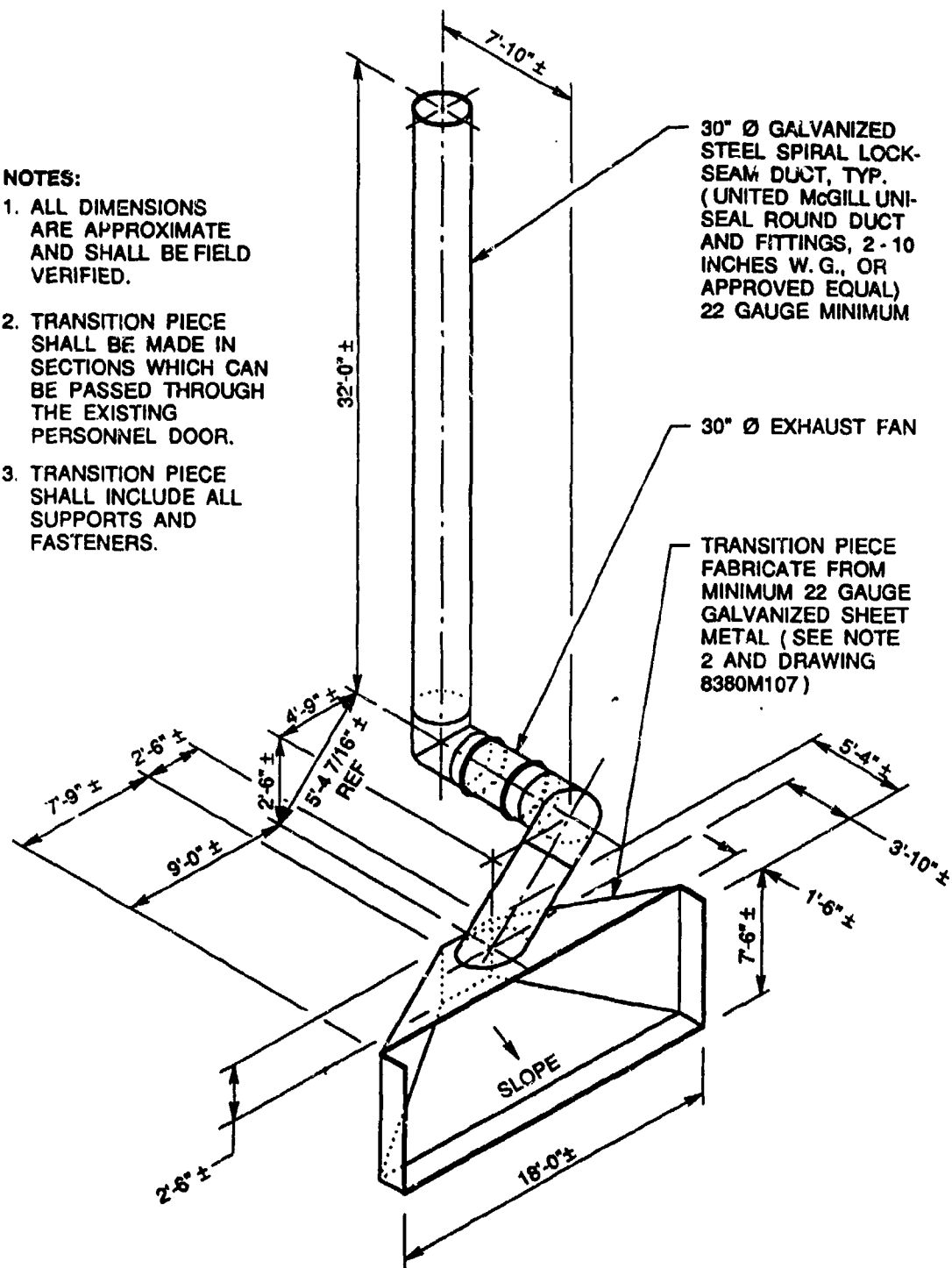
At the start of this study, the paint booth was operational and permitted for use in the single-pass mode. In conversations with the Bay Area Air Quality Management District (BAAQMD), it was determined that a new permit to operate the booth after modification was unnecessary; a notification letter to BAAQMD in advance of the modification sufficed.



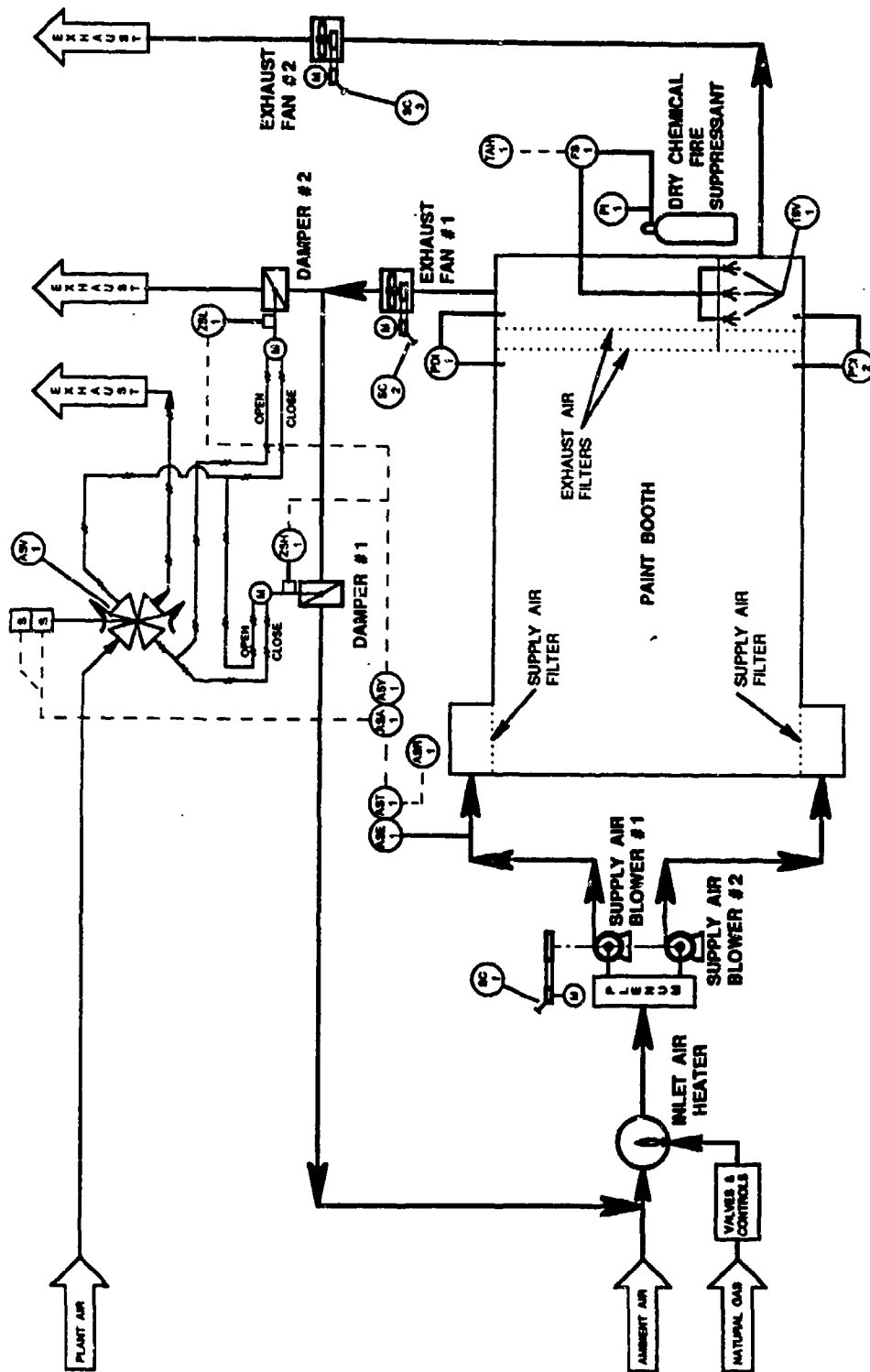
Process and Instrumentation Diagram
 Travis AFB Building 845
 Paintbooth No. 2 Prior to Modification

NOTES:

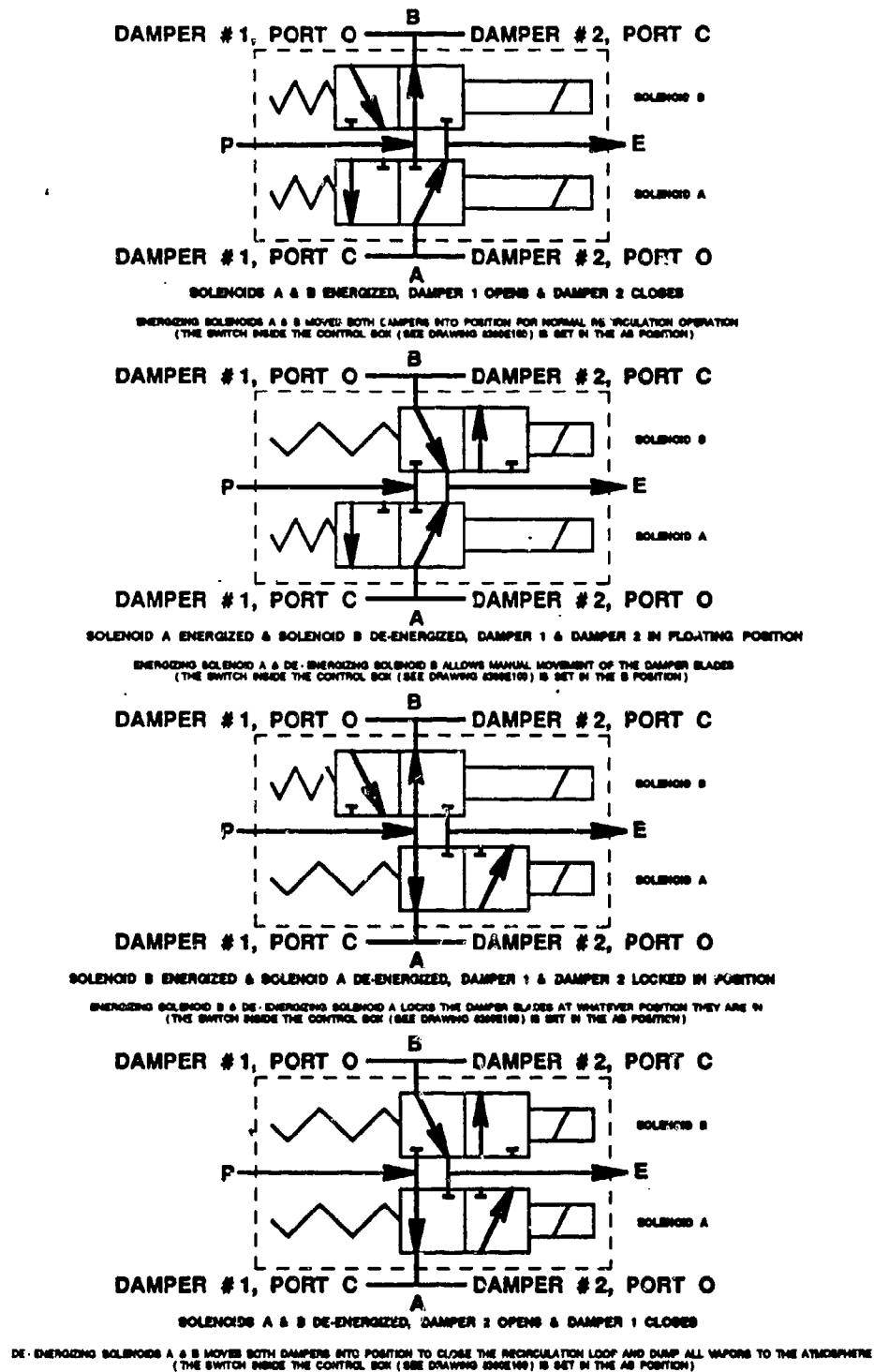
1. ALL DIMENSIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
2. TRANSITION PIECE SHALL BE MADE IN SECTIONS WHICH CAN BE PASSED THROUGH THE EXISTING PERSONNEL DOOR.
3. TRANSITION PIECE SHALL INCLUDE ALL SUPPORTS AND FASTENERS.



**Lower Exhaust Plenum Chamber
Transition Piece and Exhaust Duct Isometric
for Travis AFB Building 845 Paintbooth No. 2**

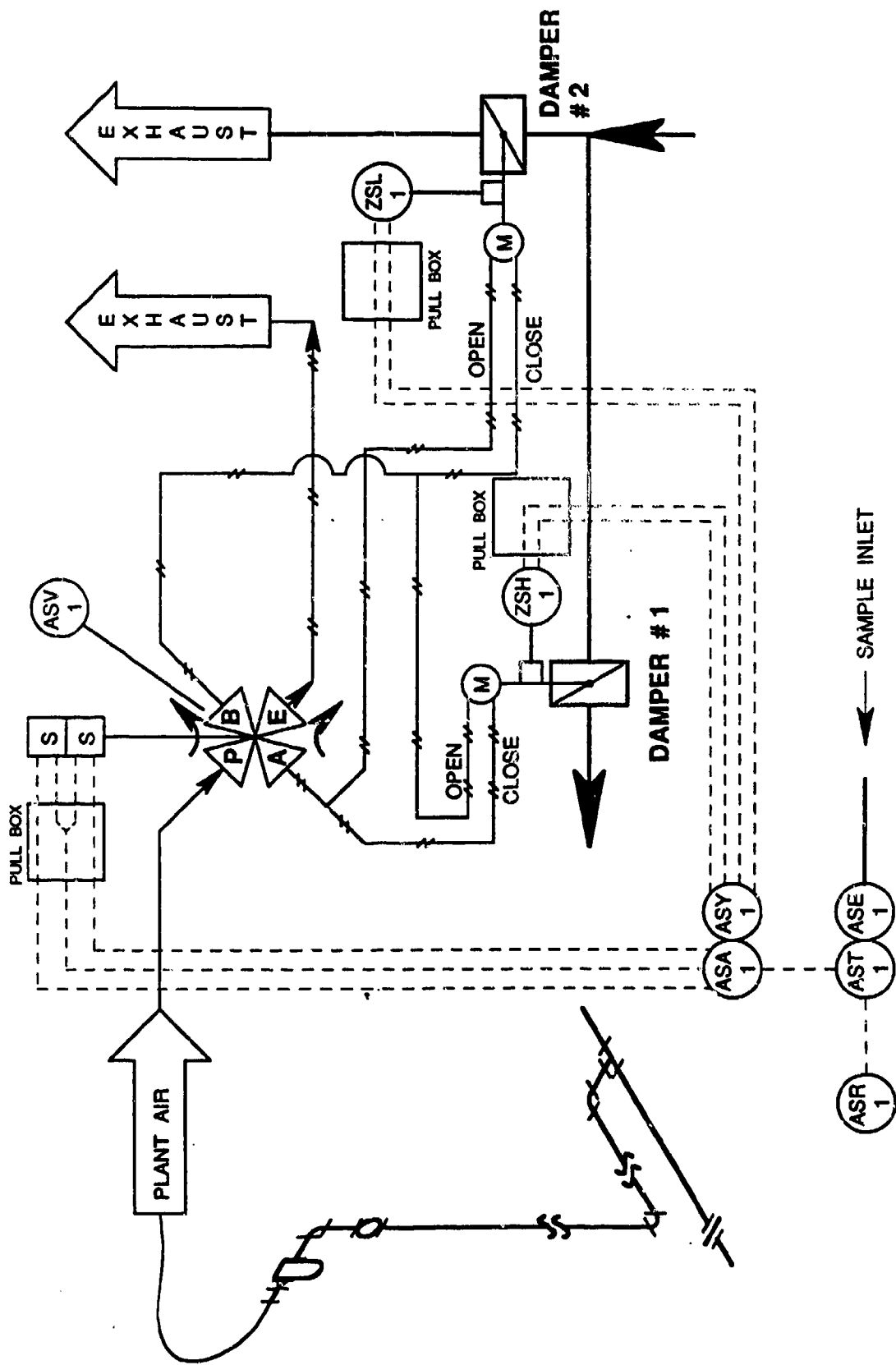


Process and Instrumentation Diagram
 Travis AFB Building 845
 Paintbooth No. 2 After to Modification

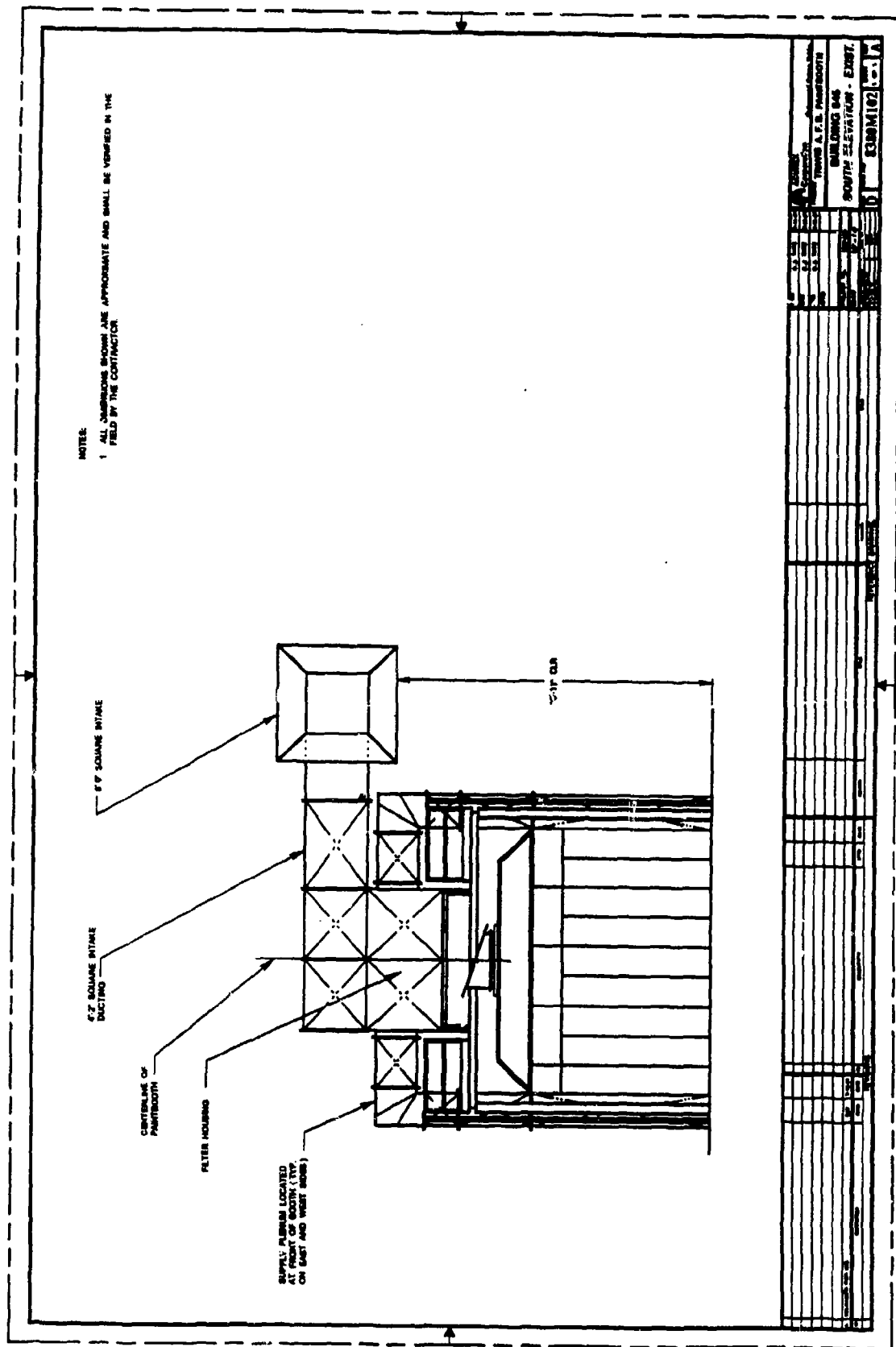


ASCO 834911

**Position Diagrams of Damper Control 4-Way Solenoid Valve ASV-1
 Describing Various Energized and De-energized Positions
 and the Effect on Dampers No. 1 and No. 2**



Dampers Control Instrumentation Diagram



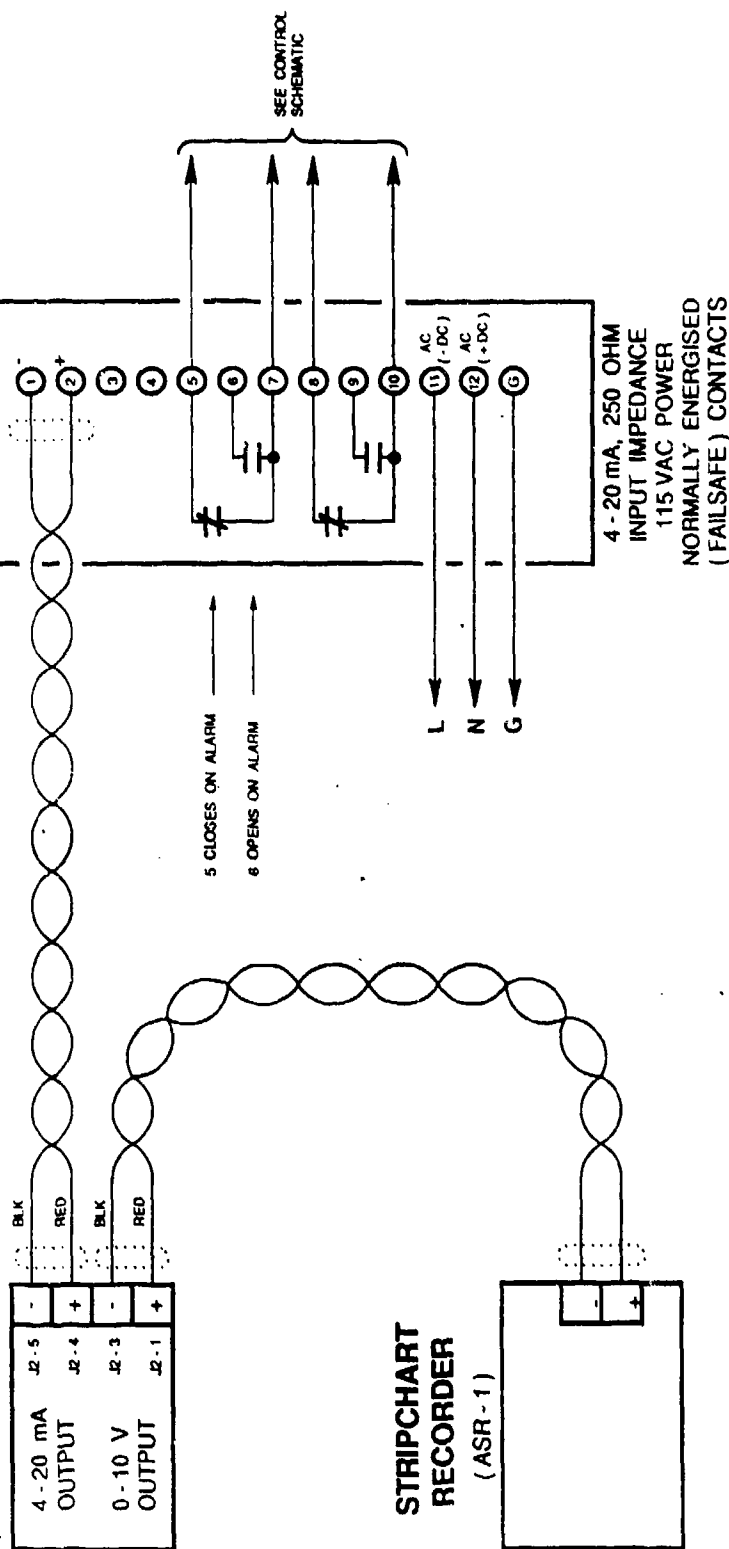


1. PROVIDE A NEW CHEMICAL FEE SUPPRESSION SYSTEM FOR THE REMAINING CROSSLANDS USING THE NEW TRANSITION PRICE. THE SYSTEM SHALL CONSIST OF THREE (3) AUTOMATICALLY ACTIVATED SPANT WAYS CONNECTED THROUGH A MANUALLY RESETTABLE SWITCH TO A CIRCUITRY OF ONE CHEMICAL SUPPLEMENT. THE MANUALLY RESETTABLE SWITCH SHALL BE CONNECTED TO THE EXISTING ALARM SYSTEM WHICH PRESENTLY IS NOT FUNCTIONAL. THE NEW SYSTEM SHALL BE INSTALLED IN THE FIRE CONTROL BUILDING AND THE SUPPRESSION SYSTEM SHALL BE ARMED BY THE FIRE CONTROL SYSTEM (COMPLETE AND INSTALLED TO COMPLY WITH NFPA 96, ALL STATE AND LOCAL LAWS AND REGULATIONS, LEADERS, AND INSURANCE COMPANY REQUIREMENTS) OR APPROVED EQUIVALENT.
2. CUT INTO EXISTING 4"x8" SQUARE DUCT WHERE SHOWN AND TIE IN NEW 4"x8" DUCT.
3. PROVIDE NEW 4"x8" CONTROL DAMPERS (2 SHOWED) WHERE SHOWN DAMPERS SHALL BE RUBBER MODEL NO. 7020N, OR APPROVED EQUAL. DAMPERS SHALL BE COMPLETE WITH PLASTICATOR MOTOR OPERATORS AND ELECTRICAL CONTROLS ON EACH DAMPER WHICH CAN BE SET TO CREATE AN OPEN OR CLOSED POSITION ON THE CLOSING LABEL.
4. CUT INTO THE 4"x8" DUCT WHERE SHOWN AND PROVIDE A NEW TIE

[illegible]

(The reverse of this page is blank)

RIS ET - 1218
VOLTAGE ALARM (ASA - 1)

[illegible]

APPENDIX E
ORGANIC DESORPTION STUDY



Mid-Pacific Environmental Laboratory, Inc.
625B Clyde Avenue
Mountain View, CA 94043
(415) 964-0844
FAX (415) 961-7113

June 4, 1991

Ms. Jackie Ayer
Acurex Engineers
555 Clyde Avenue
Mountain View, CA 94043

Ms. Ayer:

Here are the NIOSH 1300 information I promised you. Our final report to you has all been corrected for desorption efficiency. The desorption efficiency study was performed at three levels approximately 100ug, 700ug, and 1400ug per tube. The MDL study was performed using the same amount as level I of the desorption efficiency study. The correction factor used in calculating your NIOSH 1300 is slightly different from this set I am sending to you. The only difference is that I had normalized all recovery greater than 100 percent to 100%. This set I am sending you has not been normalized for recovery greater than 100 percent. There is only about 0.1 to 0.6 percent difference between the numbers. If you want your reports revise using the new correction factor please let me know.

Sorry this took so long. I hope this did not cause you any inconvenience with your project.

Sincerely,

2/6/93 *Daniel Mew*

Daniel Mew,
GC Section Manager
Mid-Pacific Environmental Laboratory Inc.
National Express Laboratory

Desorption Efficiency Study - Level 1

	Extract conc.	A1	A2	A3	A4	Average %Rec.
MEK	37.00	104.82	104.57	104.99	104.18	104.64
ETHYLACETATE	35.00	103.64	103.55	103.29	101.56	103.01
2-BUTANOL	38.00	101.60	99.80	101.38	99.92	100.67
N-BUTANOL	33.00	93.65	92.62	93.33	93.04	93.16
METHOXYACETONE	19.00	49.37	49.11	48.08	49.52	49.02
ETHOXYETHANOL	28.00	21.35	21.59	23.88	22.33	22.29
MIBK1	31.00	104.61	103.58	103.50	102.03	103.43
TOLUENE	34.00	103.57	102.63	102.51	101.11	102.46
BUTYLACETATE	26.00	105.15	104.17	104.05	103.08	104.11
ETHYLBENZENE	34.00	105.76	104.81	104.31	103.47	104.59
M & P XYLENE	34.00	98.47	134.76	119.45	129.22	120.48
PMGE ACETATE	38.00	105.00	104.47	103.52	102.90	103.97
O-XYLENE	35.00	101.18	101.46	101.42	100.65	101.18
2-EOE ACETATE	38.00	106.95	106.23	100.73	105.04	104.74
2-MOE ETHER	38.00	66.66	69.15	71.00	66.08	68.22

Desorption Efficiency Study - Level 2

	Extract conc.	B1	B2	B3	B4 %	Average Rec.
MEK	185.00	101.28	92.99	99.24	100.94	98.61
ETHYLACETATE	175.00	100.77	92.15	98.52	99.73	97.79
2-BUTANOL	190.00	97.92	89.68	95.49	97.36	95.11
N-BUTANOL	165.00	96.04	87.79	94.12	95.48	93.36
METHOXYACETONE	95.00	82.71	74.71	80.82	82.38	80.16
ETHOXYETHANOL	140.00	65.70	58.65	63.85	65.98	63.54
MIBK1	155.00	99.92	91.01	97.57	98.80	96.82
TOLUENE	170.00	99.48	90.54	97.04	98.25	96.33
BUTYLACETATE	130.00	101.05	91.88	98.33	99.45	97.68
ETHYLBENZENE	170.00	100.37	91.55	97.85	99.15	97.23
M & P XYLENE	170.00	108.54	89.66	95.80	97.12	97.78
PMGE ACETATE	190.00	99.14	90.21	96.58	97.81	95.94
O-XYLENE	175.00	96.08	87.66	93.62	94.92	93.07
2-EOE ACETATE	190.00	98.93	90.42	96.43	97.79	95.89
2-MOE ETHER	190.00	76.16	68.80	73.87	75.16	73.50

Desorption Efficiency Study - Level 3

	Extract conc.	C1	C2	C3	C4 ‡	Average Rec.
MEK	370.00	99.69	100.85	99.40	98.23	99.54
ETHYLACETATE	350.00	98.78	99.88	98.82	97.82	98.83
2-BUTANOL	380.00	96.79	97.87	96.51	95.40	96.64
N-BUTANOL	330.00	95.38	96.61	95.10	94.27	95.34
METHOXYACETONE	190.00	85.83	87.10	85.60	84.97	85.88
ETHOXYETHANOL	280.00	81.10	78.81	77.96	77.52	78.85
MIBK1	310.00	98.84	99.33	97.67	96.82	98.17
TOLUENE	340.00	98.12	98.74	97.00	95.95	97.45
BUTYLACETATE	260.00	99.14	99.86	98.49	97.85	98.83
ETHYLBENZENE	340.00	98.08	98.78	97.52	96.81	97.80
M & P XYLENE	340.00	97.76	97.40	96.17	95.46	96.70
PMGE ACETATE	380.00	97.26	97.89	96.73	95.99	96.97
O-XYLENE	350.00	93.79	94.46	93.37	92.72	93.59
2-EOE ACETATE	380.00	96.97	97.90	96.79	96.07	96.93
2-MOE ETHER	380.00	79.70	79.86	79.62	79.61	79.70

Average Desorption Efficiencies (percent)

	Level 1	Level 2	Level 3	Average
MEK	104.64	98.61	99.54	100.93
ETHYLACETATE	103.01	97.79	98.83	99.88
2-BUTANOL	100.67	95.11	96.64	97.48
N-BUTANOL	93.16	93.36	95.34	93.95
METHOXYACETONE	49.02	80.16	85.88	71.69
ETHOXYETHANOL	22.29	63.54	78.85	54.89
MIBK1	103.43	96.82	98.17	99.47
TOLUENE	102.46	96.33	97.45	98.74
BUTYLACETATE	104.11	97.68	98.83	100.21
ETHYLBENZENE	104.59	97.23	97.80	99.87
M & P XYLENE	120.48	97.78	96.70	104.98
PMGE ACETATE	103.97	95.94	96.97	98.96
O-XYLENE	101.18	93.07	93.59	95.94
2-EOE ACETATE	104.74	95.89	96.93	99.19
2-MOE ETHER	68.22	73.50	79.70	73.81

MID-PACIFIC ENVIRONMENTAL LABORATORY
Instrument ID: 3400-2 (DB624 60m column)
Date: 4/25/91

MDL Study (4/25/91)

	A1	A2	A3	A4	A5	A6	A7	Extract conc.	Mean (ug/mL)	STD (n-1)	Ext. MDL (ug/mL)	RDL (ug/mL)	RDL (ug/tube)
HEX	38.78	38.69	38.85	38.55	38.45	37.75	37.66	37.00	38.39	0.49	1.53	5	20
ETHYLACETATE	36.27	36.24	36.15	35.54	35.31	35.03	35.17	35.00	35.67	0.54	1.68	5	20
2-BUTANOL	38.61	37.92	38.52	37.97	37.42	37.10	37.08	38.00	37.80	0.63	1.97	5	20
N-BUTANOL	30.90	30.56	30.80	30.70	30.17	29.92	29.70	33.00	30.39	0.47	1.46	5	20
METHOXYACETONE	9.38	9.33	9.14	9.41	8.94	9.38	9.17	19.00	9.25	0.17	0.54	10	40
ETHOXYETHANOL	5.98	6.05	6.69	6.25	6.04	7.20	6.50	28.00	6.38	0.44	1.40	10	40
MIBK1	32.43	32.11	32.09	31.63	31.44	30.88	30.95	31.00	31.65	0.60	1.87	5	20
TOLUENE	35.21	34.89	34.85	34.38	34.15	33.54	33.69	34.00	34.39	0.63	1.99	2	8
BUTYLACETATE	27.34	27.08	27.05	26.80	26.49	26.16	26.17	26.00	26.73	0.47	1.47	5	20
ETHYLBENZENE	35.96	35.63	35.47	35.18	34.75	34.20	34.26	34.00	35.06	0.68	2.14	2	8
M & P XYLENE	33.48	45.82	40.61	43.94	40.38	42.09	44.29	34.00	41.52	4.06	12.76*	2	8
PMGE ACETATE	39.90	39.70	39.34	39.10	38.74	38.29	38.33	38.00	39.06	0.63	1.99	5	20
O-XYLENE	35.41	35.51	35.50	35.23	34.62	34.29	34.34	35.00	34.98	0.55	1.73	2	8
2-EOE ACETATE	40.64	40.37	38.28	39.91	37.61	37.28	38.98	38.00	39.01	1.34	4.22	10	40
2-NOE ETHER	25.33	26.28	26.98	25.11	25.48	27.16	26.08	38.00	26.06	0.80	2.52	10	40

* Bad calibration curve for MeP-Xylene.

RDL = Reporting limit based on instrument sensitivity and MDL study.

APPENDIX F
REDUCED DATA FOR THE BASELINE TEST SERIES

Trevia AFB

Organics

Date: 16 April, 1991

Start Time: 17:17

Stop Time: 18:22

Booth: STP
T= 67.7 P=29.92 "Hg
P= 29.88 T=68 °F

Site Location	Date	Sample Number	Time Sampled (min)	Sample Flowrate (l/min)	Volume		2-Butanone (MEK) (ug/tube)	Ethyl Acetate (ug/tube)	2-Butanol		n-Butanol	
					Collected (l)	a STP (l)			(ug/tube)	(mg/m3)	(ug/tube)	(mg/m3)
1	18 April	67	0.00	1.633	0.00	0.00 x	20 < N/A	20 < N/A	21 < N/A	21 < N/A	21 < N/A	21 < N/A
2	18 April	62	66.00	1.315	86.79	66.72 x	48 0.553404	20 < 0.230618	21 < 0.242149	21 < 0.242149	21 < 0.242149	21 < 0.242149
3	18 April	47	0.00	1.468	0.00	0.00 x	20 < N/A	20 < N/A	21 < N/A	21 < N/A	21 < N/A	21 < N/A
4	18 April	52	76.00	1.371	104.20	104.12 x	27 0.259326	20 < 0.192093	21 < 0.201698	21 < 0.201698	21 < 0.201698	21 < 0.201698
5	18 April	65	78.00	1.399	109.12	109.04 x	160 1.467376	20 < 0.183422	21 < 0.192593	21 < 0.192593	21 < 0.192593	21 < 0.192593
6	18 April	44	77.00	1.426	109.80	109.72 x	120 1.093717	20 < 0.182286	21 < 0.191400	21 < 0.191400	21 < 0.191400	21 < 0.191400
7	18 April	57	77.00	1.371	105.57	105.49 x	39 0.369717	20 < 0.189598	21 < 0.199078	21 < 0.199078	21 < 0.199078	21 < 0.199078
8	18 April	55	60.00	1.381	82.86	82.80 x	29 0.350257	20 < 0.241556	21 < 0.253634	21 < 0.253634	21 < 0.253634	21 < 0.253634
9	18 April	49	78.00	1.012	78.94	78.88 x	680 8.621201	20 < 0.253564	21 < 0.266242	21 < 0.266242	21 < 0.266242	21 < 0.266242
10	18 April	64	0.00	1.018	0.00	0.00 x	57 N/A	20 < N/A	21 < N/A	21 < N/A	21 < N/A	21 < N/A
11	18 April	46	76.00	1.313	99.79	99.71 x	83 0.832403	20 < 0.200579	21 < 0.210608	21 < 0.210608	21 < 0.210608	21 < 0.210608
12	18 April	50	45.00	1.284	57.78	57.74 x	65 1.125822	20 < 0.346406	21 < 0.363727	21 < 0.363727	21 < 0.363727	21 < 0.363727
13	18 April	42	3.00	1.355	6.07	6.06 x	140 34.46684	20 < 4.923834	21 < 5.170026	21 < 5.170026	21 < 5.170026	21 < 5.170026
14	18 April	59	77.00	1.35	103.95	103.87 x	1100 10.59015	20 < 0.192548	21 < 0.202175	21 < 0.202175	21 < 0.202175	21 < 0.202175
15	18 April	45	76.00	0.956	72.66	72.60 x	160 2.203852	20 < 0.275481	21 < 0.289255	21 < 0.289255	21 < 0.289255	21 < 0.289255
16	18 April	51	75.00	1.369	102.68	102.60 x	170 1.656983	20 < 0.194939	21 < 0.204686	21 < 0.204686	21 < 0.204686	21 < 0.204686
17	18 April	68	77.00	1.331	102.49	102.41 x	1500 14.64726	20 < 0.195296	21 < 0.205061	21 < 0.205061	21 < 0.205061	21 < 0.205061
18	18 April	41	77.00	1.317	101.41	101.33 x	1800 17.76356	20 < 0.197372	21 < 0.207241	21 < 0.207241	21 < 0.207241	21 < 0.207241
19	18 April	58	76.00	1.098	83.45	83.38 x	350 4.197455	20 < 0.239854	21 < 0.251847	21 < 0.251847	21 < 0.251847	21 < 0.251847
20	18 April	56	75.00	1.322	99.15	99.07 x	20 < 0.201869	20 < 0.201869	21 < 0.211963	21 < 0.211963	21 < 0.211963	21 < 0.211963
21	18 April	53	78.00	1.309	102.10	102.02 x	1100 10.78182	20 < 0.196033	21 < 0.205834	21 < 0.205834	21 < 0.205834	21 < 0.205834
22	18 April	60	77.00	1.319	101.56	101.48 x	540 5.320987	20 < 0.197073	21 < 0.206927	21 < 0.206927	21 < 0.206927	21 < 0.206927
23	18 April	69	76.00	1.318	100.17	100.09 x	140 1.398727	20 < 0.199818	21 < 0.209809	21 < 0.209809	21 < 0.209809	21 < 0.209809
24	18 April	48	75.00	1.276	95.70	95.63 x	120 1.254883	20 < 0.209147	21 < 0.219604	21 < 0.219604	21 < 0.219604	21 < 0.219604
(Duplicate) 10	18 April	61	77.00	0.927	71.38	71.32 x	200 2.804100	20 < 0.280410	21 < 0.294430	21 < 0.294430	21 < 0.294430	21 < 0.294430
(Duplicate) 15	18 April	63	77.00	0.905	69.69	69.63 x	160 2.277813	20 < 0.287226	21 < 0.301587	21 < 0.301587	21 < 0.301587	21 < 0.301587
Painter UH	18 April	66	81.00	1.298	105.14	105.06 x	30 0.285558	20 < 0.190372	21 < 0.199891	21 < 0.199891	21 < 0.199891	21 < 0.199891
Painter OH	18 April	54	81.00	1.285	104.09	104.00 x	5300 50.95909	20 < 0.192298	21 < 0.201913	21 < 0.201913	21 < 0.201913	21 < 0.201913
Blank	18 April	71	0.00	0	0.00	0.00 x	20 < N/A	20 < N/A	21 < N/A	21 < N/A	21 < N/A	21 < N/A

Painter UH = Underneath painter respirator hood.

Painter OH = Outside painter respirator hood.

Travis AFB

Date: 18 April, 1991

Start Time: 17:17

Stop Time: 18:22

Site Location	Date	Sample Number	Methoxyacetone (ug/tube)	Ethoxyethanol (ug/tube)	4-Methyl-2-Pentanol(NIBK) (ug/tube)	Toluene (ug/tube)	Butyl Acetate (ug/tube)
1	18 April	67	< N/A	73 < N/A	< N/A	8.2 < N/A	20 < N/A
2	18 April	62	56 < 0.645732	73 < 0.841757	< 20 < 0.230618	8.2 < 0.094553	20 < 0.230618
3	18 April	47	56 < N/A	73 < N/A	< 20 < N/A	8.2 < N/A	20 < N/A
4	18 April	52	56 < 0.537862	73 < 0.701141	75 0.720351	10 0.096046	20 < 0.192093
5	18 April	65	56 < 0.513581	73 < 0.669490	< 20 < 0.183422	8.2 < 0.075203	20 < 0.183422
6	18 April	44	56 < 0.510401	73 < 0.665344	< 20 < 0.182286	8.2 < 0.074737	20 < 0.182286
7	18 April	57	56 < 0.530876	73 < 0.692036	130 1.232392	17 0.161159	28 0.265438
8	18 April	55	56 < 0.676358	73 < 0.681681	110 1.328561	19 0.229478	31 0.374412
9	18 April	49	56 < 0.709981	73 < 0.925511	84 1.064971	8.2 < 0.103961	20 < 0.233564
10	18 April	64	56 < N/A	73 < N/A	< 20 < N/A	8.2 < N/A	20 < N/A
11	18 April	46	56 < 0.561621	400 4.011582	50 0.501447	100 1.002895	20 < 0.200579
12	18 April	50	56 < 0.969939	73 < 1.264385	300 5.196102	38 0.658173	80 1.385627
13	18 April	42	56 < 13.78673	73 < 17.97199	120 29.54300	14 3.446684	22 5.416218
14	18 April	59	56 < 0.539135	73 < 0.702801	350 3.369593	35 0.336959	62 0.596899
15	18 April	45	56 < 0.771348	73 < 1.005507	890 12.25892	100 1.377407	230 3.168037
16	18 April	51	56 < 0.545829	73 < 0.711528	980 9.552023	120 1.169635	260 2.534210
17	18 April	68	56 < 0.544831	73 < 0.712833	550 5.370663	58 0.566360	110 1.074132
18	18 April	41	56 < 0.552644	73 < 0.720411	1000 9.868644	110 1.085550	230 2.269788
19	18 April	58	56 < 0.671592	73 < 0.875469	1600 19.18836	180 2.158691	400 4.797092
20	18 April	56	56 < 0.565235	73 < 0.736824	< 20 < 0.201869	8.2 < 0.082766	20 < 0.201869
21	18 April	53	56 < 0.548893	73 < 0.715521	170 1.666282	16 0.156826	26 0.254843
22	18 April	60	56 < 0.551806	73 < 0.719318	150 1.478052	16 0.157658	31 0.305466
23	18 April	69	56 < 0.559490	73 < 0.729336	760 7.593090	91 0.909172	200 1.998181
24	18 April	48	56 < 0.585612	73 < 0.763387	620 6.483563	74 0.773844	160 1.673177
(Duplicate)	10 18 April	61	56 < 0.785148	73 < 1.023496	52 0.729066	8.2 < 0.114968	20 < 0.280410
(Duplicate)	15 18 April	63	56 < 0.804234	73 < 1.048377	850 12.20713	100 1.436133	230 3.303106
Painter UH	18 April	66	56 < 0.533043	73 < 0.694859	< 20 < 0.190372	8.2 < 0.078052	20 < 0.190372
Painter OH	18 April	54	56 < 0.538435	73 < 0.701889	1200 11.53790	130 1.249940	270 2.596029
Blank	18 April	71	56 < N/A	73 < N/A	< 20 < N/A	8.2 < N/A	20 < N/A

Painter UH = Underneath painter respirator hood.

Painter OH = Outside painter respirator hood.

Travis AFB

Date: 18 April, 1991

Start Time: 17:17

Stop Time: 18:22

Site Location	Date	Sample Number	Ethylbenzene (ug/tube)	Total Xylenes (ug/tube)	PMDE Acetate (ug/tube)	2-Ethoxyethyl Acetate (ug/tube)	2-Methoxyethyl Ether (ug/tube)
1 18 April		67	8.2 < N/A	8.2 < N/A	20 < N/A	41 < N/A	54 < N/A
2 18 April		62	8.2 < 0.094553	8.2 < 0.094553	20 < 0.230618	41 < 0.472768	54 < 0.622670
3 18 April		47	8.2 < N/A	8.2 < N/A	20 < N/A	41 < N/A	54 < N/A
4 18 April		52	8.2 < 0.078758	8.2 < 0.078758	20 < 0.192093	41 < 0.393791	54 < 0.518652
5 18 April		65	8.2 < 0.075203	8.2 < 0.075203	20 < 0.183422	41 < 0.376015	54 < 0.495239
6 18 April		44	8.2 < 0.074737	8.2 < 0.074737	20 < 0.182286	41 < 0.373606	54 < 0.492172
7 18 April		57	8.2 < 0.077735	8.2 < 0.077735	20 < 0.189598	41 < 0.388677	54 < 0.511917
8 18 April		55	8.2 < 0.099038	8.2 < 0.099038	20 < 0.241556	41 < 0.495191	54 < 0.652203
9 18 April		49	8.2 < 0.103961	8.2 < 0.103961	20 < 0.253564	41 < 0.519807	54 < 0.684624
10 18 April		64	8.2 < N/A	8.2 < N/A	20 < N/A	41 < N/A	54 < N/A
11 18 April		46	8.2 < 0.082237	8.2 < 0.082237	20 < 0.200579	41 < 0.411187	54 < 0.541563
12 18 April		50	8.2 < 0.142026	8.2 < 0.142026	20 < 0.346406	41 < 0.710134	54 < 0.935298
13 18 April		42	8.2 < 0.181772	8.2 < 0.181772	20 < 4.923834	41 < 10.09386	54 < 13.29435
14 18 April		59	8.2 < 0.078944	8.2 < 0.078944	20 < 0.192548	41 < 0.394723	54 < 0.519880
15 18 April		45	8.2 < 0.112947	8.2 < 0.112947	20 < 0.275481	41 < 0.564737	54 < 0.743800
16 18 April		51	8.2 < 0.079925	9.6 < 0.093370	20 < 0.194939	41 < 0.399625	54 < 0.526335
17 18 April		68	8.2 < 0.080071	8.2 < 0.080071	20 < 0.195296	41 < 0.400358	54 < 0.527301
18 18 April		41	8.2 < 0.080922	8.2 < 0.080922	20 < 0.197372	41 < 0.404614	54 < 0.532906
19 18 April		58	8.2 < 0.098340	8.2 < 0.098340	20 < 0.239854	41 < 0.491701	54 < 0.647607
20 18 April		56	8.2 < 0.082766	8.2 < 0.082766	20 < 0.201869	82 < 0.827666	54 < 0.545048
21 18 April		53	8.2 < 0.080373	8.2 < 0.080373	20 < 0.196033	41 < 0.401868	54 < 0.529289
22 18 April		60	8.2 < 0.080800	8.2 < 0.080800	20 < 0.197073	41 < 0.404000	54 < 0.532098
23 18 April		69	8.2 < 0.081925	8.2 < 0.081925	20 < 0.199818	41 < 0.409627	54 < 0.539509
24 18 April		48	8.2 < 0.085750	8.2 < 0.085750	20 < 0.209147	41 < 0.428751	54 < 0.564697
(Duplicate) 10 18 April		61	8.2 < 0.114968	8.2 < 0.114968	20 < 0.280410	41 < 0.576840	54 < 0.757107
(Duplicate) 15 18 April		63	8.2 < 0.117762	8.2 < 0.117762	20 < 0.287226	41 < 0.588814	54 < 0.775511
Painter UH		66	8.2 < 0.078052	8.2 < 0.078052	20 < 0.190372	41 < 0.390263	54 < 0.514005
Painter OH		54	8.2 < 0.078842	9.6 < 0.092303	20 < 0.192298	41 < 0.394211	54 < 0.519205
Blank		71	8.2 < N/A	8.2 < N/A	20 < N/A	41 < N/A	54 < N/A

Painter UH = Underneath painter respirator hood.
Painter OH = Outside painter respirator hood.

Travis AFB
Date: 18 April, 1991
Start Time: 10:02
Stop Time: 11:02

NIOSH

Site Location	Date	Sample Number	Ethoxyethanol (ug/tube) (mg/m3)	4-Methyl-2-Pentanone(MIBK) (ug/tube) (mg/m3)	Toluene (ug/tube) (mg/m3)	Butyl Acetate (ug/tube) (mg/m3)	Ethylbenzene (ug/tube) (mg/m3)
1	18 April	24	<	<	<	<	<
2	18 April	20	73 <	0.214	8.2 <	0.214	8.2 <
3	18 April	13	73 <	0.907	8.2 <	0.248	8.2 <
4	18 April	31	73 <	1.937	8.2 <	0.531	8.2 <
5	18 April	16	73 <	0.753	23	0.444	8.2 <
6	18 April	25	73 <	0.709	8.2 <	0.194	8.2 <
7	18 April	28	73 <	0.713	8.2 <	0.195	8.2 <
8	18 April	33	73 <	0.758	23	0.405	8.2 <
9	18 April	23	73 <	0.767	38	0.704	8.2 <
10	18 April	19	73 <	0.899	8.2 <	0.246	8.2 <
11	18 April	32	73 <	1.022	16	0.336	8.2 <
12	18 April	18	73 <	0.773	73	1.482	8.2 <
13	18 April	26	73 <	0.806	65	1.325	8.2 <
14	18 April	21	73 <	0.745	33	0.469	8.2 <
15	18 April	38	73 <	0.756	65	1.347	8.2 <
16	18 April	27	73 <	1.097	150	4.808	8.2 <
17	18 April	36	73 <	0.771	190	4.227	8.2 <
18	18 April	29	73 <	0.748	37	0.615	8.2 <
19	18 April	35	73 <	0.765	110	2.199	8.2 <
20	18 April	14	73 <	0.889	310	8.042	8.2 <
21	18 April	39	73 <	0.796	280	6.215	8.2 <
22	18 April	22	73 <	0.751	19	0.257	8.2 <
23	18 April	37	73 <	0.757	44	0.830	8.2 <
24	18 April	17	73 <	0.780	110	2.350	8.2 <
			73 <	0.797	100	2.185	8.2 <
(Duplicate)	10 18 April	12	73 <	1.067	18	0.482	8.2 <
Painter UH	15 18 April	15	73 <	1.149	150	4.881	8.2 <
Painter OH	18 April	11	73 <	1.265	230	7.622	8.2 <
Blank	18 April	34	73 <	0.881	8.2 <	0.241	8.2 <
		30	73	N/A	<	N/A	N/A

Painter UH = Underneath painter respirator hood.
Painter OH = Outside painter respirator hood.

Travis AFB MIOSH
Date: 18 April, 1991
Start Time: 10:02
Stop Time: 11:02

Site Location	Date	Sample Number	Total Xylenes (ug/tube)	PHGE Acetate (ug/tube)	2-Ethoxyethyl Acetate (ug/tube)	2-Methoxyethyl Ether (ug/tube)	Totals (mg/m3)
1	18 April	24	< 8.2	< 0.008	< 0.214	< 0.577	< 4.171059
2	18 April	20	< 8.2	< 0.102	< 0.248	< 0.671	< 4.850909
3	18 April	13	< 8.2	< 0.218	< 0.531	< 1.453	< 10.364339
4	18 April	31	< 8.2	< 0.095	< 0.206	< 0.423	2.723539
5	18 April	16	< 8.2	< 0.080	< 0.194	< 0.308	0.631479
6	18 April	25	< 8.2	< 0.080	< 0.195	< 0.400	0.507758
7	18 April	28	< 8.2	< 0.095	< 0.208	< 0.425	2.656532
8	18 April	33	< 8.2	< 0.086	< 0.210	< 0.431	4.369796
9	18 April	23	< 8.2	< 0.101	< 0.246	< 0.567	5.134591
10	18 April	19	< 8.2	< 0.115	< 0.280	< 0.576	2.939335
11	18 April	32	< 8.2	< 0.087	< 0.212	< 0.434	8.820479
12	18 April	18	< 8.2	< 0.091	< 0.221	< 0.453	7.806963
13	18 April	26	< 8.2	< 0.094	< 0.204	< 0.418	23.45269
14	18 April	21	< 8.2	< 0.085	< 0.207	< 0.425	12.17339
15	18 April	38	16	< 0.240	< 0.300	< 0.616	26.98433
16	18 April	27	20	< 0.211	< 0.211	< 0.433	24.09714
17	18 April	36	< 8.2	< 0.084	< 0.205	< 0.420	25.50659
18	18 April	29	9.9	< 0.104	< 0.209	< 0.429	27.85873
19	18 April	35	33	< 0.402	< 0.244	< 0.500	46.82553
20	18 April	14	29	< 0.316	< 0.218	< 0.447	36.08141
21	18 April	39	< 8.2	< 0.084	< 0.206	< 0.422	11.66099
22	18 April	22	< 8.2	< 0.085	< 0.207	< 0.425	6.367850
23	18 April	37	10	< 0.107	< 0.214	< 0.438	13.99500
24	18 April	17	< 8.2	< 0.090	< 0.218	< 0.448	12.67047
(Duplicate)	10 18 April	12	< 8.2	< 0.120	< 0.292	< 0.599	6.151232
(Duplicate)	15 18 April	15	16	< 0.252	< 0.315	< 0.646	27.56300
Painter UH	18 April	11	15	< 0.260	< 0.346	< 0.710	58.64045
Painter OH	18 April	34	< 8.2	< 0.099	< 0.241	< 0.495	< 0.823250
Blank	18 April	30	< 8.2	< N/A	< N/A	< N/A	N/A

Painter UH = Underneath painter respirator hood.
Painter OH = Outside painter respirator hood.

Booth: STP
T= 67.7 P=29.92 "Hg
P= 29.88 T=68 °F

Site Location	Date	Sample Number	Sample ALCUREX #	Time Sampled (min)	Sample Flowrate (cc/min)	Sample Flowrate (l/min)	Volume Collected (l)	Volume Collected @ STP		2-Butanone (MEK) (ug/tube)	(mg/m3)	Ethyl Acetate (ug/tube)		(mg/m3)
								(l)	(l)					
Exhaust Duct, 10:30	16 April	5F	12993	36.00	1066.00	1.066	38.38	38.35	57	1.486446	<	20	<	0.521560
Exhaust Duct, 14:45	16 April	9F	7996	54.00	1067.000	1.067	57.62	57.57	49	0.851082	<	20	<	0.347380
Exhaust Duct, Blank	17 April	7F	9995	0.00	0.000	0	0.00	0.00	20	N/A	<	20	<	N/A
Exhaust Duct, 10:00	17 April	9F	7995	60.00	1059.000	1.059	63.54	63.49	230	3.622552	<	20	<	0.315004
Exhaust Duct, 16:00	17 April	10F	12994	60.00	1089.000	1.099	65.34	65.29	20	0.306326	<	20	<	0.306326
Exhaust Duct, 4pm Dup	17 April	6F	10994	60.00	1053.00	1.053	63.18	63.13	20	0.316799	<	20	<	0.316799
Exhaust Duct, 11:00	18 April	40F	8383	53.00	1026.00	1.026	54.38	54.34	78	1.435507	<	20	<	0.368078
Exhaust Duct, 17:00	18 April	70F	12015	60.00	1027.000	1.027	61.62	61.57	170	2.760967	<	20	<	0.324819
Exhaust Duct, 11:30	19 April	75F	11050	53.00	991.00	0.991	52.52	52.48	230	4.382403	<	20	<	0.381078
Exhaust Duct, 15:00	19 April	74F	12995	42.00	991.000	0.991	41.62	41.59	240	5.770617	<	20	<	0.480884

Site Location	Date	2-Butanol (ug/tube)	2-Butanol (mg/m3)	n-Butanol (ug/tube)	n-Butanol (mg/m3)	Methoxyacetone (ug/tube)	Methoxyacetone (mg/m3)	Ethoxyethanol (ug/tube)	Ethoxyethanol (mg/m3)	4-Methyl-2-Pentanone(MIBK) (ug/tube)	4-Methyl-2-Pentanone(MIBK) (mg/m3)
Exhaust Duct, 10:30	16 April	<	21 < 0.547638	<	21 < 0.547638	<	56 < 1.460368	73 < 1.903694	<	20 <	0.521560
Exhaust Duct, 14:45	16 April	<	21 < 0.364749	<	21 < 0.364749	<	56 < 0.972666	73 < 1.267939	<	210	3.647498
Exhaust Duct, Blank	17 April	<	21 < N/A	<	21 < N/A	<	56 < N/A	73 < N/A	<	20 <	N/A
Exhaust Duct, 10:00	17 April	<	21 < 0.330754	<	21 < 0.330754	<	56 < 0.882012	73 < 1.149766	<	93	1.464771
Exhaust Duct, 16:00	17 April	<	21 < 0.321643	<	21 < 0.321643	<	56 < 0.857714	73 < 1.118092	<	48	0.735184
Exhaust Duct, 4pm Dup	17 April	<	21 < 0.332639	<	21 < 0.332639	<	56 < 0.887038	73 < 1.156317	<	82	1.298877
Exhaust Duct, 11:00	18 April	<	21 < 0.386482	<	21 < 0.386482	<	56 < 1.030620	73 < 1.343487	<	230	4.232905
Exhaust Duct, 17:00	18 April	<	21 < 0.341060	<	21 < 0.341060	<	56 < 0.909495	73 < 1.185591	<	180	2.923376
Exhaust Duct, 11:30	19 April	<	21 < 0.400132	<	21 < 0.400132	<	56 < 1.067019	73 < 1.390936	<	100	1.905392
Exhaust Duct, 15:00	19 April	<	21 < 0.504929	<	21 < 0.504929	<	56 < 1.346477	73 < 1.755229	<	86	2.067804

Site Location	Date	Toluene		Butyl Acetate		Ethylbenzene		Total Xylenes		PMGE Acetate	
		(ug/tube)	(mg/m3)	(ug/tube)	(mg/m3)	(ug/tube)	(mg/m3)	(ug/tube)	(mg/m3)	(ug/tube)	(mg/m3)
Exhaust Duct, 10:30	16 April	21	0.547638	<	20 < 0.521560	<	8.2 < 0.213839	<	8.2 < 0.213839	<	20 < 0.521560
Exhaust Duct, 14:45	16 April	29	0.503702	<	53 0.920559	<	8.2 < 0.142426	<	8.2 < 0.142426	<	20 < 0.347580
Exhaust Duct, Blank	17 April	<	N/A	<	20 < N/A	<	8.2 < N/A	<	8.2 < N/A	<	20 < N/A
Exhaust Duct, 10:00	17 April	27	0.425256	<	21 0.330754	<	8.2 < 0.129151	<	8.2 < 0.129151	<	20 < 0.315004
Exhaust Duct, 16:00	17 April	10	0.153163	<	20 < 0.306326	<	8.2 < 0.125593	<	8.2 < 0.125593	<	20 < 0.306326
Exhaust Duct, 4pm Dup	17 April	17	0.269279	<	20 < 0.316799	<	8.2 < 0.129887	<	8.2 < 0.129887	<	20 < 0.316799
Exhaust Duct, 11:00	18 April	35	0.644137	<	61 1.122640	<	8.2 < 0.150912	<	8.2 < 0.150912	<	20 < 0.368078
Exhaust Duct, 17:00	18 April	21	0.341060	<	39 0.633398	<	8.2 < 0.133176	<	8.2 < 0.133176	<	20 < 0.324819
Exhaust Duct, 11:30	19 April	13	0.247701	<	27 0.514456	<	8.2 < 0.156242	<	8.2 < 0.156242	<	20 < 0.381078
Exhaust Duct, 15:00	19 April	11	0.264486	<	24 0.577061	<	8.2 < 0.197162	<	8.2 < 0.197162	<	20 < 0.480884

Site Location	Date	2-Ethoxyethyl Acetate (ug/tube)	(mg/m ³)	2-Methoxyethyl Ether (ug/tube)	(mg/m ³)	Totals
Exhaust Duct, 10:30	16 April	<	41 < 1.069198	<	54 < 1.408212	2.04
Exhaust Duct, 14:45	16 April	<	41 < 0.712130	<	54 < 0.937928	5.87
Exhaust Duct, Blank	17 April	<	41 < N/A	<	54 < N/A	N/A
Exhaust Duct, 10:00	17 April	<	41 < 0.645759	<	54 < 0.850512	5.84
Exhaust Duct, 16:00	17 April	<	41 < 0.627969	<	54 < 0.827082	0.89
Exhaust Duct, Apr Dup	17 April	<	41 < 0.649438	<	54 < 0.855358	1.57
Exhaust Duct, 11:00	18 April	<	41 < 0.754561	<	54 < 0.993812	7.44
Exhaust Duct, 17:00	18 April	<	41 < 0.665080	<	54 < 0.877013	6.65
Exhaust Duct, 11:30	19 April	<	41 < 0.781210	<	54 < 1.028912	7.05
Exhaust Duct, 15:00	19 April	<	41 < 0.985813	<	54 < 1.298369	8.68

Travis AFB NIOSH 500 Particulate

Date: 16 April 1991

STP

Booth:

Start Time: 14:48

P=29.92 "Hg

T= 66.6

Stop Time: 15:48

T=68 °F

P= 29.87

Site Location	Date	Sample Number	Time Sampled (min)	Sample Flowrate (l/min)	Volume		Weight Gain (g)	Weight Gain (mg)	(mg/m3)
					Volume Collected (l)	Collected @ STP (l)			
1	16 April	12	65.00	3.1	201.50	201.70	0.00016	0.2	0.793
2	16 April	15	54.00	3.02	163.08	163.24	0.00000	0.0	0.000
3	16 April	3	63.00	3.13	197.19	197.38	0.00014	0.1	0.709
4	16 April	8	62.00	3.093	191.77	191.95	0.00000	0.0	0.000
5	16 April	11	65.00	3.094	201.11	201.31	0.00009	0.1	0.447
6	16 April	19	63.00	3.098	195.17	195.37	0.00000	0.0	0.000
7	16 April	13	64.00	2.961	189.50	189.69	0.00055	0.6	2.899
8	16 April	14	62.00	3.133	194.25	194.44	0.00047	0.5	2.417
9	16 April	17	63.00	3.056	192.53	192.72	0.00021	0.2	1.090
10	16 April	16	63.00	3.059	192.72	192.91	0.00076	0.8	3.940
11	16 April	18	63.00	3.033	191.08	191.27	0.00311	3.1	16.260
12	16 April	4	62.00	3.074	190.59	190.78	0.00118	1.2	6.185
13	16 April	5	63.00	3.074	193.66	193.85	0.0008	0.8	4.127
14	16 April	9	63.00	3.068	193.28	193.47	0.00291	2.9	15.041
15	16 April	39	63.00	3.016	190.01	190.20	0.00691	6.9	36.331
16	16 April	33	62.00	3.062	189.84	190.03	0.00526	5.3	27.680
17	16 April	1	63.00	3.079	193.98	194.17	0.0143	14.3	73.648
18	16 April	37	64.00	3.077	196.93	197.12	0.00662	6.6	33.583
19	16 April	27	63.00	3.077	193.85	194.04	0.00435	4.4	22.418
20	16 April	30	62.00	3.098	192.08	192.27	0.00465	4.7	24.185
21	16 April	6	63.00	3.023	190.45	190.64	0.0002	0.2	1.049
22	16 April	2	63.00	3.076	193.79	193.98	0.00088	0.9	4.537
23	16 April	32	63.00	3.054	192.40	192.59	0.00533	5.4	27.935
24	16 April	36	62.00	3.107	192.63	192.82	0.00201	2.0	10.424
Painter OH	16 April	25	0.00	3.064	0.00	0.00	0.00000	0.0	N/A
Painter UH	16 April	24	63.00	3.086	194.42	194.61	0.00000	0.0	0.000
(Duplicate) 10	16 April	10	63.00	3.199	201.54	201.74	0.00068	0.7	3.371
(Duplicate) 15	16 April	35	0.00	3.178	0.00	0.00	0.00046	0.5	N/A
Blank	16 April	7	0.00	0	0.00	0.00	0.00000	0.0	N/A
Exhaust Duct	16 April			1.067	0.00	0.00		0.0	

Painter OH = Outside painter respirator hood.

Painter UH = Underneath painter respirator hood.

Travis AFB NIOSH 500
 Date: 17 April 1991
 Start Time: 16:05
 Stop Time: 17:18

Particulate

STP
 P=29.92 "Hg
 T=68 °F

Booth:
 T= 68
 P= 29.93

Site Location	Date	Sample Number	Time Sampled (min)	Flowrate (l/min)	Volume		Weight Gain (g)	Weight Gain (mg)	(mg/m3)
					Sample Collected (l)	Volume Collected @ STP (l)			
1	17 April	40	84.00	3.052	256.37	256.45	0.00003	0.0	0.117
2	17 April	58	70.00	3.01	210.70	210.77	0.00000	0.0 *	0.000
3	17 April	22	83.00	3.036	252.15	252.24	0.00000	0.0 *	0.000
4	17 April	34	82.00	3.102	254.36	254.45	0.00000	0.0 *	0.000
5	17 April	52	84.00	2.87	241.08	241.16	0.00008	0.1	0.332
6	17 April	46	82.00	3.096	253.87	253.96	0.00000	0.0 *	0.000
7	17 April	29	83.00	2.964	246.01	246.09	0.00000	0.0 *	0.000
8	17 April	23	82.00	3.102	254.36	254.45	0.00042	0.4	1.651
9	17 April	43	83.00	3.045	252.74	252.82	0.00016	0.2	0.712
10	17 April	59	83.00	3.039	252.24	252.32	0.0000	0.0 *	0.000
11	17 April	45	82.00	3.02	247.64	247.72	0.00095	1.0	3.835
12	17 April	20	82.00	3.036	248.95	249.04	0.00042	0.4	1.687
13	17 April	31	82.00	3.041	249.36	249.45	0.00078	0.8	3.127
14	17 April	38	82.00	3.038	249.12	249.20	0.00179	1.8	7.183
15	17 April	48	82.00	2.963	242.97	243.05	0.00012	0.1	0.494
16	17 April	49	82.00	3.043	249.53	249.61	0.00219	2.2	8.774
17	17 April	42	83.00	3.045	252.74	252.82	0.00218	2.2	8.623
18	17 April	44	83.00	3.071	254.89	254.98	0.00522	5.2	20.472
19	17 April	41	82.00	3.048	249.94	250.02	0.00635	6.3	25.398
20	17 April	53	82.00	3.084	252.89	252.97	0.00357	3.6	14.112
21	17 April	51	82.00	3.012	246.98	247.07	0.00044	0.4	1.781
22	17 April	55	82.00	3.062	251.08	251.17	0.00065	0.7	2.588
23	17 April	47	82.00	3.026	248.13	248.21	0.00115	1.2	4.633
24	17 April	21	82.00	3.05	250.10	250.18	0.00072	0.7	2.878
Painter OH	17 April	50	78.00	3.008	234.62	234.70	0.00085	0.9	3.622
Painter UH	17 April	57	78.00	3.036	236.81	236.89	0.00000	0.0 *	0.000
(Duplicate) 10	17 April	66	82.00	3.16	259.12	259.21	0.00044	0.4	1.697
(Duplicate) 15	17 April	54	82.00	3.144	257.81	257.89	0.0024	2.4	9.306
Blank	17 April		0.00	0	0.00	0.00		0.0	N/A
Exhaust Duct	17 April		60.00	1.053	63.18	63.20		0.0	0
Exh. Duct Dup	17 April		60.00	1.089	65.34	65.36		0.0	0

Painter OH = Outside painter respirator hood.
 Painter UH = Underneath painter respirator hood.

Travis AFB HIOSH 7500 Metals

Date: 17 April, 1991

Start Time: 10:03

Stop Time: 11:59

STP
F=29.92 *Hg
T=68 *FBooth:
T= 60.7
P= 29.77Painter UH = Underneath painter respirator hood.
Painter OH = Outside painter respirator hood.

Site Location	Date	Sample Number	Time Sampled (min)	Sample Flowrate (l/min)	Volume Collected		Lead ug/sample	Zinc ug/sample	Strontium ug/sample	Chromium ug/sample
					(l)	(l)				
1 17 April		56	77.00	3.11	239.47	241.61	1.5 <	6.21 <	0.95	0.33
2 17 April		52	75.00	3.015	226.13	226.15	1.5 <	6.57 <	1.92	0.54
3 17 April		5	74.00	3.091	228.73	230.78	1.5 <	6.50 <	3.02	1.41
4 17 April		22	72.00	3.117	224.42	226.43	1.5 <	6.62 <	2.18	1.17
5 17 April		53	77.00	2.756	212.21	214.11	1.5 <	7.01 <	3.51	0.99
6 17 April		51	74.00	3.136	232.06	234.14	1.5 <	6.41 <	1.82	1.04
7 17 April		46	74.00	2.981	220.59	222.37	1.5 <	6.74 <	7.67	3.72
8 17 April		47	72.00	3.106	223.63	225.63	1.5 <	6.65 <	8.40	4.58
9 17 April		54	75.00	3.06	229.50	231.55	1.5 <	6.48 <	5.10	1.95
10 17 April		20	74.00	3.051	225.77	227.79	1.5 <	6.58 <	1.22	1.50
11 17 April		62	73.00	3.032	221.34	223.32	1.5 <	6.72 <	29.63	14.36
12 17 April		12	71.00	3.041	215.91	217.84	1.5 <	6.89 <	26.76	13.02
13 17 April		57	74.00	3.053	225.92	227.94	1.5 <	6.58 <	16.73	7.91
14 17 April		31	74.00	3.042	225.11	227.12	1.5 <	6.60 <	27.56	14.42
15 17 April		50	73.00	2.973	217.03	218.97	1.5 <	6.85 <	112.20	63.06
16 17 April		18	71.00	3.048	216.41	218.34	1.5 <	6.87 <	67.98	38.13
17 17 April		59	75.00	3.051	228.83	230.87	1.5 <	6.50 <	53.16	29.33
18 17 April		13	74.00	3.07	227.18	229.21	1.5 <	6.54 <	115.30	59.76
19 17 April		70	73.00	3.089	225.50	227.51	1.5 <	6.59 <	156.32	77.64
20 17 April		63	71.00	3.186	226.21	228.23	1.5 <	6.57 <	54.98	29.33
21 17 April		60	75.00	3.009	225.68	227.69	1.5 <	6.59 <	10.11	5.19
22 17 April		19	75.00	3.077	230.78	232.84	1.5 <	6.44 <	11.54	6.06
23 17 April		66	73.00	3.045	222.29	224.27	1.5 <	6.69 <	63.47	35.06
24 17 April		6	72.00	3.066	220.75	222.73	1.5 <	6.73 <	36.35	20.15
(Duplicate) 10 17 April		11	74.00	3.186	235.76	237.87	1.5 <	6.31 <	6.02	3.65
(Duplicate) 15 17 April		64	72.00	3.14	226.08	228.10	1.5 <	6.58 <	92.69	53.01
Painter UH		7	31.00	3.068	95.11	95.96	1.5 <	15.63 <	31.44	16.14
Painter OH		21	66.00	3.054	201.56	203.37	1.5 <	7.38 <	0.78	0.15
Blank		17	0.00	0	0.00	0.00	1.5 <	N/A	1.23	0.30
Exhaust Duct	17 April	81	60.00	1.059	63.54	64.11	1.5 <	6.7	41.9	25.07
							6.7	35.1		21

Travis AFB

Isocyanates

Date: 19 April, 1991

Start Time: 11:26

Stop Time: 12:26

Booth:

STP:

T= 64.3

P=29.92 "Hg

P= 29.8

T=68 °F

Site Location	Date	Sample Number	Time Sampled (min)	Sample Flowrate (l/min)	Volume Collected (l)	Volume Collected		HMDI per Filter (ug)	HMDI Concentration (ug/m3)
						Collected	@ STP (l)		
1	19 April	8	66.0	3.082	203	205		< 1.0	< 4.9
2	19 April	6	55.0	3.314	182	183		< 1.0	< 5.5
3	19 April	2	65.0	3.048	198	199		< 1.0	< 5.0
4	19 April	4	64.0	3.115	199	200		< 1.0	< 5.0
5	19 April	20	66.0	3.069	203	204		< 1.0	< 4.9
6	19 April	14	64.0	3.144	201	202		< 1.0	< 4.9
7	19 April	7	64.0	3.015	193	194		< 1.0	< 5.2
8	19 April	13	61.0	3.094	189	190		< 1.0	< 5.3
9	19 April	22	65.0	3.160	205	207		< 1.0	< 4.8
10	19 April	23	64.0	3.069	196	198		< 1.0	< 5.1
11	19 April	51	64.0	3.158	202	203		< 1.0	< 4.9
12	19 April	43	63.0	3.112	196	197		< 1.0	< 5.1
13	19 April	15	65.0	3.125	203	204		< 1.0	< 4.9
14	19 April	5	64.0	3.149	202	203		< 1.0	< 4.9
15	19 April	59	64.0	3.167	203	204		1.3	6.4
16	19 April	58	63.0	3.119	196	198		1.0	5.1
17	19 April	34	65.0	3.136	204	205		< 1.0	< 4.9
18	19 April	18	64.0	3.120	200	201		1.5	7.5
19	19 April	19	64.0	3.131	200	202		2.5	12.4
20	19 April	9	63.0	3.162	199	200		2.2	11.0
21	19 April	21	65.0	3.120	203	204		< 1.0	< 4.9
22	19 April	25	64.0	3.151	202	203		< 1.0	< 4.9
23	19 April	1	64.0	3.118	200	201		< 1.0	< 5.0
24	19 April	35	63.0	3.136	198	199		< 1.0	< 5.0
Exhaust Duct	19 April	10	55.0	3.172	174	175		< 1.0	< 5.7
(Duplicate) 10	19 April	11	64.0	3.127	200	201		< 1.0	< 5.0
(Duplicate) 15	19 April	24	64.0	3.156	202	203		1.6	7.9
Painter UH	19 April	54	65.0	3.116	203	204		< 1.0	< 4.9
Painter OH	19 April	41	65.0	3.106	202	203		< 1.0	< 4.9
Blank	19 April	16	0.0	N/A	N/A	N/A		< 1.0	N/A
Exhaust Duct	19 April	Tube	53.0	0.991	53	53			

Painter UH = Underneath painter respirator hood.

Painter OH = Outside painter respirator hood.

Travis AFB

Isocyanates

Date: 19 April, 1991

Start Time: 15:15

Stop Time: 16:00

Booth:

STP

T= 65.6

P=29.92 "Hg

P= 29.88

T=68 °F

Site Location	Date	Sample Number	Time Sampled (min)	Sample Flowrate (l/min)	Volume		HMDI per Filter (ug)	HMDI Concentration (ug/m3)
					Collected (l)	# STP (l)		
1	19 April	26	49.0	3.105	152	153	< 1.0	< 6.6
2	19 April	17	40.0	3.341	134	134	< 1.0	< 7.5
3	19 April	29	47.0	3.012	142	142	< 1.0	< 7.0
4	19 April	39	46.0	3.041	140	140	< 1.0	< 7.1
5	19 April	45	48.0	3.057	147	147	< 1.0	< 6.8
6	19 April	57	47.0	3.133	147	148	< 1.0	< 6.8
7	19 April	53	47.0	3.019	142	142	< 1.0	< 7.0
8	19 April	31	45.0	3.103	140	140	< 1.0	< 7.1
9	19 April	46	48.0	3.132	150	151	< 1.0	< 6.6
10	19 April	48	47.0	3.044	143	144	< 1.0	< 7.0
11	19 April	30	47.0	3.035	143	143	< 1.0	< 7.0
12	19 April	37	46.0	3.116	143	144	< 1.0	< 7.0
13	19 April	12	47.0	3.118	147	147	< 1.0	< 6.8
14	19 April	47	47.0	3.143	148	148	< 1.0	< 6.7
15	19 April	32	46.0	3.176	146	147	1.2	8.2
16	19 April	33	46.0	3.155	145	146	< 1.0	< 6.9
17	19 April	38	47.0	3.128	147	147	< 1.0	< 6.8
18	19 April	42	47.0	3.133	147	148	< 1.0	< 6.8
19	19 April	40	47.0	3.120	147	147	2.8	19.0
20	19 April	52	45.0	3.159	142	143	< 1.0	< 7.0
21	19 April	3	47.0	3.109	146	147	< 1.0	< 6.8
22	19 April	55	47.0	3.150	148	149	< 1.0	< 6.7
23	19 April	28	46.0	3.131	144	144	< 1.0	< 6.9
24	19 April	49	46.0	3.128	144	144	< 1.0	< 6.9
Exhaust Duct	19 April	36	42.0	3.159	133	133	< 1.0	< 7.5
Exh. Duct Dup.	19 April	44	42.0	3.129	131	132	< 1.0	< 7.6
Exh. Duct Blnk	19 April	27	42.0	N/A	N/A	N/A	< 1.0	N/A
(Duplicate) 10	19 April	70	47.0	3.130	147	148	< 1.0	< 6.8
(Duplicate) 15	19 April	50	46.0	3.168	146	146	1.3	9.9
Painter UH	19 April	72	48.0	3.098	149	149	< 1.0	< 6.7
Painter OH	19 April	71	48.0	3.185	153	153	< 1.0	< 6.5
Blank	19 April	56	0.0	N/A	N/A	N/A	< 1.0	N/A
Exhaust Duct	19 April	Charcoal Tube	42.0	0.991	42	42		

Painter UH = Underneath painter respirator hood.
 Painter OH = Outside painter respirator hood.

APPENDIX G

REDUCED DATA FOR THE POSTMODIFICATION TEST SERIES

TEST: ORGANICS #1
 DATE: 06-16-92
 METHOD: NIOSH 1300

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

PAINT: LT GREEN PRIMER, GRAY TOPCOAT
 OBJECT: AUXILIARY RAMP

PAGE 1 OF 2

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	PRE-CAL #	POST-CAL (ml/min)	RUN TIME (min)	MEK (ug)	MIBK (ug)	TOLUENE (ug)	BUTYL ACETATE (ug)	ETHYL BENZENE (ug)	XYLENES (ug)
1	1	90043384	27	1012	1009	142	186	78	24	nd	nd
2	2	90045685	22	1010	1247	63	13	85	25	nd	nd
3	3	90045788	35	1000	125	63	159	74	22	nd	nd
4	4	900469870	19	1001	3	63	nd	nd	nd	nd	nd
5	5	90043586	9	1024	555	63	117	69	21	nd	nd
6	6	90045483	7	1016	1015	63	170	81	25	nd	nd
7	7	900459860	21	1000	998	63	340	97	27	nd	nd
8	8	900477182	28	1010	1021	63	304	89	28	nd	nd
9	9	43788	10	1025	1076	63	174	105	30	nd	nd
10	10	90045182	39	1010	958	63	315	115	31	nd	nd
11	11	90046182	20	1010	1017	63	732	145	72	nd	nd
12	12	90047384	25	1030	1087	63	671	221	63	nd	nd
13	13	900439840	11	1024	1081	63	177	139	45	nd	20.6
14	14	900450849	8	1025	961	63	284	158	50	nd	nd
15	15	90046384	38	1042	1074	63	772	301	93	nd	nd
16	16	90047586	24	1020	1024	63	553	411	61	nd	nd
17	17	90044182	23	742	126	63	113	1878	35	nd	nd
18	18	90044788	30	1016	1006	63	295	364	112	nd	27.8
19	19	90047887	29	984	995	63	nd	nd	nd	nd	16.2
20	20	90044384	1	850	836	63	547	208	66	nd	nd
P over	P over	90044586	5	862	859	63	213	92	27	nd	nd
P under	P under	90046788	14	633	629	63	154	106	29	nd	nd
1A	1A	900479880	16	938	904	63	189	83	23	nd	nd
2A	2A	90049182	18	1017	1003	63	12	nd	nd	nd	13.8
3A	3A	90049182	17	1000	981	63	1386	146	nd	nd	nd
1B	1B	90049182	6	1029	1006	63	nd	nd	nd	nd	nd
2B	2B	90049483	2	1031	1068	63	119	61	25	nd	nd
3B	3B	90049586	3	1018	956	63	142	95	29	nd	nd
28	28	90048182	33	1010	1018	63	1594	80	24	nd	nd
38	38	90048384	32	1020	1015	63	nd	nd	nd	nd	nd
TUBE BLN	TUBE BLN	90048586	31	1010	1003	63	138	66	20	nd	nd
EXHAUST	EXHAUST	90049788	37	1021	1036	63	147	71	22	nd	nd
RECIRC	RECIRC	90027786	12	1036	1098	63	nd	nd	nd	nd	nd
		900275	12	1036	1098	63	377	43	52	nd	nd
							nd	nd	nd	nd	nd

TEST: ORGANICS #1
DATE: 06-16-92
METHOD: NIOSH 1300

PAGE 2 OF 2
D E INITIALS:
Q A INITIALS:

BN & LJL
LJL

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	AVG FLOW (L/MIN)	MEK (mg/M3)	MIBK (mg/M3)	TOLUENE (mg/M3)	BUTYL ACETATE (mg/M3)	ETHYL BENZENE (mg/M3)	XYLENES (mg/M3)
1	15	90043384	1.011	2.2	2.9	1.2	0.4	< MDL	< MDL
2	22	90045685	1.129	0.2	2.5	1.2	0.4	< MDL	< MDL
3	25	90045788	1.013	2.6	2.8	1.2	0.3	< MDL	< MDL
4	24	900469870	1.002	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
5	10	90043586	0.990	1.9	2.6	1.1	0.3	< MDL	< MDL
6	20	90045483	1.016	2.7	2.7	1.3	0.4	< MDL	< MDL
7	14	900459860	0.999	5.4	3.5	1.5	0.4	< MDL	< MDL
8	11	90047182	1.016	4.8	3.2	1.4	0.4	< MDL	< MDL
9	54	90043788	1.051	2.6	3.7	1.6	0.5	< MDL	< MDL
10	5	90045182	0.994	5.1	4.6	1.9	0.5	< MDL	< MDL
11	56	90046182	1.014	11.5	6.4	2.3	1.1	< MDL	< MDL
12	59	90047384	1.059	10.1	7.3	3.3	0.9	< MDL	< MDL
21	18	900439840	1.053	2.7	4.4	2.1	0.7	< MDL	0.3
22	8	900450849	0.993	4.5	5.6	2.5	0.8	< MDL	< MDL
23	58	90046384	1.058	11.6	9.8	4.5	1.4	< MDL	< MDL
24	29	90047586	1.022	8.6	6.4	2.9	0.9	< MDL	< MDL
13	1	90044182	0.734	2.4	40.6	2.4	0.8	< MDL	< MDL
14	13	90044788	1.011	4.6	38.6	5.7	1.8	< MDL	0.4
15	28	90046586	1.034	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
16	2	90047887	0.990	8.8	1.0	3.3	1.1	< MDL	0.3
17	53	90044384	0.843	2.4	4.0	1.7	0.5	< MDL	< MDL
18	6	90044586	0.861	2.8	4.5	2.0	0.5	< MDL	< MDL
19	23	90046788	0.631	13.4	4.8	2.1	0.6	< MDL	< MDL
20	16	900479880	0.921	< MDL	0.2	< MDL	< MDL	< MDL	< MDL
P over	19	90048788	1.010	0.4	21.8	2.3	< MDL	< MDL	0.2
P under	12	900490889	0.991	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
IA	3	90049182	1.018	1.9	25.2	1.3	0.4	< MDL	< MDL
2A	26	90049483	1.050	2.1	29.7	1.4	0.4	< MDL	< MDL
3A	21	90049586	0.987	1.9	25.6	1.3	0.4	< MDL	< MDL
1B	9	90048182	1.014	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
2B	17	90048384	1.018	1.5	2.2	1.0	0.3	< MDL	< MDL
3B	27	90048586	1.007	1.6	2.3	1.1	0.3	< MDL	< MDL
TUBE BLN	30	90049788	0.000	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
EXHAUST	51	90027786	1.029	4.4	5.8	0.7	0.8	< MDL	< MDL
RECIRC	33	900275	1.067	3.5	< MDL	< MDL	< MDL	< MDL	< MDL

ORGANICS #1
 DATE: 06-16-92
 METHOD: NIOSH 1300
 GRID CHART 1 - MEK

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS:BN & LJJ
 Q A INITIALS:LJJ

EXHAUST GRID			
1	2.2	2	0.2
3	2.6	4	< MDL
5	1.9	6	2.7
7	5.4	8	4.8
9	2.6	10	5.1
11	11.5	12	10.1
21	2.7	22	4.5
23	11.6	24	8.6
13	2.4	14	4.6
15	< MDL	16	8.8
17	2.4	18	2.8
19	13.6	20	< MDL

Painter Over
 0.4
 Painter Under
 < MDL

Field Blank
 < MDL

Painter Over
 0.4
 Painter Under
 < MDL

Field Blank
 < MDL

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: mg/MS GRID MDL: 0.0115 mg/SAMPLE EXHAUST DUCT: 4.4
 OBJECT: AUXILIARY BAMP OSHA TWA:590 mg/MS PAINTER MDL: 0.0115 mg/SAMPLE RECIRC DUCT: 3.5

ORGANICS #1
 DATE: 06-16-92
 METHOD: NIOSH 1300
 GRID CHART 2 - MINK

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS:MM & LJJ
 O A INITIALS:LJJ

Painter Over 21.8		EXHAUST GRID										Field Blank < MDL	
Painter Under < MDL		1	2.9	2	2.5	3	2.8	4	< MDL				
INLET GRID A		5	2.6	6	2.7	7	3.5	8	3.2	INLET GRID B			
1A	25.2	9	3.7	10	4.6	11	8.4	12	7.3	18	< MDL		
2A	29.7	21	4.4	22	5.6	23	9.8	24	6.4	28	2.2		
3A	25.6	13	40.6	14	38.6	15	< MDL	16	1.0	30	2.3		
		17	4.0	18	4.5	19	4.8	20	0.2				

PAINT TYPE: LT GREEN PRIMER, GRAY TOP				UNITS: mg/MS	GRID MDL: 0.0095 mg/SAMPLE	EXHAUST DUCT: 5.8
OBJECT: AUXILIARY RAMP				OSMA TWA:205 mg/MS	PAINTER MDL: 0.0095 mg/SAMPLE	RECIRC DUCT: < MDL

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: mg/MS GRID MDL: 0.0095 mg/SAMPLE EXHAUST DUCT: 5.8
 OBJECT: AUXILIARY RAMP OSHA TWA:205 mg/MS PAINTER MDL: 0.0095 mg/SAMPLE RECIRC DUCT: < MDL

ORGANICS #1

DATE: 06-16-92

METHOD: NIOSH 1300

GRID CHART 3 - TOLUENE

TRAVIS AFB
PAINT BOOTHS TESTS
ACUREX PROJECT 8405

D E INITIALS:MM & LJJ
Q A INITIALS:LJJ

EXHAUST GRID				Field Blank < MDL			
1	1.2	2	1.2	3	1.2	4	< MDL
5	1.1	6	1.3	7	1.5	8	1.4
9	1.6	10	1.9	11	2.3	12	3.3
21	2.1	22	2.5	23	4.5	24	2.9
13	2.4	14	5.7	15	< MDL	16	3.3
17	1.7	18	2.0	19	2.1	20	< MDL
INLET GRID A							
1A	1.3						
2A	1.4						
3A	1.3						
INLET GRID B							
1B	< MDL						
2B	1.0						
3B	1.1						

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: mg/MS GRID MDL: 0.0114 mg/SAMPLE EXHAUST DUCT: 0.7
 OBJECT: AUXILIARY BAMP OSHA TWA:375 mg/MS PAINTER MDL: 0.0114 mg/SAMPLE RECIRC DUCT: < MDL

ORGANICS #1
DATE: 06-16-92
METHOD: NIOSH 1300

TRAVIS AFB
PAINT BOOTEN TESTS
ACUREX PROJECT 8465

D E INITIALS:MM & LJJ
Q A INITIALS:LJJ

GRID CHART 4 - BUTYL ACETATE

Painter Over < MDL		EXHAUST GRID												Field Blank < MDL	
Painter Under < MDL		1	0.4	2	0.4	3	0.3	4	< MDL						
		5	0.3	6	0.4	7	0.4	8	0.4						
		9	0.5	10	0.5	11	1.1	12	0.9						
		21	0.7	22	0.8	23	1.4	24	0.9						
		13	0.8	14	1.8	15	< MDL	16	1.1						
		17	0.5	18	0.5	19	0.6	20	< MDL						
INLET GRID A														INLET GRID B	
1A 0.4														1B < MDL	
2A 0.4														2B 0.3	
3A 0.4														3B 0.3	

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: MG/MS GRID MDL: 0.0116 MG/SAMPLE EXHAUST DUCT: 0.8
OBJECT: AUXILIARY RAMP CGMA TUA:710 MG/MS PAINTER MDL: 0.0116 MG/SAMPLE RECIRC DUCT: < MDL

ORGANICS #1
DATE: 06-16-92
METHOD: TOSH 1300

GRID CHART 5 - ETHYL BENZENE

TEAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS:MM & LJJ
Q A INITIALS:LJJ

EXHAUST GRID			
1 < MDL	2 < MDL	3 < MDL	4 < MDL
5 < MDL	6 < MDL	7 < MDL	8 < MDL
9 < MDL	10 < MDL	11 < MDL	12 < MDL
21 < MDL	22 < MDL	23 < MDL	24 < MDL
13 < MDL	14 < MDL	15 < MDL	16 < MDL
17 < MDL	18 < MDL	19 < MDL	20 < MDL
INLET GRID A			
1A < MDL			
2A < MDL			
3A < MDL			
INLET GRID B			
1B < MDL			
2B < MDL			
3B < MDL			
Field Blank < MDL			

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: mg/M3 GRID MDL: 0.0117 mg/SAMPLE EXHAUST DUCT: < MDL
 OBJECT: AUXILIARY BUMP OSHA TWA:435 mg/M3 PAINTER MDL: 0.0117 mg/SAMPLE RECIRC DUCT: < MDL

ORGANICS #1
DATE: 06-16-92
METHOD: NIOSH 1300

GRID CHART 6 - XYLENES

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8405

C E INITIALS:GM & LHL
Q A INITIALS:LAL

EXHAUST GRID			INLET GRID A		
1 < MDL	2 < MDL	3 < MDL	4 < MDL	Field Blank < MDL	
5 < MDL	6 < MDL	7 < MDL	8 < MDL		
9 < MDL	10 < MDL	11 < MDL	12 < MDL		
21 0.3	22 < MDL	23 < MDL	24 < MDL		
13 < MDL	14 0.4	15 < MDL	16 0.3		
17 < MDL	18 < MDL	19 < MDL	20 < MDL		
INLET GRID B			EXHAUST DUCT		
18 < MDL	28 < MDL	38 < MDL	GRID MDL: 0.0368 mg/SAMPLE	EXHAUST DUCT: < MDL	
			PAINTER MDL: 0.0368 mg/SAMPLE	RECIRC DUCT: < MDL	
			OSHA TWA:435 mg/MS		

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: mg/MS
OBJECT: AUXILIARY RAMP

PAINT: LT GREEN PRIMER, GRAY TOPCOAT
OBJECT: AUXILIARY RAMP BOTTOMS

TEST: ORGANICS #2
DATE: 06-17-92 AM
METHOD: NIOSH 1300

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	PUMP #	PRE-CAL # (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	MEK (ug)	MIBK (ug)	TOLUENE (ug)	BUTYL ACETATE (ug)	ETHYL BENZENE (ug)	XYLENES (ug)
1	113	90040788	2	1033	1018	59	65	96	62	18	nd	nd
2	46	900419820	13	1086	1078	59	209	156	77	25	nd	nd
3	116	90043182	18	1054	1059	0	nd	nd	nd	nd	nd	nd
4	43	900509810	22	1091	1176	0	71	nd	nd	nd	nd	nd
5	111	900409810	1	1102	1143	59	nd	nd	nd	nd	nd	nd
6	44	90042182	8	1031	1027	59	76	102	61	19	nd	nd
7	35	9004998500	7	1084	1096	57	289	252	122	40	nd	nd
8	119	90051182	21	1068	1068	0	nd	nd	nd	nd	nd	nd
9	52	90041182	11	1056	1067	59	204	225	120	37	nd	nd
10	49	90042384	9	1060	1056	59	285	220	109	34	nd	nd
11	40	90050182	17	1054	1045	57	401	317	169	59	nd	nd
12	108	90051384	25	1088	1150	56	339	255	135	46	nd	nd
21	42	90041384	3	1073	1045	59	81	178	114	32	nd	nd
22	109	90042586	15	1095	1146	59	389	387	198	65	nd	nd
23	110	90050384	19	1039	1034	0	nd	nd	nd	nd	nd	nd
24	117	90051586	24	1037	1070	57??	224	246	127	41	nd	nd
13	31	90041586	10	1050	1054	59	228	370	201	65	nd	nd
14	112	90042788	14	632	631	59	224	384	208	71	nd	nd
15	120	90052788	37	1076	1067	59	319	726	399	135	nd	nd
16	41	90050586	12	1084	1128	57	710	485	302	100	nd	nd
17	114	90051788	26	847	770	56	602	244	129	45	nd	nd
18	32	90041788	6	1100	1121	59	215	310	165	53	nd	nd
19	38	900429830	16	953	947	0	nd	nd	nd	nd	nd	nd
20	45	90050887	5	912	918	57	3019	385	111	86	nd	nd
P over	115	900519820	20	1081	1081	0	nd	nd	nd	nd	nd	nd
P under	47	90037485	32	1058	1040	58	702	419	229	68	nd	nd
1A	118	90037687	35	1056	1034	58	15	nd	nd	nd	nd	nd
2A	50	90040182	33	1074	1050	59	82	108	65	20	nd	nd
3A	106	90040384	31	1053	1036	59	nd	nd	nd	nd	nd	nd
1B	48	90040586	28	1055	1028	59	74	96	58	20	nd	nd
2B	34	90052182	30	1070	1050	59	149	139	71	22	nd	nd
3B	37	90052384	29	990	981	59	nd	nd	nd	nd	nd	nd
EXHAUST	107	90052586	27	1054	1148	59	nd	nd	nd	nd	nd	nd
RECIRC	36	90026687	36	1061	1048	49	298	252	158	49	nd	nd
	39	90026889	39	1064	1067	48	105	135	84	25	nd	nd

TEST: ORGANICS #2
DATE: 06-17-92 AM
METHOD: NIOSH 1300

PAGE 2 OF 2
D E INITIALS: BN & LJJ
Q A INITIALS: LJJ

GRID	LOC	ACUREX TUBE #	ACUREX SAMPLE #	AVG FLOW (L/MIN)	MEK (mg/M3)	MIBK (mg/M3)	TOLUENE (mg/M3)	BUTYL ACETATE (mg/M3)	ETHYL BENZENE (mg/M3)	XYLENES (mg/M3)
1		113	90040748	1.026	1.1	1.6	1.0	0.3	< MDL	< MDL
2		46	900419820	1.082	3.3	2.4	1.2	0.4	< MDL	< MDL
3		116	90043182	1.057	no sample	no sample	no sample	no sample	no sample	no sample
4		43	900509810	1.134	no sample	no sample	no sample	no sample	no sample	no sample
5		111	900409810	1.123	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
6		44	90042182	1.029	1.3	1.7	1.0	0.3	< MDL	< MDL
7		35	9004998500	1.095	4.6	4.0	2.0	0.6	< MDL	< MDL
8		119	90051182	1.068	no sample	no sample	no sample	no sample	no sample	no sample
9		52	90041182	1.062	3.3	3.6	1.9	0.6	< MDL	< MDL
10		49	90042344	1.058	4.6	3.5	1.7	0.5	< MDL	< MDL
11		40	90050182	1.050	6.7	5.3	2.8	1.0	< MDL	< MDL
12		108	90051344	1.119	5.4	4.1	2.2	0.7	< MDL	< MDL
21		42	90041344	1.059	1.3	2.8	1.8	0.5	< MDL	< MDL
22		109	90042586	1.121	5.9	5.9	3.0	1.0	< MDL	< MDL
23		110	90050344	1.037	no sample	no sample	no sample	no sample	no sample	no sample
24		117	90051586	1.054	no sample	no sample	no sample	no sample	no sample	no sample
13		31	90041586	1.072	3.6	5.8	3.2	1.0	< MDL	< MDL
14		112	90042788	0.632	6.0	10.3	5.6	1.9	< MDL	< MDL
15		120	90052788	1.072	5.0	11.5	6.3	2.1	< MDL	< MDL
16		41	90050586	1.106	11.3	7.7	4.8	1.6	< MDL	< MDL
17		114	90051788	0.809	13.3	5.4	2.8	1.0	< MDL	< MDL
18		32	90041788	1.111	3.3	4.7	2.5	0.8	< MDL	< MDL
19		38	900429830	0.950	no sample	no sample	no sample	no sample	no sample	no sample
20		45	90050887	0.915	57.9	7.4	2.1	1.6	< MDL	< MDL
P over		115	900519820	1.081	no sample	no sample	no sample	no sample	no sample	no sample
P under		47	90037485	1.049	11.5	6.9	3.8	1.1	< MDL	< MDL
1A		118	90037687	1.045	0.2	< MDL	< MDL	< MDL	< MDL	< MDL
2A		50	90040182	1.062	1.3	1.7	1.0	0.3	< MDL	< MDL
3A		106	90040384	1.045	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
1B		48	90040586	1.042	1.2	1.6	0.9	0.3	< MDL	< MDL
2B		34	90052182	1.060	2.4	2.2	1.1	0.4	< MDL	< MDL
3B		37	90052384	0.936	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
EXHAUST		107	90052586	1.101	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
RECTRC		36	90026687	1.055	5.8	4.9	3.1	0.9	< MDL	< MDL
		39	90026889	1.066	2.1	2.6	1.6	0.5	< MDL	< MDL

TEST: ORGANICS #2
 DATE: 06-17-92 AM
 METHOD: NIOSH 1300
 GRID CHART 1 - MEK

TRAVIS AFB
 PAINT BOOTH TESTS
 AGRUX PROJECT 8485

D E INITIALS: DM & LJJ
 G A INITIALS: LJJ

Painter Over 11.5		EXHAUST GRID								INLET GRID 3	
Painter Under 0.2		1	1.1	2	3.3	3	no sample	4	no sample	1B	2.4
INLET GRID A		5	< MDL	6	1.3	7	4.6	8	no sample	2B	< MDL
1A	1.3	9	3.3	10	4.6	11	6.7	12	5.4	3B	< MDL
2A	< MDL	21	1.3	22	5.9	23	no sample	24	no sample		
3A	0.2	13	3.6	14	6.0 5.0	15	11.3	16	13.3		
		17	3.3	18	no sample	19	57.9	20	no sample		
		PAINT TYPE: LT GREEN PRIMER, GRAY TOP				UNITS: mg/m3	GRID MDL: 0.0115 mg/SAMPLE		EXHAUST DUCT: 5.8		
		OBJECT: AUXILIARY DAMP BOTTOMS				OSMA TWA: 500 mg/m3	PAINTER MDL: 0.0115 mg/SAMPLE		RECTING DUCT: 2.1		

TEST: ORGANICS #2
 DATE: 06-17-92 AM
 METHOD: NIOSH 1500
 GRID CHART 2 - NIKK

TRAVIS AFB
 PAINT BOOTH TESTS
 ACDREX PROJECT 84-85

D E INITIALS:BN & LJJ
 Q A INITIALS:LJJ

EXHAUST GRID			
1	1.6	2	2.4
3	no sample	4	no sample
5	< MDL	6	1.7
7	4.0	8	no sample
9	3.6	10	3.5
11	5.3	12	4.1
21	2.8	22	5.9
23	no sample	24	no sample
13	5.8	14	10.3 11.5
15	7.7	16	5.4
17	4.7	18	no sample
19	7.4	20	no sample
INLET GRID A			
1A	1.7		
2A	< MDL		
3A	1.6		
INLET GRID B			
1B	2.2		
2B	< MDL		
3B	< MDL		

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: mg/MS GRID MDL: 0.0095 mg/SAMPLE EXHAUST DUCT: 4.9
 OBJECT: AUXILIARY BAMP BOTTOMS OSMA TWA:205 mg/MS PAINTER MDL: 0.0095 mg/SAMPLE RECIRC DUCT: 2.6

TEST: ORGANICS #2
DATE: 06-17-92 AM
METHOD: NIOSH 1500

GRID CHART 3 - TOLUENE

TRAVIS AFB
PAINT BOOTH TESTS
ADUREX PROJECT 8485

D E INITIALS: BM & LJJ
Q A INITIALS: LJJ

PAINTER Over 3.8		EXHAUST GRID				INLET GRID A		INLET GRID B			
Painter Under < MDL		1	2	3	4	5	6	7	8	1A	1.1
		1.0	1.2	no sample	no sample	< MDL	1.0	2.0	no sample	1.0	1.1
		9	10	11	12	21	22	23	24	2A	< MDL
		1.9	1.7	2.8	2.2	1.8	3.0	no sample	no sample	< MDL	< MDL
		13	14	15	16						
		3.2	5.6 6.3	4.8	2.3						
		17	18	19	20						
		2.5	no sample	2.1	no sample						
		PAINT TYPE: LT GREEN PRIMER, GRAY TOP				GRID MDL: 0.0114 mg/SAMPLE				EXHAUST DUCT: 3.1	
		UNITS: mg/MS				PAINTER MDL: 0.0114 mg/SAMPLE				RECIRC DUCT: 1.6	
		OBJECT: AUXILIARY RAMP BOTTOMS				OSMA TWA: 375 mg/MS					

TEST: ORGANICS #2
DATE: 06-17-92 AM
METHOD: NIOSH 1500

GRID CHART 4 - BUTYL ACETATE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8405

D E INITIALS:BN & LJJ
Q A INITIALS:LJJ

EXHAUST GRID

Pointer Over 1.1		1	0.3	2	0.4	3	no sample	4	no sample
Pointer Under < MDL		5	< MDL	6	0.3	7	0.6	8	no sample
INLET GRID A		9	0.6	10	0.5	11	1.0	12	0.7
1A 0.3		21	0.5	22	1.0	23	no sample	24	no sample
2A < MDL		13	1.0	14	1.9 2.1	15	1.6	16	1.0
3A 0.3		17	0.8	18	no sample	19	1.6	20	no sample
INLET GRID B		18	0.4	28	< MDL	28	< MDL		

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: mg/M3 GRID MDL: 0.0116 mg/SAMPLE EXHAUST DUCT: 0.9
OBJECT: MISCELLANEOUS RAMP BOTTOMS OSHA TWA: 710 mg/M3 PAINTER MDL: 0.0116 mg/SAMPLE RECIRC DUCT: 0.5

P E INITIALS:BM & LJI
Q A INITIALS:LJI

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

TEST: ORGANICS #2
DATE: 06-17-92 AM
METHOD: NIOSH 1500

GRID CHART 5 - ETNYL BENZENE

EXHAUST GRID				INLET GRID A				INLET GRID B																																																			
1	< MDL	2	< MDL	3	no sample	4	no sample	5	< MDL	6	< MDL	7	< MDL	8	no sample	9	< MDL	10	< MDL	11	< MDL	12	< MDL	13	< MDL	14	< MDL < MDL	15	< MDL	16	< MDL	17	< MDL	18	no sample	19	< MDL	20	no sample	21	< MDL	22	< MDL	23	no sample	24	no sample	25	< MDL	26	< MDL	27	< MDL	28	no sample	29	< MDL	30	< MDL

PAINT TYPE: LT GREEN PRIMER, GRAY TOP UNITS: mg/MS GRID MDL: 0.0117 mg/SAMPLE EXHAUST DUCT: < MDL
OBJECT: AUXILIARY RAMP BOTTOMS CSMA TUN:435 mg/MS PAINTER MDL: 0.0117 mg/SAMPLE RECIRC DUCT: < MDL

TEST: ORGANICS #2
DATE: 06-17-92 AM
METHOD: NIOSH 1300

GRID CHART 6 - XYLENES

TRAVIS AFB
PAINT BOOTH TESTS
AQUINEX PROJECT 0405

D E INITIALS:BM & LJJ
Q A INITIALS:LJJ

Painter Over < MDL	EXHAUST GRID				INLET GRID B																						
Painter Under < MDL	1 < MDL	2 < MDL	3 no sample	4 no sample	5 < MDL	6 < MDL	7 < MDL	8 no sample	9 < MDL	10 < MDL	11 < MDL	12 < MDL	13 < MDL	14 < MDL < MDL	15 < MDL	16 < MDL	17 < MDL	18 no sample	19 < MDL	20 no sample	21 < MDL	22 < MDL	23 no sample	24 no sample	25 < MDL	26 < MDL	27 < MDL
					INLET GRID A																						
					1A																						
					2A < MDL																						
					3A < MDL																						

PAGE 1 OF 2

ADDITIONAL ORGANIC SPECIES	2-METHOXY ETHYL ETHER	ETHYL ACETATE
10	50	nd
91 900829830	1072	62
17 146 90083182	1125	49
22 98 90082783	997	nd
RECIRC	1667	46
		706

64

TEST: ORGANICS #3
DATE: 06-17-92 PM
METHOD: NIOSH 1300

PAGE 2 OF 2
DE INITIALS: BN & LJJ
QA INITIALS: LJJ

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	AVG FLOW (L/MIN)	MEK (mg/M3)	MIBK (mg/M3)	TOLUENE (mg/M3)	BUTYL ACETATE (mg/M3)	ETHYL BENZENE (mg/M3)	XYLENES (mg/M3)
1	149	90081384	1.057	8.0	6.5	< MDL	1.8	< MDL	< MDL
2	135	90082586	1.1345	no sample	no sample	no sample	no sample	no sample	no sample
3	132	90083788	1.1625	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
4	96	900849850	1.077	no sample	no sample	no sample	no sample	no sample	no sample
5	18	90081586	1.0565	no sample	no sample	no sample	no sample	no sample	no sample
6	105	90082788	0.628	2.1	6.4	< MDL	1.8	< MDL	< MDL
7	103	900839840	0.76	12.6	8.4	0.5	2.2	< MDL	< MDL
8	100	90083182	1.115	11.0	8.5	< MDL	1.3	< MDL	< MDL
9	104	90081788	1.018	16.3	22.6	0.6	6.5	< MDL	< MDL
10	91	900829830	1.083	16.2	20.6	0.6	5.5	< MDL	0.4
11	136	90084182	1.0175	23.6	16.1	0.4	4.1	< MDL	0.3
12	129	90083584	1.1825	no sample	no sample	no sample	no sample	no sample	no sample
21	131	900819820	1.047	6.6	6.8	< MDL	1.8	< MDL	< MDL
22	146	90083182	1.1105	18.1	25.5	0.7	6.9	< MDL	1.0
23	134	90084384	0.9125	23.2	18.7	0.5	4.7	< MDL	< MDL
24	140	90085586	1.0505	23.9	13.1	0.3	3.0	< MDL	< MDL
13	126	90082182	1.106	13.4	18.1	0.5	5.0	< MDL	< MDL
14	128	90083384	1.1145	13.3	20.0	0.6	5.4	< MDL	< MDL
15	95	90084586	1.1635	46.2	1.2	3.4	4.7	< MDL	< MDL
16	141	90085788	1.052	28.7	1.5	0.3	3.2	< MDL	< MDL
17	93	90082384	0.9375	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
18	142	90083586	1.0895	15.6	8.9	0.2	2.4	< MDL	< MDL
19	148	90084788	1.1245	108.3	8.8	< MDL	2.3	< MDL	< MDL
20	124	900859860	0.9795	no sample	no sample	no sample	no sample	no sample	no sample
P over	150	90036687	1.0145	2.7	4.7	< MDL	1.2	< MDL	< MDL
P under	101F	900388	1.0475	no sample	no sample	no sample	no sample	no sample	no sample
1A	94	90080182	1.0645	7.6	6.4	< MDL	1.7	< MDL	< MDL
2A	147	90080384	1.02	2.6	2.6	< MDL	0.7	< MDL	< MDL
3A	143	90080586	1.063	7.2	5.6	< MDL	1.7	< MDL	< MDL
1B	138	90080788	1.0345	5.7	4.6	< MDL	1.2	< MDL	< MDL
2B	139	90080988	1.055	no sample	no sample	no sample	no sample	no sample	no sample
3B	92	90081188	1.0285	6.4	5.5	< MDL	1.4	< MDL	< MDL
EXHAUST	125	90027081	1.052	23.7	14.1	0.3	3.3	< MDL	< MDL
RECIRC	98	90027283	1.032	< MDL	12.8	0.3	2.9	< MDL	< MDL

2-METHOXY			ETHYL
			ACETATE
			ETHER
ADDITIONAL ORGANIC SPECIES			
10	91	900829830	1.083
22	146	90083182	1.1105
RECIRC	98	90027283	1.032

TEST: ORGANICS #3
DATE: 06-17-92 PM
METHOD: NIOSH 1500

GRID CHART 1 - MEK

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8465

D E INITIALS:BM & LJJ
G A INITIALS:LJJ

EXHAUST GRID

Painter Over
2.7
Painter Under
no sample

INLET GRID A

1A 7.6

2A 2.6

3A 7.2

1	8.0	2	no sample	3	< MDL	4	no sample
5	no sample	6	2.1	7	12.6	8	11.0
9	16.3	10	16.2	11	23.6	12	no sample
21	6.6	22	18.1	23	23.2	24	23.9
13	13.4	14	13.3	15	46.2	16	28.7
17	< MDL	18	15.6	19	108.3	20	no sample

INLET GRID B

1B 5.7

2B no sample

3B 6.4

PAINT TYPE: LT GREEN PRIMER
OBJECT: METAL & WOOD BOX

UNITS: mg/MS
OSHA TWA:590 mg/MS

GRID MDL: 0.0115 mg/SAMPLE
PAINTER MDL: 0.0115 mg/SAMPLE

EXHAUST DUCT: 23.7
RECIRC DUCT: < MDL

TEST: ORGANICS #3
 DATE: 06-17-92 PM
 METHOD: NIOSH 1300
 GRID CHART 2 - NINEK

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS:BN & LJJ
 Q A INITIALS:LJJ

EXHAUST GRID

1	6.5	2	no sample	3	< MDL	4	no sample
5	no sample	6	6.4	7	8.4	8	8.5
9	22.6	10	20.6	11	16.1	12	no sample
21	6.8	22	25.5	23	18.7	24	13.1
13	18.1	14	20.0	15	1.2	16	1.5
17	< MDL	18	8.9	19	8.8	20	no sample

Painter Over
 4,7
 Painter Under
 no sample

INLET GRID A

1A	6.4
2A	2.6
3A	6.6

INLET GRID B

1B	4.6
2B	no sample
3B	5.5

EXHAUST DUCT: 14.1
 RECIRC DUCT: 12.8

GRID MDL: 0.0095 mg/SAMPLE
 PAINTER MDL: 0.0095 mg/SAMPLE

UNITS: mg/M3
 OSHA TWA: 205 mg/M3

PAINT TYPE: LT GREEN PRIMER
 OBJECT: METAL & WOOD BOX

TEST: ORGANICS #3
DATE: 06-17-92 PM
METHOD: NIOSH 1500

GRID CHART 3 - TOLUENE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8465

D E INITIALS:MM & LJJ
O A INITIALS:LJJ

EXHAUST GRID

1	< MDL	2	no sample	3	< MDL	4	no sample
5	no sample	6	< MDL	7	0.5	8	< MDL
9	0.6	10	0.6	11	0.4	12	no sample
21	< MDL	22	0.7	23	0.5	24	0.3
13	0.5	14	0.6	15	3.4	16	0.3
17	< MDL	18	0.2	19	< MDL	20	no sample

Painter Over
< MDL
Painter Under
no sample

INLET GRID A

1A
< MDL

2A
< MDL

3A
< MDL

INLET GRID B

1B
< MDL

2B
no sample

3B
< MDL

PAINT TYPE: LT GREEN PRIMER
OBJECT: METAL & WOOD BOX

UNITS: mg/M3
OSHA TWA:375 mg/M3
GRID MDL: 0.0114 mg/SAMPLE
PAINTER MDL: 0.0114 mg/SAMPLE
EXHAUST DUCT: 0.3
RECIRC DUCT: 0.3

TEST: ORGANICS #3
DATE: 06-17-92 PM
METHOD: NIOSH 1500

GRID CHART 4 - BUTYL ACETATE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS:BM & LJJ
Q A INITIALS:LJJ

EXHAUST GRID

1	1.8	2	no sample	3	< MDL	4	no sample
5	no sample	6	1.8	7	2.2	8	3.3
9	6.5	10	5.5	11	4.1	12	no sample
21	1.8	22	6.9	23	4.7	24	3.0
13	5.0	14	5.4	15	4.7	16	3.2
17	< MDL	18	2.4	19	2.3	20	no sample

INLET GRID A

1A	1.7
2A	0.7
3A	1.7

INLET GRID B

1B	1.2
2B	no sample
3B	1.4

PAINT TYPE: LT GREEN PRIMER
OBJECT: METAL & WOOD BOX

UNITS: mg/M3
OSHA TWA:710 mg/M3
GRID MDL: 0.0116 mg/SAMPLE
PAINTER MDL: 0.0116 mg/SAMPLE
EXHAUST DUCT: 3.3
RECIRC DUCT: 2.9

TEST: ORGANICS #3
DATE: 06-17-92 PM
METHOD: NIOSH 1500

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 0485

D E INITIALS:BM & LJJ
Q A INITIALS:LJJ

GRID CHART 5 - ETNYL BENZENE

PAINTER Over < MDL		PAINTER Under no sample		EXHAUST GRID		INLET GRID A		INLET GRID B	
1	< MDL	2	no sample	3	< MDL	4	no sample	5	no sample
6	< MDL	7	< MDL	8	< MDL	9	< MDL	10	< MDL
11	< MDL	12	no sample	13	< MDL	14	< MDL	15	< MDL
16	< MDL	17	< MDL	18	< MDL	19	< MDL	20	no sample
21	< MDL	22	< MDL	23	< MDL	24	< MDL	25	no sample
26	< MDL	27	< MDL	28	< MDL	29	< MDL	30	< MDL
31	< MDL	32	< MDL	33	< MDL	34	< MDL	35	< MDL
36	< MDL	37	< MDL	38	< MDL	39	< MDL	40	< MDL

PAINT TYPE: LT GREEN PRIMER
OBJECT: METAL & WOOD BOX
UNITS: mg/m³
OSHA TWA: 435 mg/m³
GRID MDL: 0.0117 mg/SAMPLE
PAINTER MDL: 0.0117 mg/SAMPLE
EXHAUST DUCT: < MDL
RECIRC DUCT: < MDL

TEST: ORGANICS #3
DATE: 06-17-92 PM
METHOD: NIOSH 1500

GRID CHART 6 - XYLENES

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8405

D E INITIALS:RM & LJJ
Q A INITIALS:LJJ

EXHAUST GRID		INLET GRID B				EXHAUST DUCT: < MDL	RECIRC DUCT: < MDL
Painter Over < MDL	1 < MDL	2 no sample	3 < MDL	4 no sample	1B < MDL	< MDL	< MDL
Painter Under no sample	5 no sample	6 < MDL	7 < MDL	8 < MDL	2B no sample		
1A	9 < MDL	10 0.4	11 0.3	12 no sample	3B < MDL		
2A < MDL	21 < MDL	22 1.0	23 < MDL	24 < MDL			
3A < MDL	13 < MDL	14 < MDL	15 < MDL	16 < MDL			
	17 < MDL	18 < MDL	19 < MDL	20 no sample			
PAINT TYPE: LT GREEN PRIMER	UNITS: mg/KG	GRID MDL: 0.0368 mg/SAMPLE	EXHAUST DUCT: < MDL	RECIRC DUCT: < MDL			
OBJECT: METAL & WOOD BOX	OSHA TWA: 435 mg/KG	PAINTER MDL: 0.0368 mg/SAMPLE					

PAINT TYPE: LT GREEN PRIMER
OBJECT: METAL & WOOD BOX

UNITS: mg/M3
OSHA TWA: 435 mg/M3

GRID MDL: 0.0368 mg/SAMPLE
PAINTER MDL: 0.0368 mg/SAMPLE

TEST: ORGANICS #4
DATE: 06/18/92
METHOD: NIOSH 1300

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

PAINT: LT GREEN PRIMER
OBJECT: LADDERS

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	MEK (ug)	MTBK (ug)	TOLUENE (ug)	BUTYL ACETATE (ug)	ETHYL BENZENE (ug)	XYLENES (ug)
1	174	900867888	1	1055	1080	0	nd	nd	nd	nd	nd	nd
2	122	900869870	24	1071	1128	1	nd	nd	nd	nd	nd	nd
3	162	90087384	20	1089	1082	1	nd	nd	nd	nd	nd	nd
4	178	90087586	18	1060	1060	0	nd	nd	nd	nd	nd	nd
5	171	90087788	5	890	878	30	31	nd	nd	13	nd	nd
6	133	900879880	32	1053	1043	29	39	nd	nd	nd	nd	nd
7	173	90088182	34	1001	1002	0	nd	nd	nd	nd	nd	nd
8	121	90088384	19	1023	1033	0	nd	nd	nd	nd	nd	nd
9	163	90088586	6	1009	1027	29	32	nd	nd	22	nd	nd
10	172	90088788	13	1060	994	28	66	nd	nd	nd	nd	nd
11	164	900889890	8	1023	1016	29	107	18	nd	nd	nd	nd
12	166	90089182	35	1041	1029	29	68	nd	nd	30	nd	nd
21	165	90090788	15	1089	1077	30	40	nd	nd	31	nd	nd
22	160	900909810	17	1053	1046	29	71	13	nd	nd	nd	nd
23	153	90091182	31	1036	1029	29	117	24	nd	nd	nd	nd
24	151	90091384	37	1042	1046	29	75	nd	nd	nd	nd	nd
13 DUP	167	90093881	2	1060	1082	22	56	nd	nd	34	nd	nd
14	127	90092182	12	1050	1043	29	50	nd	nd	32	nd	nd
15	170	90094872	10	1077	1037	29	128	25	nd	nd	nd	nd
16	203	90089586	9	1089	1078	30	200	56	nd	nd	nd	nd
17	152	90089788	7	1066	1014	30	106	20	nd	nd	nd	nd
18	130	9008998900	14	800	530	29	94	nd	nd	nd	nd	nd
18 DUP	155	90090182	25	1022	1053	29	420	111	nd	16	nd	nd
19	97	90092384	11	1033	1046	30	455	nd	nd	nd	nd	nd
20	169	90093884	26	876	874	29	421	132	nd	nd	nd	nd
P over	154	90090586	33	1020	1027	0	nd	nd	nd	nd	nd	nd
P under	176	90037889	21	1044	1040	28	nd	nd	nd	nd	nd	nd
1A	175F	900380	30	1054	1065	0	nd	nd	nd	nd	nd	nd
2A	177	90086182	3	1057	1056	29	48	nd	nd	nd	nd	nd
3A	161	90086384	38	1051	1046	29	45	nd	nd	nd	nd	nd
3A	179	90086586	27	1002	1019	29	50	nd	nd	nd	nd	nd
1B	168	90091586	16	935	915	25	nd	nd	nd	nd	nd	nd
2B	157	90091788	29	978	968	28	42	nd	nd	nd	nd	nd
3B	158	900919820	26	1025	1033	29	35	nd	nd	nd	nd	nd
EXHAUST	156	90027488	36	1009	1049	31	199	59	nd	14	nd	nd
RECIRC	159	900279880	39	1030	1028	30	76	nd	nd	nd	nd	nd

TEST: ORGANICS #4
DATE: 06/18/92
METHOD: NIOSH 1300

PAGE 2 OF 2
DE INITIALS: BN & LJJ
QA INITIALS: LJJ

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	AVG FLOW (L/MIN)	HEK (ug/M3)	MIBK (ug/M3)	TOLUENE (ug/M3)	BUTYL ACETATE (ug/M3)	ETHYL BENZENE (ug/M3)	XYLENES (ug/M3)
1	174	900867486	1.058	no sample	no sample	no sample	no sample	no sample	no sample
2	122	900869870	1.100	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
3	162	90087344	1.086	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
4	178	90087546	1.060	no sample	no sample	no sample	no sample	no sample	no sample
5	171	90087748	0.884	1.2	< MDL	< MDL	0.5	< MDL	< MDL
6	133	900879480	1.048	1.3	< MDL	< MDL	< MDL	< MDL	< MDL
7	173	90088142	1.002	no sample	no sample	no sample	no sample	no sample	no sample
8	121	90088344	1.028	no sample	no sample	no sample	no sample	no sample	no sample
9	163	90088546	1.018	1.1	< MDL	< MDL	0.7	< MDL	< MDL
10	172	90088748	1.027	2.1	< MDL	< MDL	< MDL	< MDL	< MDL
11	164	900889480	1.020	3.6	0.5	< MDL	< MDL	< MDL	< MDL
12	166	90089142	1.035	2.3	< MDL	< MDL	1.0	< MDL	< MDL
21	165	90090748	1.083	1.2	< MDL	< MDL	1.0	< MDL	< MDL
22	160	900909480	1.050	2.3	0.4	< MDL	< MDL	< MDL	< MDL
23	153	90091142	1.033	3.9	0.8	< MDL	< MDL	< MDL	< MDL
24	151	90091344	1.044	2.5	< MDL	< MDL	< MDL	< MDL	< MDL
13	167	900893481	1.071	2.4	< MDL	< MDL	1.4	< MDL	< MDL
14	127	90092142	1.047	1.6	< MDL	< MDL	1.1	< MDL	< MDL
15	170	900894472	1.057	4.2	0.8	< MDL	< MDL	< MDL	< MDL
16	203	90089546	1.084	6.2	1.7	< MDL	< MDL	< MDL	< MDL
17	152	90089748	1.040	3.4	0.6	< MDL	< MDL	< MDL	< MDL
18	130	9008994900	0.665	4.9	< MDL	< MDL	< MDL	< MDL	< MDL
18 DUP	155	90090142	1.038	14.0	3.7	< MDL	< MDL	< MDL	< MDL
19	169	90092344	1.040	14.6	< MDL	< MDL	0.5	< MDL	< MDL
20	154	90090546	0.975	16.6	5.2	< MDL	< MDL	< MDL	< MDL
P over	176	90037849	1.024	no sample	no sample	no sample	no sample	no sample	no sample
P under	175F	900380	1.042	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
1A	177	90086142	1.057	1.6	< MDL	< MDL	< MDL	< MDL	< MDL
2A	161	90086344	1.049	1.5	< MDL	< MDL	< MDL	< MDL	< MDL
3A	179	90086546	1.011	1.7	< MDL	< MDL	< MDL	< MDL	< MDL
1B	168	90091546	0.925	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
2B	157	90091748	0.973	1.5	< MDL	< MDL	< MDL	< MDL	< MDL
3B	158	900919420	1.029	1.2	< MDL	< MDL	< MDL	< MDL	< MDL
EXHAUST	156	90027448	1.029	6.2	1.8	< MDL	0.4	< MDL	< MDL
RECIRC	159	900279480	1.029	2.5	< MDL	< MDL	< MDL	< MDL	< MDL

TEST: ORGANICS #4
 DATE: 06/18/92
 METHOD: NIOSH 1300
 GRID CHART 1 - MEK

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS:BM & LJJ
 G A INITIALS:LJJ

EXHAUST GRID			
1 no sample	2 < MDL	3 < MDL	4 no sample
5 1.2	6 1.3	7 no sample	8 no sample
9 1.1	10 2.1	11 3.6	12 2.3
21 1.2	22 2.3	23 3.9	24 2.5
13 2.4 1.6	14 4.2	15 6.2	16 3.4
17 4.9	18 14.0 14.6	19 16.6	20 no sample
INLET GRID A			
1A 1.6			
2A 1.5			
3A 1.7			
INLET GRID B			
1B < MDL			
2B 1.5			
3B 1.2			

PAINT TYPE: LT GREEN PRIMER
 OBJECT: LADDERS
 UNITS: mg/MS
 GRID MDL: 0.0115 mg/SAMPLE
 PAINTER MDL: 0.0115 mg/SAMPLE
 EXHAUST DUCT: 6.2
 RECIRC DUCT: 2.5
 OSMA TWA:590 mg/MS

TEST: ORGANICS #4
 DATE: 06/18/92
 METHOD: NIOSH 1300
 GRID CHART 2 - MINK

TRAVIS AFB
 PAINT BOOTH TESTS
 ACDREX PROJECT 0485

D E INITIALS:BM & LJJ
 Q A INITIALS:LJJ

Painter Over < MDL		Painter Under no sample		INLET GRID A		EXHAUST GRID				INLET GRID B	
1A < MDL		2A < MDL		3A < MDL		1 no sample	2 < MDL	3 < MDL	4 no sample	19 < MDL	
						5 < MDL	6 < MDL	7 no sample	8 no sample	29 < MDL	
						9 < MDL	10 < MDL	11 0.6	12 < MDL		
						21 < MDL	22 0.4	23 0.8	24 < MDL		
						13 < MDL < MDL	14 0.8	15 1.7	16 0.6		
						17 < MDL	18 3.7 < MDL	19 5.2	20 no sample		
										39 < MDL	

PAINT TYPE: LT GREEN PRIMER
 OBJECT: LADDERS
 UNITS: mg/MS
 GRID MDL: 0.0095 mg/SAMPLE
 PAINTER MDL: 0.0095 mg/SAMPLE
 EXHAUST DUCT: 1.8
 RECTIRC DUCT: < MDL
 OSHA TWA: 205 mg/MS

D E INITIALS:BN & LJJ
Q A INITIALS:LJJ

EXHAUST GRID

[illegible]

TEST: ORGANICS #4
DATE: 06/18/92
METHOD: NIOSH 1300

GRID CHART 4 - BUTYL ACETATE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS:BN & LJJ
Q A INITIALS:LJJ

PAINTER Over < MDL		PAINTER Under no sample		EXHAUST GRID		INLET GRID A	
1	no sample	2	< MDL	3	< MDL	4	no sample
5	0.5	6	< MDL	7	no sample	8	no sample
9	0.7	10	< MDL	11	< MDL	12	1.0
21	1.0	22	< MDL	23	< MDL	24	< MDL
13	1.4 1.1	14	< MDL	15	< MDL	16	< MDL
17	< MDL	18	< MDL 0.5	19	< MDL	20	no sample
1A < MDL		2A < MDL		INLET GRID E		1B < MDL	
3A < MDL						2B < MDL	
						3B < MDL	

PAINT TYPE: LT GREEN PRIMER

UNITS: mg/m³

GRID MDL: 0.0116 mg/SAMPLE

EXHAUST DUCT: 0.4

OBJECT: LADDERS

OSMA TWA: 710 mg/m³

PAINTER MDL: 0.0116 mg/SAMPLE

RECTING DUCT: < MDL

TEST: ORGANICS 96
DATE: 06/18/92
METHOD: NIOSH 1300

GRID CHART 5 - ETHYL BENZENE

TRAVIS AFB
PAINT BOUTH TESTS
AOCRES PROJECT 84-05

D E INITIALS:BN & LJJ
Q A INITIALS:LJJ

Painter Over < MDL	EXHAUST GRID				
Painter Under no sample	1 no sample	2 < MDL	3 < MDL	4 no sample	
	5 < MDL	6 < MDL	7 no sample	8 no sample	
	9 < MDL	10 < MDL	11 < MDL	12 < MDL	
	21 < MDL	22 < MDL	23 < MDL	24 < MDL	
	13 < MDL < MDL	14 < MDL	15 < MDL	16 < MDL	
	17 < MDL	18 < MDL < MDL	19 < MDL	20 no sample	

TEST: ORGANICS #4
DATE: 06/18/92
METHOD: NIOSH 1500

GRID CHART 6 - XYLENES

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8465

D E INITIALS:BM & LJJ
Q A INITIALS:LJJ

EXHAUST GRID

Painter Over < MDL		1 no sample		2 < MDL		3 < MDL		4 no sample	
Painter Under no sample		5 < MDL		6 < MDL		7 no sample		8 no sample	
1A < MDL		9 < MDL		10 < MDL		11 < MDL		12 < MDL	
2A < MDL		21 < MDL		22 < MDL		23 < MDL		24 < MDL	
3A < MDL		13 < MDL < MDL		14 < MDL		15 < MDL		16 < MDL	
		17 < MDL		18 < MDL < MDL		19 < MDL		20 no sample	
INLET GRID A		INLET GRID B							

PAINT: WHITE TOPCOAT
OBJECT: COMFORT PALLET

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

TEST: ORGANICS #5
DATE: 06-23-92 PM
METHOD: NIOSH 1300

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	MEK (ug)	MIBK (ug)	TOLUENE (ug)	BUTYL ACETATE (ug)	ETHYL BENZENE (ug)	XYLENES (ug)
1	211 90094344	40	1063	1045	0	ND	ND	ND	ND	ND	ND	ND
2	198 90094546	18	1028	1029	0	ND	ND	ND	ND	ND	ND	ND
3	190 90094748	42	1050	1044	58	76	415	73	111	ND	ND	ND
4	238 90094950	35	1040	1031	58	79	347	66	91	ND	ND	ND
5	186 90095142	33	1017	1009	0	ND	ND	ND	ND	ND	ND	ND
6	196 90095344	8	1017	1000	59	103	554	104	148	ND	ND	ND
7	183 90095546	10	1051	1043	61	111	609	102	158	ND	ND	ND
8	215 90095748	21	1011	1004	58	131	562	97	141	ND	ND	ND
9	236 900959460	41	1077	1056	60	75	330	65	77	ND	14	ND
9 DUP	60x 900927	2	1050	1050	45	104	461	85	129	ND	ND	ND
10	192 90096142	12	1096	1061	59	149	1073	192	297	ND	ND	18
11	217 90096344	25	1047	994	58	223	755	133	193	ND	ND	12
12	219 90096546	16	1040	988	58	183	761	133	193	ND	ND	12
12 DUP	230 9009485	43	1073	1055	0	ND	ND	ND	ND	ND	ND	ND
21	237 90096748	15	1081	1042	60	86	377	74	103	ND	ND	ND
22	216 90096970	13	1023	974	57	190	1176	210	318	ND	ND	22
23	226 90097142	9	1071	1052	60	444	1226	213	348	ND	ND	21
24	212 90097344	29	1026	1025	0	ND	ND	ND	ND	ND	ND	ND
13	235 90097546	11	1060	1041	60	82	454	81	121	ND	ND	ND
14	225 90097748	17	1029	1017	58	208	1022	189	284	ND	ND	18
15	181 900979480	7	1022	1000	60	551	1227	208	344	ND	21	20
15 DUP	184 90098243	6	1031	1043	58	583	1370	238	371	ND	ND	36
16	240 90098442	5	1095	1106	59	302	842	152	224	ND	ND	24
17	233 90098644	1	1040	1041	0	ND	ND	ND	ND	ND	ND	ND
18	214 90098846	24	1031	1035	59	387	605	111	166	ND	ND	ND
18 DUP	200x 900991	14	1009	1017	59	294	544	101	137	ND	ND	ND
19	223 90098748	20	1056	1035	58	949	921	166	249	ND	ND	16
20	188 900989490	34	1076	1073	0	ND	ND	ND	ND	ND	15	ND
P over	228 90099081	30	1023	1011	0	ND	ND	ND	ND	ND	ND	ND
P OVER 2	102F 900392	19	1042	1025	59	524	3824	1113	1053	ND	67	106
1A	222 90093142	28	1028	1041	59	62	255	51	ND	ND	ND	ND
2A	194 90093347	27	1070	1044	59	69	352	73	94	ND	ND	ND
3A	239 90093448	3	1078	1073	59	82	336	65	88	ND	ND	ND
1B	213 90093546	31	1075	1068	59	164	333	65	85	ND	ND	ND
2B	182 900939440	22	1057	1043	51	65	363	65	99	ND	ND	ND
3B	224 90094142	32	1040	1032	59	63	224	46	65	ND	ND	ND
3B DUP	145F 900925	23	848	862	59	109	476	80	117	ND	ND	ND
F BLANK	55F 900926	38	TEST TIME -->	994	68	ND	ND	ND	ND	ND	ND	ND
EXHAUST	185 90029140	39	1011	994	68	223	437	80	117	ND	ND	ND
RECIRC	187 90028849	39	1053	1025	69	448	711	115	178	ND	ND	ND

TEST: ORGANICS #5
DATE: 06-23-92 PM
METHOD: NIOSH 1300

PAGE 2 OF 2
D E INITIALS: BN & LJJ
Q A INITIALS: LJJ

GRID LOC	ACUREX ACUREX TUBE # SAMPLE #	AVG FLOW (L/MIN)	MEK (mg/M3)	MTBK (mg/M3)	TOLUENE (mg/M3)	BUTYL ACETATE (mg/M3)	ETHYL BENZENE (mg/M3)	XYLENES (mg/M3)
1	211 90094344	1.054	no sample	no sample	no sample	no sample	no sample	no sample
2	198 90094546	1.029	no sample	no sample	no sample	no sample	no sample	no sample
3	190 90094748	1.047	1.3	6.8	1.2	1.8	< MDL	< MDL
4	238 90094950	1.036	1.3	5.8	1.1	1.5	< MDL	< MDL
5	186 90095142	1.013	no sample	no sample	no sample	no sample	no sample	no sample
6	196 90095344	1.009	1.7	9.3	1.7	2.5	< MDL	< MDL
7	183 90095546	1.047	1.7	9.5	1.6	2.5	< MDL	< MDL
8	215 90095748	1.008	2.2	9.6	1.7	2.4	< MDL	< MDL
9	236 900959460	1.067	1.2	5.2	1.0	1.2	0.2	< MDL
9 DUP	60x 900927	1.050	2.2	9.8	1.8	2.7	< MDL	< MDL
10	192 90096142	1.079	2.3	16.9	3.0	4.7	< MDL	0.3
11	217 90096344	1.021	3.8	12.8	2.2	3.3	< MDL	0.2
12	219 90096546	1.014	3.1	12.9	2.3	3.3	< MDL	0.2
12 DUP	230 90096748	1.064	no sample	no sample	no sample	no sample	no sample	no sample
21	237 90096946	1.062	1.4	5.9	1.2	1.6	< MDL	< MDL
22	216 90097142	0.999	3.3	20.7	3.7	5.6	< MDL	0.4
23	226 90097344	1.062	7.0	19.2	3.3	5.5	< MDL	0.3
24	212 90097546	1.026	no sample	no sample	no sample	no sample	no sample	no sample
13	235 90097748	1.051	1.3	7.2	1.3	1.9	< MDL	< MDL
14	225 900979480	1.023	3.5	17.2	3.2	4.8	< MDL	0.3
15	181 90098142	1.011	9.1	20.2	3.4	5.7	0.3	0.3
15 DUP	184 90098344	1.037	9.7	22.8	4.0	6.2	< MDL	0.6
16	240 90098546	1.101	4.7	13.0	2.3	3.4	< MDL	0.2
17	233 90098748	1.041	no sample	no sample	no sample	no sample	no sample	no sample
18	214 90098946	1.033	6.3	9.9	1.8	2.7	< MDL	< MDL
18 DUP	200x 900991	1.013	4.9	9.1	1.7	2.3	< MDL	< MDL
19	223 90099344	1.046	15.6	15.2	2.7	4.1	< MDL	0.3
20	188 90099546	1.075	no sample	no sample	no sample	no sample	no sample	no sample
P over	228 90039041	1.017	no sample	no sample	no sample	no sample	no sample	no sample
P OVER 2	102F 900392	1.034	6.6	62.7	18.3	17.3	1.1	1.7
1A	222 90093142	1.035	1.0	4.2	0.8	< MDL	< MDL	< MDL
2A	194 90093347	1.057	1.1	5.6	1.2	1.5	< MDL	< MDL
3A	239 90093546	1.076	1.3	5.3	1.0	1.4	< MDL	< MDL
1B	213 90093748	1.072	2.5	5.3	1.0	1.3	< MDL	< MDL
2B	182 900939440	1.050	1.2	6.8	1.2	1.8	< MDL	< MDL
3B	224 90094142	1.036	1.0	3.7	0.8	1.1	< MDL	< MDL
3B DUP	145F 900925	0.855	2.2	8.4	1.6	2.3	< MDL	< MDL
F SLANK	55F 900926	1.000	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
EXHAUST	185 90029140	1.003	3.3	6.4	1.2	1.7	< MDL	< MDL
RECTRC	187 90028849	1.039	6.2	9.9	1.6	2.5	< MDL	< MDL

TEST: ORGANICS #5
 DATE: 06-23-92 PM
 METHOD: KIOSH 1300
 GRID CHART 2 - MIBC

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS:BM & LJJ
 Q A INITIALS:LJJ

EXHAUST GRID				Field Blank < MDL			
1	no sample	2	no sample	3	6.8	4	5.8
5	no sample	6	9.3	7	9.5	8	9.6
9	5.2 9.8	10	16.9	11	12.8	12	12.9 no sample
21	5.9	22	20.7	23	19.2	24	no sample
13	7.2	14	17.2	15	20.2 22.8	16	13.0
17	no sample	18	9.9 9.1	19	15.2	20	no sample
INLET GRID A				INLET GRID B			
1A	4.2	2A	5.6	18	5.3	28	6.8
3A	5.3			38	3.7 8.4		

PAINT TYPE: WHITE TOPCOAT
 OBJECT: COMFORT PALLET
 UNITS: mg/KG
 OSHA TWA:205 mg/KG
 GRID MDL: 0.0095 mg/SAMPLE
 PAINTER MDL: 0.0095 mg/SAMPLE
 EXHAUST DUCT: 6.4
 RECIRC DUCT: 9.9

TEST: ORGANICS #5
DATE: 06-23-92 PM
METHOD: NIOSH 1300

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8465

D E INITIALS: MW & LJJ
G A INITIALS: LJJ

GRID CHART 4 - BUTYL ACETATE

Painter Over no sample		EXHAUST GRID												Field Blank < MDL	
Painter Under 17.3		1	no sample	2	no sample	3	1.8	4	1.5						
		5	no sample	6	2.5	7	2.5	8	2.4						
		9	1.2 2.7	10	4.7	11	3.3	12	3.3 no sample						
		21	1.6	22	5.6	23	5.5	24	no sample						
		13	1.9	14	4.8	15	5.7 6.2	16	3.4						
		17	no sample	18	2.7 2.3	19	4.1	20	no sample						
INLET GRID A		INLET GRID B													
1A < MDL		1B 1.3													
2A 1.5		2B 1.8													
3A 1.4		3B 1.1 2.3													

PAINT TYPE: WHITE TOPCOAT
OBJECT: COMFORT PALLET

UNITS: mg/M3
OSHA TWA: 710 mg/M3

GRID MDL: 0.0116 mg/SAMPLE
PAINTER MDL: 0.0116 mg/SAMPLE

EXHAUST DUCT: 1.7
RECIRC DUCT: 2.5

TEST: ORGANICS #5
DATE: 06-23-92 PM
METHOD: NIOSH 1500

GRID CHART 5 - ETHYL BENZENE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS:DH & LJJ
Q A INITIALS:LJJ

EXHAUST GRID			
1 no sample	2 no sample	3 < MDL	4 < MDL
5 no sample	6 < MDL	7 < MDL	8 < MDL
9 0.2 < MDL	10 < MDL	11 < MDL	12 < MDL no sample
21 < MDL	22 < MDL	23 < MDL	24 no sample
13 < MDL	14 < MDL	15 0.3 0.3	16 < MDL
17 no sample	18 < MDL < MDL	19 < MDL	20 no sample
Field Blank < MDL			
INLET GRID B			
1A < MDL	2A < MDL	3A < MDL	
1B < MDL	2B < MDL	3B < MDL < MDL	

PAINT TYPE: WHITE TOPCOAT
OBJECT: CORROSION PALLET
UNITS: mg/MS
GRID MDL: 0.0117 mg/SAMPLE
EXHAUST DUCT: < MDL
OSMA TWA:435 mg/MS
PAINTER MDL: 0.0117 mg/SAMPLE
RECIRC DUCT: < MDL

TEST: ORGANICS #5
DATE: 06-23-92 PM
METHOD: NIOSH 1300

GRID CHART 6 - XYLENES

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS:BM & LJJ
Q A INITIALS:LJJ

Painter Over no sample		Painter Under 1.7		EXHAUST GRID				Field Blank < MDL	
INLET GRID A		INLET GRID B		1	2	3	4	5	6
1A	2A	3A	1B	no sample	no sample	< MDL	< MDL	no sample	< MDL
			2B	0.2 < MDL	0.3	0.2	no sample	0.2 no sample	
			3B	< MDL	0.4	0.3	no sample		
				< MDL	0.3	0.3 0.6	0.2		
				no sample	< MDL < MDL	0.3	no sample		
PAINT TYPE: WHITE TOPCOAT				UNITS: mg/MS		GRID MDL: 0.0368 mg/SAMPLE		EXHAUST DUCT: < MDL	
OBJECT: COMFORT PALLET				OSHA TWA:435 mg/MS		PAINTER MDL: 0.0368 mg/SAMPLE		RECIRC DUCT: < MDL	

PAINT: GUNSHIP GRAY TOPCOAT
OBJECT: C141 ENGINE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

TEST: ORGANICS #6
DATE: 06-30-92 PM
METHOD: NIOSH 1300

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	PUMP #	PRE-CAL # (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	MEK (ug)	MIBK (ug)	TOLUENE (ug)	BUTYL ACETATE (ug)	ETHYL BENZENE (ug)	XYLENES (ug)
1	86 90099981000		35	1057	1047	64	49	850	47	245	ND	58
2	63 90100182		5	1056	1015	65	49	909	54	265	ND	63
3	249 90100344		29	1053	912	46	54	564	53	163	ND	41
3 DUP	241 90100566		20	1081	1075	64	76	999	58	285	13	73
4	77 90100768		50	1049	1046	64	69	679	38	197	ND	50
5	257 901009410		11	1054	1085	65	53	1048	56	309	ND	76
6	71 90101182		17	1053	1015	64	73	1107	54	318	ND	72
7	268 90101344		28	1076	1078	64	75	1165	48	303	15	70
8	65 90101546		24	1053	1070	65	83	1047	34	294	13	67
9	85 90101768		6	1096	1068	64	47	948	46	279	ND	67
10	259 901019420		34	1052	1037	64	60	1227	58	361	13	85
11	73 90102182		15	1053	1080	65	181	2410	75	688	33	161
11 DUP	75 90102768		8	1081	1018	65	137	2185	68	635	30	149
12	68 90102344		14	1085	775	47	88	623	57	174	ND	43
21	242 90104344		13	1076	1043	62	48	945	44	282	ND	69
22	66 90104566		43	1045	1042	64	54	1143	28	324	14	77
22 DUP	84 90104768		12	1050	1074	64	60	1135	40	311	13	71
23	62 901049850		1	1056	553	48	60	779	51	242	ND	64
24	260 90105182		25	1053	1068	17	ND	281	37	86	ND	ND
13	69 90102546		16	1077	1140	64	61	941	60	276	12	70
14	80 901029830		47	1041	1041	64	86	1437	63	410	19	102
15	251 90103182		33	1045	1032	64	314	2655	71	740	35	163
16	81 90103344		32	1063	1079	65	125	1001	46	266	13	58
17	72 90103566		30	1039	1036	64	49	763	60	227	ND	59
18	267 90103768		40	1040	1039	0	ND	ND	75	ND	ND	ND
19	263 901039440		18	1028	1015	64	1160	1277	49	327	14	53
20	76 90104182		45	1072	974	47	352	604	55	160	ND	32
P over	61 9002978394		46	1112	1112	0	ND	ND	41	ND	ND	ND
P under	89F 900393		52	1051	928	64	ND	106	371	31	ND	ND
1A	266F 900395		55	1036	1019	63	45	716	66	208	ND	50
2A	67 90039768		31	1036	1022	63	35	582	32	178	ND	45
2A DUP	70 9003994400		21	1075	1067	0	ND	ND	34	ND	DN	DN
3A	90 90079687		51	1049	1047	63	39	584	43	173	ND	44
18	2668 900798		49	1049	1055	64	28	644	65	200	ND	54
28	78 9008004996		54	1058	960	42	25	349	42	146	11	28
38	246 90099768		19	1045	1018	63	32	581	45	160	15	39
F BLANK	898 900296					63	ND	ND	120	ND	ND	ND
EXHAUST	245 90029243		37	1056	1022	57	42	1112	50	323	11	78
RECIRC	265 90029465		38	1027	1012	57	39	1061	50	307	ND	74

TEST: ORGANICS #6
DATE: 06-30-92 PM
METHOD: NIOSH 1300

PAGE 2 OF 2
D E INITIALS: BN & LJJ
Q A INITIALS: LJJ

GRID	LOC	ACUREX #	ACUREX SAMPLE #	AVG FLOW (L/MIN)	MEK (mg/M3)	MIBK (mg/M3)	TOUENE (mg/M3)	BUTYL ACETATE (mg/M3)	ETHYL BENZENE (mg/M3)	XYLENES (mg/M3)
1		86	90099981000	1.052	0.7	12.6	0.7	3.6	< MDL	0.9
2		63	90100182	1.036	0.7	13.5	0.8	3.9	< MDL	0.9
3		249	90100384	0.983	1.2	12.5	1.2	3.6	< MDL	0.9
3 DUP		241	90100586	1.078	1.1	14.5	0.8	4.1	0.2	1.1
4		77	90100788	1.048	1.0	10.1	0.6	2.9	< MDL	0.7
5		257	901009810	1.070	0.8	15.1	0.8	4.4	< MDL	1.1
6		71	90101182	1.034	1.1	16.7	0.8	4.8	< MDL	1.1
7		268	90101384	1.077	1.1	16.9	0.7	4.4	0.2	1.0
8		65	90101586	1.062	1.2	15.2	0.5	4.3	0.2	1.0
9		85	90101788	1.082	0.7	13.7	0.7	4.0	< MDL	1.0
10		259	901019820	1.045	0.9	18.4	0.9	5.4	0.2	1.3
11		73	90102182	1.067	2.6	34.8	1.1	9.9	0.5	2.3
11 DUP		75	90102788	1.050	2.0	32.0	1.0	9.3	0.4	2.2
12		68	90102384	0.930	2.0	14.3	1.3	4.0	< MDL	1.0
21		242	90104384	1.060	0.7	14.4	0.7	4.3	< MDL	1.1
22		66	90104586	1.044	0.8	17.1	0.4	4.9	0.2	1.2
22 DUP		84	90104788	1.062	0.9	16.7	0.6	4.6	0.2	1.0
23		62	901049850	0.805	1.6	20.2	1.3	6.3	< MDL	1.7
24		260	90105182	1.061	< MDL	15.6	2.1	4.8	< MDL	< MDL
13		69	90102586	1.109	0.9	13.3	0.8	3.9	0.2	1.0
14		80	901029830	1.041	1.3	21.6	0.9	6.2	0.3	1.5
15		251	90103182	1.039	4.7	39.9	1.1	11.1	0.5	2.5
16		81	90103384	1.071	1.8	14.4	0.7	3.8	0.2	0.8
17		72	90103586	1.038	0.7	11.5	0.9	3.4	< MDL	0.9
18		267	90103788	1.040	no sample	sample	sample	sample	sample	sample
19		263	901039840	1.022	17.7	19.5	0.7	5.0	0.2	0.8
20		76	90104182	1.023	7.3	12.6	1.1	3.3	< MDL	0.7
P over		61	9002978394	1.112	no sample	sample	sample	sample	sample	sample
P under		89F	900393	0.990	< MDL	1.7	5.9	0.5	< MDL	< MDL
1A		266F	900395	1.028	0.7	11.1	1.0	3.2	< MDL	0.8
2A		67	90039788	1.029	0.5	9.0	0.5	2.7	< MDL	0.7
2A DUP		70	9003998400	1.071	no sample	sample	sample	sample	sample	sample
3A		90	90079687	1.048	0.6	8.8	0.7	2.6	< MDL	0.7
18		2668	900798	1.052	0.4	9.6	1.0	3.0	< MDL	0.8
28		78	9008008996	1.009	0.6	8.2	1.0	3.4	0.3	0.7
38		246	90099788	1.032	0.5	8.9	0.7	2.5	0.2	0.6
F BLANK		898	900296	1.000	< MDL	< MDL	1.9	< MDL	< MDL	< MDL
EXHAUST		245	90029283	1.039	0.7	18.8	0.8	5.5	0.2	1.3
RECIRC		265	90029485	1.020	0.7	18.3	0.9	5.3	< MDL	1.3

TEST: ORGANICS 86
 DATE: 06-30-92 PM
 METHOD: NIOSH 1300
 GRID CHART 1 - MEK

TRAVIS AFB
 PAINT BOOTH TESTS
 ALCUREX PROJECT 0485

D E INITIALS:BN & LJJ
 G A INITIALS:LJJ

Painter Over
 no sample
 Painter Under
 < MDL

INLET GRID A

1A 0.7

2A 0.5
 no sample

3A 0.6

EXHAUST GRID

1 0.7 2 0.7 3 1.2
 1.1 4 1.0

5 0.8 6 1.1 7 1.1
 8 1.2

9 0.7 10 0.9 11 2.6
 2.0 12 2.0

21 0.7 22 0.8
 0.9 23 1.6 24 < MDL

13 0.9 14 1.3 15 4.7
 16 1.8

17 0.7 18 no sample 19 17.7
 20 7.3

Field Blank
 < MDL

INLET GRID B

1B 0.4

2B 0.6

3B 0.5

PAINT TYPE: GUNSHIP GRAY TOPCOAT

UNITS: mg/MS

GRID MDL: 0.0115 mg/SAMPLE

EXHAUST MUCT: 0.7

OBJECT: C141 ENGINE

OSMA TWA:500 mg/MS

PAINTER MDL: 0.0115 mg/SAMPLE

RECIRC DUCT: 0.7

TEST: ORGANICS #6
 DATE: 06-30-92 PM
 METHOD: NIOSH 1300

GRID CHART 2 - NIKK

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 84-85

D E INITIALS:BN & LJJ
 Q A INITIALS:LJJ

Painter Over no sample Painter Under 1.7		EXHAUST GRID										Field Blank < MDL
INLET GRID A		1	12.6	2	13.5	3	12.5 14.5	4	10.1			
1A 11.1		5	15.1	6	16.7	7	16.9	8	15.2	INLET GRID B		1B 9.6
2A 9.0 no sample		9	13.7	10	18.4	11	34.8 32.0	12	14.3			2B 8.2
3A 8.8		21	14.4	22	17.1 16.7	23	20.2	24	15.6			3B 8.9
		13	13.3	14	21.6	15	39.9	16	14.4			
		17	11.5	18	no sample	19	19.5	20	12.6			

PAINT TYPE: GUNSHIP GRAY TOPCOAT
 OBJECT: C141 ENGINE
 UNITS: mg/M3
 GRID MDL: 0.0095 mg/SAMPLE
 EXHAUST DUCT: 13.8
 RECIRC DUCT: 18.3
 COSMA TWA: 205 mg/M3
 PAINTER MDL: 0.0095 mg/SAMPLE

TEST: ORGANICS #6
DATE: 06-30-92 PM
METHOD: NIOSH 1300

GRID CHART 3 - TOLUENE

TRAVIS AFH
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS:DW & LJJ
G A INITIALS:LJJ

Painter Over
no sample
Painter Under
5.9

INLET GRID A

1A 1.6

2A 0.5
no sample

3A 0.7

EXHAUST GRID

1	0.7	2	0.8	3	1.2 0.8	4	0.6
5	0.8	6	0.8	7	0.7	8	0.5
9	0.7	10	0.9	11	1.1 1.0	12	1.3
21	0.7	22	0.4 0.6	23	1.3	24	2.1
13	0.8	14	0.9	15	1.1	16	0.7
17	0.9	18	no sample	19	0.7	20	1.1

Field Blank
1.9

INLET GRID B

1B 1.0

2B 1.0

3B 0.7

PAINT TYPE: GUNSHIP GRAY TOPCOAT

OBJECT: C141 ENGINE

UNITS: mg/MS

OSMA TWA:375 mg/MS

GRID MDL: 0.0114 mg/SAMPLE

PAINTER MDL: 0.0114 mg/SAMPLE

EXHAUST DUCT: 0.8

RECIRC DUCT: 0.9

TEST: ORGANICS A6
DATE: 06-30-92 PM
METHOD: NIOSH 1300

GRID CHART 4 - BUTYL ACETATE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8465

D E INITIALS: DM & LJJ
Q A INITIALS: LJJ

Printer Over no sample		EXHAUST GRID										Field Blank < MDL	
Printer Under 0.5		1	3.6	2	3.9	3	3.6 4.1	4	2.9				
		5	4.4	6	4.8	7	4.4	8	4.3				
		9	4.0	10	5.4	11	9.9 9.3	12	4.0				
		21	4.3	22	4.9 4.6	23	6.3	24	4.8				
		13	3.9	14	6.2	15	11.1	16	3.8				
		17	3.4	18	no sample	19	5.0	20	3.3				
INLET GRID A		INLET GRID B											
1A 3.2		1B 3.0											
2A 2.7 no sample		2B 3.4											
3A 2.6		3B 2.5											

PAINT TYPE: GUNSHIP GRAY TOPCOAT
GRID MDL: 0.0116 mg/SAMPLE
EXHAUST DUCT: 5.5
OBJECT: C141 ENGINE
OSMA TWA: 710 mg/MS
PAINTER MDL: 0.0116 mg/SAMPLE
RECIRC DUCT: 5.3

TEST: ORGANICS #6
DATE: 06-30-92 PM
METHOD: RIOSH 1500

GRID CHART 5 - ETHYL BENZENE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 04-85

D E INITIALS:BM & LJJ
Q A INITIALS:LJJ

Painter Over
no sample
Painter Under
< MDL

INLET GRID A

1A < MDL

2A < MDL
no sample

3A < MDL

EXHAUST GRID

1 < MDL
2 < MDL
3 < MDL
4 < MDL

5 < MDL
6 < MDL
7 0.2
8 0.2

9 < MDL
10 0.2
11 0.5
12 < MDL

21 < MDL
22 0.2
23 < MDL
24 < MDL

13 0.2
14 0.3
15 0.5
16 0.2

17 < MDL
18 no sample
19 0.2
20 < MDL

Field Blank
< MDL

INLET GRID B

16 < MDL

26 0.3

36 0.2

PAINT TYPE: GUNSHIP GRAY TOPCOAT

OBJECT: C141 ENGINE

UNITS: mg/m3

OSHA TWA:435 mg/m3

GRID MDL: 0.0117 mg/sample

PAINTER MDL: 0.0117 mg/sample

EXHAUST DUCT: 0.2

RECIRC DUCT: < MDL

TEST: ORGANICS #6
 DATE: 06-30-92 PM
 METHOD: NIOSH 1500

TRAVIS AFB
 PAINT BOOTH TESTS
 FOURX PROJECT 8405

D E INITIALS:BN & LJJ
 Q A INITIALS:LJJ

GRID CHART 6 - XYLENES

PAINTER OVER		PAINTER UNDER		EXHAUST GRID		FIELD BLANK	
no sample		< MDL				< MDL	
1A		2A				1B	
0.8		no sample				0.8	
3A		4A				2B	
0.7		0.7				0.7	
5A		6A				3B	
0.8		0.8				0.6	
7A		8A				4B	
0.8		0.8				0.7	
9A		10A				5B	
0.8		0.8				0.8	
11A		12A				6B	
0.8		0.8				0.8	
13A		14A				7B	
0.8		0.8				0.8	
15A		16A				8B	
0.8		0.8				0.8	
17A		18A				9B	
0.8		0.8				0.8	
19A		20A				10B	
0.8		0.8				0.8	
21A		22A				11B	
0.8		0.8				0.8	
23A		24A				12B	
0.8		0.8				0.8	
25A		26A				13B	
0.8		0.8				0.8	
27A		28A				14B	
0.8		0.8				0.8	
29A		30A				15B	
0.8		0.8				0.8	
31A		32A				16B	
0.8		0.8				0.8	
33A		34A				17B	
0.8		0.8				0.8	
35A		36A				18B	
0.8		0.8				0.8	
37A		38A				19B	
0.8		0.8				0.8	
39A		40A				20B	
0.8		0.8				0.8	
41A		42A				21B	
0.8		0.8				0.8	
43A		44A				22B	
0.8		0.8				0.8	
45A		46A				23B	
0.8		0.8				0.8	
47A		48A				24B	
0.8		0.8				0.8	
49A		50A				25B	
0.8		0.8				0.8	
51A		52A				26B	
0.8		0.8				0.8	
53A		54A				27B	
0.8		0.8				0.8	
55A		56A				28B	
0.8		0.8				0.8	
57A		58A				29B	
0.8		0.8				0.8	
59A		60A				30B	
0.8		0.8				0.8	
61A		62A				31B	
0.8		0.8				0.8	
63A		64A				32B	
0.8		0.8				0.8	
65A		66A				33B	
0.8		0.8				0.8	
67A		68A				34B	
0.8		0.8				0.8	
69A		70A				35B	
0.8		0.8				0.8	
71A		72A				36B	
0.8		0.8				0.8	
73A		74A				37B	
0.8		0.8				0.8	
75A		76A				38B	
0.8		0.8				0.8	
77A		78A				39B	
0.8		0.8				0.8	
79A		80A				40B	
0.8		0.8				0.8	
81A		82A				41B	
0.8		0.8				0.8	
83A		84A				42B	
0.8		0.8				0.8	
85A		86A				43B	
0.8		0.8				0.8	
87A		88A				44B	
0.8		0.8				0.8	
89A		90A				45B	
0.8		0.8				0.8	
91A		92A				46B	
0.8		0.8				0.8	
93A		94A				47B	
0.8		0.8				0.8	
95A		96A				48B	
0.8		0.8				0.8	
97A		98A				49B	
0.8		0.8				0.8	
99A		100A				50B	
0.8		0.8				0.8	

PAINT TYPE: GUNSHIP GRAY TOPOCAT
 OBJECT: C141 ENGINE
 UNITS: mg/MS
 GRID MDL: 0.0368 mg/SAMPLE
 EXHAUST DUCT: 1.3
 ORCA TMR-435 mg/MS
 PAINTER MDL: 0.0368 mg/SAMPLE
 RECIRC DUCT: 1.3

TEST: SINGLE PASS ORGANICS
DATE: 07-01-92 AM1
METHOD: M10SH 1300

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

PAINT: GUNSHIP GRAY TOPCOAT
OBJECT: C141 ENGINE

PAGE 1 OF 2

GRID LOC	ACUREX TUBE #	ACUREX SAMPLE #	PUMP #	PRE-CAL # (ml/min)	POST-CAL # (ml/min)	RUN TIME (min)	HEK (ug)	MIBK (ug)	TOLUENE (ug)	BUTYL ACETATE (ug)	ETHYL BENZENE (ug)	XYLENES (ug)
1	321	900389296	34	1056	1022	67	ND	70	ND	36	ND	ND
2	322	900529230	33	1051	1036	1	ND	ND	ND	ND	ND	ND
3	297	900799228	54	1048	1031	67	17	159	17	34	ND	ND
3 DUP	248	901319248	28	1035	1009	67	17	181	ND	55	ND	ND
4	301	900929230	18	1034	1018	68	22	135	15	44	ND	ND
5	299	901053244	42	1022	1004	67	13	148	ND	51	ND	ND
6	303	901055246	11	997	1010	68	19	297	ND	104	ND	ND
7	296	901057248	13	1005	1021	66	26	379	ND	125	ND	29
8	290	901058260	47	997	985	68	24	231	ND	79	ND	ND
9	305	90128247	30	1043	1051	0	ND	ND	13	ND	ND	ND
10	291	90128249	31	1052	1021	67	23	312	ND	99	ND	ND
11	292	901290241	17	991	971	67	47	896	24	321	13	87
11 DUP	293	901320241	35	1068	1051	67	46	1053	26	372	15	94
12	312	901292243	50	1029	1007	68	37	320	ND	108	ND	ND
21	244	901310241	29	986	972	1	ND	ND	ND	ND	ND	ND
22	294	901312243	19	1005	970	67	19	291	16	93	ND	ND
22 DUP	302	901322243	7	1034	1048	68	19	301	ND	103	ND	ND
23	64	901314245	10	1014	957	68	39	958	26	363	15	99
24	320	901316247	51	1001	1010	68	31	333	ND	110	ND	ND
13	315	901294245	24	1032	1020	67	ND	96	27	ND	ND	ND
14	306	901296247	20	1007	997	67	20	370	16	112	ND	26
15	300	901298249	53	1029	1023	67	63	841	ND	267	11	67
15 DUP	307	901324245	12	1029	1042	68	58	986	13	323	14	190
16	308	901300241	43	1063	1034	58	27	231	ND	69	ND	ND
17	289	901302243	45	1006	1032	57	ND	82	33	ND	ND	ND
18	323	901304245	15	1025	1052	68	36	231	ND	65	ND	ND
19	298	901308249	5	1004	963	68	258	353	ND	87	ND	ND
20	309	901308249	55	1053	1032	67	65	176	ND	55	ND	ND
P over	313	900327248	49	1007	989	67	28	215	27	129	15	17
P under	253F	900329	52	1020	970	67	ND	ND	35	30	15	ND
1A	311	900349242	36	1012	1025	67	ND	ND	ND	ND	ND	ND
2A	281F	900363	39	1006	1044	67	ND	ND	ND	ND	ND	ND
3A	280F	900364	32	1033	1043	67	ND	ND	ND	ND	ND	ND
18	295	900365242	16	958	1001	67	ND	ND	ND	ND	ND	ND
28	88F	900383	6	1036	1020	67	ND	ND	ND	ND	ND	ND
38	318	900384245	1	997	964	68	ND	ND	ND	ND	ND	ND
F BLANK	304	9002872308	37	1029	1014	63	20	222	13	74	ND	ND
EXHAUST	310	900309246	38	1020	993	60	18	221	ND	74	ND	ND
SPLIT												

TEST: SINGLE PASS ORGANICS
DATE: 07-01-92 AM1
METHOD: NIOSH 1300

PAGE 2 OF 2
O E INITIALS: BN & LJJ
Q A INITIALS: LJJ

GRID LOC	ACUREX #	ACUREX SAMPLE #	AVG FLOW (L/MIN)	MEK (mg/M3)	MIBK (mg/M3)	TOLUENE (mg/M3)	BUTYL ACETATE (mg/M3)	ETHYL BENZENE (mg/M3)	XYLENES (mg/M3)
1	321	900389896	1.039	< MDL	1.0	< MDL	0.5	< MDL	< MDL
2	322	900529830	1.035	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
3	297	900799828	1.035	0.2	2.3	0.2	0.5	< MDL	< MDL
3 DUP	248	90131988	1.022	0.2	2.6	< MDL	0.8	< MDL	< MDL
4	301	900629830	1.026	0.3	1.9	0.2	0.6	< MDL	< MDL
5	299	90105384	1.013	0.2	2.2	< MDL	0.8	< MDL	< MDL
6	303	90135586	1.035	0.3	4.4	< MDL	1.5	< MDL	< MDL
7	296	90105788	1.013	0.4	5.7	< MDL	1.9	< MDL	0.4
8	290	901059860	0.991	0.4	3.4	< MDL	1.2	< MDL	< MDL
9	305	90128687	1.047	no sample	no sample	no sample	no sample	no sample	no sample
10	291	90128889	1.0365	0.3	4.5	< MDL	1.4	< MDL	< MDL
11	292	90129081	0.981	0.7	13.6	0.4	4.9	0.2	1.3
11 DUP	293	90132081	1.0595	0.6	14.8	0.4	5.2	0.2	1.3
12	312	90129283	1.018	0.5	4.6	< MDL	1.6	< MDL	< MDL
21	244	90131081	0.979	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
22	294	90131283	0.9875	0.3	4.4	0.2	1.4	< MDL	< MDL
22 DUP	302	90132283	1.041	0.3	4.3	< MDL	1.5	< MDL	< MDL
23	64	90131485	0.9855	0.6	14.3	0.4	5.4	0.2	1.5
24	320	90131687	1.0055	0.5	4.9	< MDL	1.6	< MDL	< MDL
13	315	90129485	1.026	< MDL	1.4	0.4	< MDL	< MDL	< MDL
14	306	90129687	1.002	0.3	5.5	0.2	1.7	< MDL	0.4
15	300	90129889	1.026	0.9	12.2	< MDL	3.9	0.2	1.0
15 DUP	307	90132485	1.0355	0.8	14.0	0.2	4.6	0.2	2.7
16	308	90130081	1.0485	0.4	3.2	< MDL	1.0	< MDL	< MDL
17	289	90130283	1.019	< MDL	1.2	0.5	< MDL	< MDL	< MDL
18	323	90130485	1.0385	0.5	3.3	< MDL	0.9	< MDL	< MDL
19	298	90130687	0.9835	3.9	5.3	< MDL	1.3	< MDL	< MDL
20	309	90130889	1.0425	0.9	2.5	< MDL	0.8	< MDL	< MDL
P over	313	90032788	0.998	0.4	3.2	0.4	1.9	0.2	0.3
P under	253F	900329	0.995	< MDL	< MDL	0.5	0.5	0.2	< MDL
1A	311	900349862	1.0185	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
2A	281F	900363	1.025	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
3A	280F	900364	1.038	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
1B	295	900365882	0.9795	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
29	88F	900383	1.028	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
33	318	90038485	0.9805	< MDL	< MDL	< MDL	< MDL	< MDL	< MDL
F BLANK	304	9002878308	0	no sample	no sample	no sample	no sample	no sample	no sample
EXHAUST	304	9002878308	1.0215	0.3	3.4	0.2	1.1	< MDL	< MDL
SPLIT	319	900309826	1.0065	0.3	3.7	< MDL	1.2	< MDL	< MDL

DE INITIALS:BN & LJJ
QA INITIALS:LJJ

EXHAUST GRID

PAINT TYPE:GUMSHIP GRAY TOPCOAT	UNITS:	MG/MS	GRID MDL:	0.0115	MG/SAMPLE	EXHAUST DUCT:	0.3
OBJECT: C141 ENGINE	OSMA TWA:590	MG/MS	PAINTER MDL:	0.0115	MG/SAMPLE	SINGLE PASS DUCT:	0.3

TEST: S.P. ORGANICS
 DATE: 07-01-92 AM1
 METHOD: NIOSH 1300
 GRID CHART 2 - MIX

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS:BN & LJJ
 Q A INITIALS:LJJ

Painter Over 3.2		Field Blank no sample	
Painter Under < MDL			
INLET GRID A		INLET GRID B	
1A < MDL	18 < MDL		
2A < MDL	2B < MDL		
3A < MDL	3B < MDL		

EXHAUST GRID				INLET GRID B			
1	1.0	2	< MDL	3	2.3 2.6	4	1.9
5	2.2	6	4.4	7	5.7	8	3.4
9	no sample	10	4.5	11	13.6 14.8	12	4.6
21	< MDL	22	4.4 4.3	23	14.3	24	4.9
13	1.4	14	5.5	15	12.2 14.0	16	3.2
17	1.2	18	3.3	19	5.3	20	2.5

PAINT TYPE: GUNSHIP GRAY TOPCOAT	UNITS: mg/M3	GRID MDL: 0.0005 mg/SAMPLE	EXHAUST DUCT: 3.4
OBJECT: C161 ENGINE	OSHA TWA: 205 mg/M3	PAINTER MDL: 0.0005 mg/SAMPLE SINGLE PASS DUCT: 3.7	

PAINT TYPE:GRANSHIP GRAY TOPCOAT
 UNITS: mg/M3
 GRID MDL: 0.0075 mg/SAMPLE
 EXHAUST DUCT: 3.4
 OBJECT: C161 ENGINE
 OSMA TWA:205 mg/M3
 PAINTER MDL: 0.0095 mg/SAMPLE SINGLE PASS DUCT: 3.7

TEST: S.P. ORGANICS
 DATE: 07-01-92 AMT
 METHOD: NIOSH 1500
 GRID CHART 3 - TOLUENE

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS:BM & LJJ
 Q A INITIALS:LJJ

EXHAUST GRID			
Painter Over 0.4	1 < MDL	2 < MDL	3 0.2 < MDL
Painter Under 0.5	4 0.2		
INLET GRID A			
1A < MDL	5 < MDL	6 < MDL	7 < MDL
			8 < MDL
2A < MDL	9 no sample	10 < MDL	11 0.4 0.4
			12 < MDL
3A < MDL	21 < MDL	22 0.2 < MDL	23 0.4
			24 < MDL
	13 0.4	14 0.2	15 < MDL 0.2
			16 < MDL
	17 0.5	18 < MDL	19 < MDL
			20 < MDL
INLET GRID B			
	18 < MDL		
		28 < MDL	
			38 < MDL

PAINT TYPE:GUNSHIP GRAY TOPCOAT
 UNITS: mg/KS
 GRID MDL: 0.0114 mg/SAMPLE
 EXHAUST DUCT: 0.2
 OBJECT: C141 ENGINE
 OSHA TWA:375 mg/KS
 PAINTER MDL: 0.0114 mg/SAMPLE SINGLE PASS DUCT: < MDL

TEST: S.P. ORGANICS
DATE: 07-01-92 AM1
METHOD: NIOSH 1300

GRID CHART 4 - BUTYL ACETATE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS:BN & LJJ
Q A INITIALS:LJJ

Painter Over 1.9 Painter Under 0.5		EXHAUST GRID								Field Blank no sample	
INLET GRID A		1	0.5	2	< MDL	3	0.5 0.8	4	0.6	INLET GRID B	
1A < MDL		5	0.8	6	1.5	7	1.9	8	1.2	1B < MDL	
		9	no sample	10	1.4	11	4.9 5.2	12	1.6	2B < MDL	
2A < MDL		21	< MDL	22	1.4 1.5	23	5.4	24	1.6	3B < MDL	
		13	< MDL	14	1.7	15	3.9 4.6	16	1.0		
3A < MDL		17	< MDL	18	0.9	19	1.3	20	0.8		

TEST: S.P. ORGANICS
DATE: 07-01-92 AM1
METHOD: NIOSH 1500

GRID CHART 5 - ETHYL BENZENE

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8405

D E INITIALS:BM & LJI
Q A INITIALS:LJI

EXHAUST GRID	
1 < MDL	2 < MDL
3 < MDL < MDL	4 < MDL
5 < MDL	6 < MDL
7 < MDL	8 < MDL
9 no sample	10 < MDL
11 0.2 0.2	12 < MDL
13 < MDL	14 < MDL
15 0.2 0.2	16 < MDL
17 < MDL	18 < MDL
19 < MDL	20 < MDL
21 < MDL	22 < MDL < MDL
23 0.2	24 < MDL
25 < MDL	26 < MDL
27 < MDL	28 < MDL
29 < MDL	30 < MDL
31 < MDL	32 < MDL
33 < MDL	34 < MDL
35 < MDL	36 < MDL
37 < MDL	38 < MDL
39 < MDL	40 < MDL
41 < MDL	42 < MDL
43 < MDL	44 < MDL
45 < MDL	46 < MDL
47 < MDL	48 < MDL
49 < MDL	50 < MDL
51 < MDL	52 < MDL
53 < MDL	54 < MDL
55 < MDL	56 < MDL
57 < MDL	58 < MDL
59 < MDL	60 < MDL
61 < MDL	62 < MDL
63 < MDL	64 < MDL
65 < MDL	66 < MDL
67 < MDL	68 < MDL
69 < MDL	70 < MDL
71 < MDL	72 < MDL
73 < MDL	74 < MDL
75 < MDL	76 < MDL
77 < MDL	78 < MDL
79 < MDL	80 < MDL
81 < MDL	82 < MDL
83 < MDL	84 < MDL
85 < MDL	86 < MDL
87 < MDL	88 < MDL
89 < MDL	90 < MDL
91 < MDL	92 < MDL
93 < MDL	94 < MDL
95 < MDL	96 < MDL
97 < MDL	98 < MDL
99 < MDL	100 < MDL

PAINT TYPE:GUNSHIP GRAY TOPCOAT
GRID MDL: 0.0117 mg/SAMPLE
EXHAUST DUCT: < MDL
OBJECT: C141 ENGINE
UNITS: mg/M3
OSHA TWA:435 mg/M3
PAINTER MDL: 0.0117 mg/SAMPLE SINGLE PASS DUCT: < MDL

TEST: S.P. ORGANICS
 DATE: 07-01-92 AM1
 METHOD: NIOSH 1300
 GRID CHART 6 - XYLENES

TRAVIS AFB
 PAINT ROOM TESTS
 ACUREX PROJECT 8405

D E INITIALS:BN & LJJ
 G A INITIALS:LJJ

Painter Over 0.5		EXHAUST GRID		Field Blank no sample	
Painter Under < MDL		1	2	3	4
		< MDL	< MDL	< MDL < MDL	< MDL
INLET GRID A		5	6	7	8
1A < MDL		< MDL	< MDL	0.4	< MDL
2A < MDL		9 no sample	10 < MDL	11 1.3 1.3	12 < MDL
3A < MDL		21 < MDL	22 < MDL < MDL	23 1.5	24 < MDL
		13 < MDL	14 0.4	15 1.0 2.7	16 < MDL
		17 < MDL	18 < MDL	19 < MDL	20 < MDL
INLET GRID B		18 < MDL	28 < MDL	38 < MDL	

PAINT TYPE:GURSHIP GRAY TOPCOAT
 UNITS: mg/MS
 GRID MDL: 0.0368 mg/SAMPLE
 EXHAUST DUCT: < MDL
 OBJECT: C141 ENGINE
 OSHA TWA:435 mg/MS
 PAINTER MDL: 0.0368 mg/SAMPLE SINGLE PASS DUCT: < MDL

TEST: PARTICULATE #1 DATE: 06-19-92 AM METHOD: NIOSH 500				TRAVIS AFB PAINT Booth TESTS ACUREX PROJECT 04-85				PAINT: WHITE TOPCOAT OBJECT: LADDERS				D E INITIALS: BM & LJJ O A INITIALS: LJJ			
GRID LOC	ACUREX SAMPLE #	FILTER #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	PRE #1 (g)	PRE #2 (g)	POST #1 (g)	POST #2 (g)	ACCURACY (0.0001)	AVG FLOW (L/MIN)	PRE AVG (g)	POST AVG (g)	PART MT PARTICULATE (mg/M3)
1	900077	33	29	3024	2988	42	0.0132	0.0132	0.0132	0.0132	0.0132	3.006	0.0132	0.0132	< MDL
2	900078	162	4	3072	3017	42	0.0128	0.0127	0.0127	0.0127	0.0127	3.045	0.0128	0.0127	< MDL
3	900079	88	24	3024	3113	42	0.0116	0.0116	0.0116	0.0116	0.0116	3.069	0.0116	0.0116	< MDL
4	900080	24	20	3085	3066	41	0.0118	0.0118	0.0118	0.0118	0.0118	3.076	0.0118	0.0118	< MDL
5	900081	16	35	3045	3000	42	0.0125	0.0125	0.0126	0.0126	0.0126	3.023	0.0125	0.0126	0.0001
6	900082	94	2	3042	3126	32	0.0130	0.0130	0.0132	0.0132	0.0132	3.084	0.0130	0.0132	0.0002
7	900083	92	19	3075	3012	41	0.0126	0.0126	0.0126	0.0126	0.0126	3.057	0.0126	0.0125	< MDL
8	900084	71	7	3066	3048	42	0.0121	0.0121	0.0120	0.0121	0.0121	3.057	0.0121	0.0120	< MDL
9	900085	67	32	3057	2962	42	0.0119	0.0120	0.0125	0.0125	0.0125	3.041	0.0119	0.0125	0.0006
10	900086	133	30	3079	3003	42	0.0128	0.0128	0.0129	0.0130	0.0130	3.041	0.0128	0.0130	0.0002
11	900087	134	26	3069	2962	42	0.0132	0.0131	0.0131	0.0131	0.0131	3.016	0.0131	0.0131	< MDL
12	900088	151	12	3027	3088	42	0.0132	0.0132	0.0132	0.0132	0.0132	3.058	0.0132	0.0132	< MDL
21	900089	84	34	3015	2991	41	0.0128	0.0128	0.0135	0.0134	0.0134	3.003	0.0128	0.0134	0.0006
22	900090	31	22	3003	3135	37	0.0133	0.0133	0.0135	0.0135	0.0135	3.069	0.0133	0.0135	0.0002
23	900091	116	18	3054	3045	41	0.0125	0.0125	0.0125	0.0125	0.0125	3.050	0.0125	0.0125	< MDL
24	900092	28	9	3018	3027	44	0.0125	0.0124	0.0124	0.0125	0.0125	3.023	0.0125	0.0124	< MDL
13 DUP	900093	17	31	3091	3045	41	0.0125	0.0125	0.0136	0.0136	0.0136	3.068	0.0125	0.0136	8.7
14	900094	2	23	3075	3129	42	0.0126	0.0125	0.0135	0.0136	0.0136	3.102	0.0125	0.0135	7.7
15	900095	22	6	3036	3036	42	0.0136	0.0135	0.0140	0.0140	0.0140	3.036	0.0135	0.0140	3.9
16	900096	5	5	3057	3036	42	0.0125	0.0124	0.0126	0.0125	0.0125	3.047	0.0124	0.0125	0.0001
17	900097	6	8	3082	3054	42	0.0115	0.0115	0.0115	0.0115	0.0115	3.068	0.0115	0.0115	< MDL
18	900098	40	33	3066	3039	42	0.0132	0.0131	0.0142	0.0142	0.0142	3.053	0.0132	0.0142	8.6
19	900099	102	36	3048	3060	42	0.0132	0.0133	0.0142	0.0142	0.0142	3.054	0.0133	0.0142	7.0
18 DUP	900100	21	1	3048	3018	43	0.0123	0.0123	0.0126	0.0126	0.0126	3.033	0.0123	0.0126	2.3
20	900101	69	25	3003	3060	42	0.0115	0.0116	0.0120	0.0119	0.0119	3.032	0.0115	0.0119	3.1
P over	900102	85	11	3048	3122	42	0.0125	0.0124	0.0125	0.0126	0.0126	3.085	0.0124	0.0126	1.5
P under	900103	203	28	3069	3066	41	0.0120	0.0120	0.0171	0.0170	0.0170	3.038	0.0120	0.0171	41.0
1A	900071	152	21	3042	3000	41	0.0128	0.0128	0.0128	0.0128	0.0128	3.021	0.0128	0.0128	< MDL
2A	900072	160	14	3054	3107	42	0.0122	0.0122	0.0122	0.0122	0.0122	3.081	0.0122	0.0122	< MDL
3A	900073	185	15	3027	3018	42	0.0119	0.0120	0.0118	0.0119	0.0119	3.023	0.0118	0.0119	< MDL
18	900074	9	10	3006	2983	42	0.0117	0.0117	0.0117	0.0120	0.0120	2.995	0.0117	0.0120	< MDL
28	900075	53	3	3045	3024	41	0.0117	0.0117	0.0117	0.0118	0.0118	3.055	0.0117	0.0117	< MDL
38	900076	157	13	3054	3043	41	0.0132	0.0133	0.0132	0.0132	0.0132	3.051	0.0132	0.0132	< MDL
EXHAUST RECIRC		62	27	3024	3012	41	0.0124	0.0124	0.0123	0.0124	0.0124	3.018	0.0124	0.0123	< MDL
												0	0	0	0.0000 no sample
												0	0	0	0.0000 no sample

TEST: PARTICULATE #1
 DATE: 06-19-92 AM
 METHOD: NIOSH 500

TRAVIS AFB
 PAINT BOOTH TESTS
 ADMEX PROJECT 8405

D E INITIALS: BM & LJJ
 Q A INITIALS: LJJ

GRID CHART - PARTICULATE

Painter Over 41.0		EXHAUST GRID				INLET GRID B				PAINT TYPE: WHITE TOPCOAT		OBJECT: LADDERS	
Painter Under < MDL		1	< MDL	2	< MDL	3	< MDL	4	< MDL	1B	< MDL	EXHAUST DUCT: no sample	
INLET GRID A		5	0.8	6	2.0	7	< MDL	8	< MDL	2B	< MDL	RECIRC DUCT: no sample	
1A < MDL		9	4.7	10	1.6	11	< MDL	12	< MDL	3B	< MDL		
2A < MDL		21	4.9	22	1.8	23	< MDL	24	< MDL				
3A < MDL		13	8.7 7.7	14	3.9	15	0.8	16	< MDL				
		17	8.6	18	7.0 2.3	19	3.1	20	1.5				
		UNITS: mg/M3		GRID MDL: 0.1 mg/SAMPLE		EXHAUST DUCT: no sample							
		OSHA TWA: 40 mg/M3		PAINTER MDL: 0.1 mg/SAMPLE		RECIRC DUCT: no sample							

TEST: PARTICULATE #2 DATE: 06-19-92 PM METHOD: NIOSH 500				TRAVIS AFB PAINT BOOTH TESTS ACUREX PROJECT 8465				PAINT: LT GREEN PRIMER OBJECT: BOWSER				D E INITIALS: BM & LJJ O A INITIALS: LJJ			
GRID LOC	ACUREX SAMPLE #	FILTER #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	PRE #1 (g)	PRE #2 (g)	POST #1 (g)	POST #2 (g)	AVG FLOW (L/MIN)	PRE AVG (g)	POST AVG (g)	PART WT (g)	PARTICULA (mg/M3)
1	900109	26	33	3039	3024	38	0.0123	0.0123	0.0122	0.0123	3.032	0.0123	0.0122	0.0000	< MDL
2	900110	124	36	3060	3094	38	0.0123	0.0122	0.0123	0.0122	3.077	0.0122	0.0122	0.0000	< MDL
3	900111	173	25	3060	3129	38	0.0122	0.0122	0.0121	0.0122	3.095	0.0122	0.0122	0.0000	< MDL
4	900112	70	20	3066	3051	38	0.0117	0.0117	0.0118	0.0117	3.059	0.0117	0.0117	0.0000	< MDL
5	900113	153	16	3063	3142	38	0.0134	0.0133	0.0134	0.0134	3.103	0.0134	0.0134	0.0000	< MDL
6	900114	61	1	3033	3033	39	0.0115	0.0115	0.0116	0.0116	3.026	0.0115	0.0116	0.0001	0.8
7	900115	184	24	3045	3148	38	0.0128	0.0128	0.0129	0.0129	3.097	0.0128	0.0129	0.0001	0.8
8	900116	3	12	3068	3164	38	0.0131	0.0131	0.0133	0.0133	3.126	0.0131	0.0133	0.0002	1.7
9	900117	77	29	3021	3012	38	0.0116	0.0116	0.0118	0.0118	3.071	0.0116	0.0118	0.0002	1.7
10	900118	90	4	3065	3057	38	0.0115	0.0115	0.0123	0.0123	3.071	0.0115	0.0123	0.0008	6.9
11	900119	178	22	3068	3216	34	0.0131	0.0131	0.0139	0.0138	3.152	0.0131	0.0139	0.0008	7.5
12	900120	206	13	3048	3714	37	0.0119	0.0119	0.0126	0.0126	3.381	0.0119	0.0126	0.0007	5.6
21	900121	201	32	3018	3003	38	0.0136	0.0136	0.0140	0.0139	3.011	0.0136	0.0139	0.0003	2.6
22	900122	207	6	3036	3027	38	0.0121	0.0120	0.0129	0.0128	3.032	0.0121	0.0129	0.0008	6.9
23	900123	51	18	3045	3021	38	0.0126	0.0126	0.0130	0.0138	3.033	0.0126	0.0138	0.0012	10.4
23 DUP	900134	98	5	3036	3024	39	0.0115	0.0115	0.0124	0.0124	3.030	0.0115	0.0124	0.0009	7.6
24	900124	164	14	3039	3085	38	0.0127	0.0128	0.0136	0.0136	3.062	0.0128	0.0136	0.0008	6.9
13	900125	200	31	3045	3003	38	0.0125	0.0125	0.0127	0.0127	3.024	0.0125	0.0127	0.0002	1.7
14	900126	30	30	3003	3006	38	0.0124	0.0124	0.0133	0.0133	3.085	0.0124	0.0133	0.0009	7.9
15	900127	59	19	3012	3009	38	0.0134	0.0134	0.0144	0.0143	3.011	0.0134	0.0143	0.0009	7.9
16	900128	57	9	3027	3027	40	0.0135	0.0135	0.0145	0.0145	3.027	0.0135	0.0145	0.0010	8.3
17	900129	129	35	3000	2994	38	0.0138	0.0138	0.0139	0.0139	2.997	0.0138	0.0139	0.0001	0.9
18	900130	136	34	3003	2977	38	0.0122	0.0122	0.0125	0.0125	2.990	0.0122	0.0125	0.0003	2.6
19	900131	183	26	3057	3051	5	0.0120	0.0119	0.0119	0.0120	3.054	0.0119	0.0120	0.0001	6.5
20	900132	65	11	3039	3088	39	0.0125	0.0124	0.0136	0.0137	3.064	0.0124	0.0136	0.0012	10.0
P over	900138	195	28	3006	3024	37	0.0131	0.0131	0.0133	0.0132	3.015	0.0131	0.0132	0.0001	0.9
P under	900139	43	21	3000	2985	37	0.0122	0.0121	0.0121	0.0121	2.993	0.0121	0.0121	0.0000	< MDL
1A	900103	93	3	3024	3003	41	0.0125	0.0125	0.0125	0.0125	3.014	0.0125	0.0125	0.0000	< MDL
2A	900104	60	10	3030	3126	42	0.0116	0.0116	0.0116	0.0116	3.078	0.0116	0.0116	0.0000	< MDL
3A	900105	62	23	3085	3174	39	0.0125	0.0125	0.0124	0.0124	3.130	0.0125	0.0124	0.0000	< MDL
1B	900106	39	7	3048	3132	42	0.0126	0.0125	0.0126	0.0125	3.090	0.0125	0.0125	0.0000	< MDL
18	900106	38	8	3045	3082	42	0.0135	0.0134	0.0136	0.0134	3.064	0.0135	0.0135	0.0000	< MDL
28	900107	45	15	3018	3129	45	0.0124	0.0124	0.0124	0.0123	3.074	0.0124	0.0123	0.0000	< MDL
38	900108	180	27	3012	2994	41	0.0121	0.0121	0.0130	0.0130	3.003	0.0121	0.0130	0.0009	7.3
F BLANK	900135	163	2			38	0.0132	0.0132	0.0132	0.0131	3.000	0.0132	0.0131	0.0000	< MDL
EXHAUST											0.000	0.0000	0.0000	0.0000	no sample
RECIRC											0.000	0.0000	0.0000	0.0000	no sample

TEST: PARTICULATE #2
 DATE: 06-19-92 PM
 METHOD: NIOSH 501

GRID CHART - PARTICULATE

TRAVIS AFB
 PAINT BOOTH TESTS
 AQUIEX PROJECT 8465

D E INITIALS: MM & LJJ
 Q A INITIALS: LJJ

Painter Over 0.9		EXHAUST GRID				Field Blank < MDL	
Painter Under < MDL		1	2	3	4		
		< MDL	< MDL	< MDL	< MDL		
INLET GRID A		5	6	7	8	INLET GRID B	
1A < MDL		< MDL	0.8	0.8	1.7	1B < MDL	
2A < MDL < MDL		9	10	11	12	2B < MDL	
3A < MDL		21	22	23	24	3B 7.3	
		1.7	6.9	7.5	5.6		
		2.6	6.9	10.4 7.6	6.9		
		13	14	15	16		
		0.9	7.9	7.9	8.3		
		17	18	19	20		
			2.6	6.5	10.0		
PAINT TYPE: LT GREEN PRIMER		UNITS: mg/M3		GRID MDL: 0.1 mg/SAMPLE		EXHAUST DUCT: no sample	
OBJECT: BOURER		OSHA TWA: 77 mg/M3		PAINTER MDL: 0.1 mg/SAMPLE		RECIRC DUCT: no sample	

TEST: PARTICULATE #3 DATE: 06-22-92 AM METHOD: NIOSH 500				TRAVIS AFB PAINT Booth TESTS ACUREX PROJECT 84-85				PAINT: RED: M20BASE & WHITE TOPCOAT OBJECT: BOWSER & LADDERS				D E INITIALS: BN & LJJ O A INITIALS: LJJ			
GRID LOC	ACUREX SAMPLE #	FILTER #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	PRE #1 (g)	PRE #2 (g)	POST #1 (g)	POST #2 (g)	AVG FLOW (L/MIN)	PRE AVG (g)	POST AVG (g)	PART WT (g)	PARTICULATE (mg/M3)
1	9000008	63	8	3030	2980	70	0.0126	0.0126	0.0126	0.0127	3.005	0.0126	0.0126	0.0000	< MDL
2	9000009	148	6	3048	3021	72	0.0124	0.0126	0.0123	0.0123	3.035	0.0123	0.0123	0.0000	< MDL
3	9000010	12	25	3012	3075	71	0.0133	0.0133	0.0133	0.0134	3.044	0.0134	0.0134	0.0001	0.5
4	9000011	11	1	3015	3066	73	0.0125	0.0125	0.0127	0.0127	3.041	0.0125	0.0127	0.0002	0.9
5	9000012	73	41	3060	3045	72	0.0124	0.0124	0.0125	0.0124	3.053	0.0124	0.0125	0.0001	0.5
6	9000013	166	12	3030	3085	72	0.0133	0.0134	0.0133	0.0134	3.058	0.0133	0.0133	0.0000	< MDL
7	9000014	195	33	3075	3021	71	0.0131	0.0131	0.0133	0.0132	3.048	0.0131	0.0132	0.0001	0.5
8	9000015	76	4	3072	2997	71	0.0127	0.0127	0.0128	0.0128	3.035	0.0127	0.0128	0.0001	0.5
9	9000016	1	7	3027	3035	72	0.0132	0.0131	0.0120	0.0120	3.031	0.0132	0.0120	0.0000	< MDL
10	9000017	109	5	3063	3033	72	0.0122	0.0122	0.0126	0.0126	3.048	0.0122	0.0126	0.0004	1.8
11	9000018	192	14	3039	2988	72	0.0139	0.0130	0.0140	0.0139	3.014	0.0135	0.0139	0.0004	1.8
12	9000018	105	2	3066	3012	55	0.0134	0.0135	0.0139	0.0139	3.039	0.0134	0.0139	0.0005	3.0
21	9000020	58	10	3027	3091	73	0.0122	0.0122	0.0124	0.0124	3.059	0.0122	0.0124	0.0002	0.9
22	9000021	115	26	3066	3119	1	0.0123	0.0123	0.0123	0.0122	3.093	0.0123	0.0122	0.0000	< MDL
23	9000022	8	30	3027	2983	72	0.0117	0.0117	0.0129	0.0130	3.005	0.0117	0.0129	0.0012	5.5
23 DUP	9000032	132	22	3204	3204	62	0.0136	0.0135	0.0142	0.0142	3.204	0.0135	0.0142	0.0007	3.5
24	9000023	36	24	3027	3066	72	0.0135	0.0134	0.0144	0.0144	3.047	0.0135	0.0144	0.0009	4.1
13	9000024	215	31	3066	3000	72	0.0130	0.0130	0.0135	0.0135	3.033	0.013	0.0135	0.0005	2.3
14	9000025	27	9	3049	3000	75	0.0134	0.0134	0.0141	0.0141	3.025	0.0134	0.0149	0.0007	3.1
15	9000026	14	42	2985	3030	71	0.0134	0.0134	0.0149	0.0149	3.008	0.0134	0.0149	0.0015	7.0
16	9000027	74	16	3024	3129	71	0.0127	0.0126	0.0131	0.0131	3.077	0.0127	0.0131	0.0004	1.8
17	9000028	46	36	3066	3110	71	0.0132	0.0132	0.0132	0.0133	3.088	0.0132	0.0132	0.0000	< MDL
18	9000029	123	11	3045	2976	72	0.0128	0.0128	0.0141	0.0141	3.010	0.0128	0.0141	0.0013	6.0
19	9000030	99	23	3030	3151	72	0.0116	0.0116	0.0132	0.0132	3.091	0.0116	0.0132	0.0016	7.2
20	9000031	208	43	3045	2954	72	0.0120	0.0120	0.0132	0.0132	3.000	0.012	0.0132	0.0012	5.6
P over	9000066	150	21	3051	2400	70	0.0128	0.0128	0.0153	0.0153	2.726	0.0128	0.0153	0.0025	13.1
P under	9000067	50	32	3066	2983	70	0.0126	0.0125	0.0126	0.0125	3.027	0.0126	0.0126	0.0000	< MDL
1A	9000001	64	13	3060	3097	70	0.0126	0.0126	0.0125	0.0125	3.079	0.0126	0.0125	0.0000	< MDL
2A	9000003	144	3	3051	3003	70	0.0131	0.0131	0.0131	0.0131	3.027	0.0131	0.0131	0.0000	< MDL
2A DUP	9000007	63	20	3082	3021	70	0.0126	0.0126	0.0126	0.0126	3.052	0.0126	0.0126	0.0000	< MDL
3A	9000005	32	27	3039	3012	70	0.0126	0.0125	0.0125	0.0125	3.026	0.0125	0.0125	0.0000	< MDL
1B	9000002	199	29	3027	3000	69	0.0130	0.0130	0.0130	0.0129	3.014	0.013	0.013	0.0000	< MDL
2B	9000004	41	40	3015	2960	69	0.0126	0.0125	0.0116	0.0116	2.988	0.0125	0.0116	0.0000	< MDL
3B	9000006	149	19	3027	2950	69	0.0125	0.0125	0.0125	0.0125	2.989	0.0125	0.0125	0.0000	< MDL
EXHAUST											0.000	0	0	0.0000	no sample
RECIRC											0.000	0	0	0.0000	no sample

O E INITIALS: OM & LUL
O A INITIALS: LUL

EXHAUST GRID

EXHAUST DUCT: no sample

TEST: PARTICULATE #4
DATE: 06-24-92 AM
METHOD: NIOSH 500

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 84-85

PAINT: BLUE WATERBASED
OBJECT: COMFORT PALLET

D E INITIALS: BM & LJJ
Q A INITIALS: LJJ

GRID	LOC	ACUREX SAMPLE #	FILTER #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	PRE #1 (g)	PRE #2 (g)	POST #1 (g)	POST #2 (g)	AVG FLOW (L/MIN)	PRE AVG (g)	POST AVG (g)	PART WT (g)	PARTICULA (mg/M3)
1		900040	18	10	3051	3030	70	0.0122	0.0122	0.0122	0.0122	3.041	0.0122	0.0122	0.0000	< MDL
2		900041	165	14	2994	3033	70	0.0132	0.0132	0.0132	0.0132	3.014	0.0132	0.0132	0.0000	< MDL
3		900042	42	2	2975	3003	54	0.0122	0.0121	0.0123	0.0124	2.989	0.0121	0.0124	0.0003	1.9
4		900043	54	17	3051	3042	61	0.0115	0.0115	0.0121	0.0120	3.047	0.0115	0.0121	0.0006	2.8
5		900044	189	22	3009	3069	61	0.0125	0.0125	0.0125	0.0126	3.039	0.0125	0.0125	0.0000	< MDL
6		900045	91	19	3051	3097	70	0.0125	0.0125	0.0127	0.0127	3.074	0.0125	0.0127	0.0002	0.9
7		900046	172	36	3015	3110	70	0.0119	0.0118	0.0129	0.0128	3.063	0.0119	0.0128	0.0009	4.2
8		900047	101	37	3069	3100	70	0.0117	0.0117	0.0127	0.0127	3.085	0.0117	0.0127	0.0010	4.6
9	DUP	900048	168	6	3042	3042	70	0.0130	0.0130	0.0134	0.0135	3.042	0.0130	0.0134	0.0004	1.9
10		900049	86	41	3009	2942	71	0.0130	0.0130	0.0134	0.0134	2.976	0.0130	0.0134	0.0004	1.9
11		900050	210	40	3048	3045	70	0.0123	0.0122	0.0133	0.0133	3.047	0.0122	0.0133	0.0011	5.2
12		900051	56	4	3079	3036	70	0.0126	0.0126	0.0148	0.0149	3.058	0.0126	0.0148	0.0022	10.3
13		900052	154	31	3048	3003	70	0.0133	0.0133	0.0151	0.0150	3.026	0.0133	0.0151	0.0018	8.5
14	DUP	900053	139	33	3045	3063	70	0.0118	0.0118	0.0133	0.0134	3.054	0.0118	0.0133	0.0015	7.0
15		900140	194	34	3051	3036	70	0.0131	0.0130	0.0135	0.0134	3.044	0.0130	0.0135	0.0005	2.3
16		900064	137	30	3003	3006	70	0.0119	0.0119	0.0129	0.0129	3.005	0.0119	0.0129	0.0010	4.8
17		900211	79	16	3027	3072	70	0.0118	0.0118	0.0141	0.0142	3.050	0.0118	0.0142	0.0024	11.2
18		900054	47	11	2997	3045	71	0.0126	0.0125	0.0151	0.0151	3.021	0.0125	0.0151	0.0026	12.1
19		900055	37	15	2997	3006	70	0.0122	0.0122	0.0126	0.0126	3.002	0.0122	0.0126	0.0004	1.9
20		900056	15	21	3027	3030	70	0.0124	0.0124	0.0132	0.0131	3.029	0.0124	0.0132	0.0008	3.8
21		900057	25	24	3000	3039	70	0.0125	0.0124	0.0142	0.0141	3.020	0.0124	0.0141	0.0017	8.0
22	DUP	900058	34	8	3074	3066	71	0.0124	0.0124	0.0139	0.0139	3.070	0.0124	0.0139	0.0015	6.9
23		900059	171	20	3018	3063	70	0.0117	0.0117	0.0135	0.0135	3.041	0.0117	0.0135	0.0018	8.5
24		900060	55	18	3048	3072	71	0.0122	0.0120	0.0123	0.0123	3.065	0.0121	0.0168	0.0047	21.6
25		900061	100	5	3057	3072	70	0.0118	0.0118	0.0124	0.0124	3.027	0.0118	0.0124	0.0006	2.8
26	DUP	900062	96	1	2974	2925	71	0.0121	0.0121	0.0129	0.0129	2.950	0.0121	0.0129	0.0008	3.8
27		900063	126	25	3003	3018	70	0.0122	0.0122	0.0147	0.0147	3.011	0.0122	0.0147	0.0025	11.9
28		900064	188	42	3079	3069	70	0.0124	0.0124	0.0152	0.0152	3.074	0.0124	0.0152	0.0028	13.0
29	P over	900069	118	28	3006	2991	69	0.0121	0.0121	0.0150	0.0150	2.999	0.0121	0.0150	0.0029	14.0
30	P under	900070	205	32	3069	3015	69	0.0133	0.0133	0.0132	0.0132	3.042	0.0133	0.0132	0.0000	< MDL
31		900033	97	7	2988	2945	70	0.0120	0.0121	0.0121	0.0121	2.967	0.0121	0.0121	0.0000	< MDL
32		900034	131	43	3057	3040	69	0.0117	0.0117	0.0118	0.0118	3.059	0.0117	0.0118	0.0001	0.5
33		900035	191	3	3039	3000	69	0.0133	0.0133	0.0133	0.0133	3.020	0.0133	0.0133	0.0000	< MDL
34		900036	141	29	3079	3024	69	0.0123	0.0122	0.0123	0.0123	3.052	0.0123	0.0123	0.0000	< MDL
35		900037	179	35	3070	3051	69	0.0129	0.0129	0.0129	0.0129	3.061	0.0129	0.0129	0.0000	< MDL
36		900038	186	27	3051	3036	69	0.0130	0.0130	0.0131	0.0131	3.044	0.0130	0.0131	0.0000	< MDL
37	DUP	900039	186	12	2991	3018	69	0.0121	0.0121	0.0121	0.0120	3.005	0.0121	0.0121	0.0000	< MDL
38		900068	13	26			69	0.0122	0.0122	0.0122	0.0122	3.000	0.0122	0.0122	0.0000	< MDL
39	BLANK											0	0.0000	0.0000	0.0000	no sample
40	EXHAUST											0	0.0000	0.0000	0.0000	no sample
41	RECIRC											0	0.0000	0.0000	0.0000	no sample

TEST: PARTICULATE #4
 DATE: 06-24-92 AM
 METHOD: NIOSH 500

GRID CHART - PARTICULATE

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS: BM & LJJ
 Q A INITIALS: LJJ

PAINTER OVER 14.0		PAINTER UNDER < MDL		EXHAUST GRID		FIELD BLANK < MDL	
INLET GRID A		INLET GRID B					
1A	< MDL	1B	< MDL	1	< MDL	2	< MDL
2A	0.5	2B	< MDL	5	< MDL	6	0.9
3A	< MDL	3B	< MDL	9	1.9 1.9	10	5.2
				21	2.3	22	4.8
				13	1.9	14	3.8
				17	21.6	18	2.8 3.8
						15	8.0 6.9
						11	10.3
						7	4.2
						8	4.6
						12	8.5 7.0
						24	12.1
						16	8.5
						20	13.0
						19	11.9
						23	11.2
						25	12.1

PAINT TYPE: BLUE WATERBASED
 OBJECT: COMFORT PALLET
 UNITS: mg/m3
 OSHA TWA: 77 mg/m3
 GRID MDL: 0.1 mg/sample
 PAINTER MDL: 0.1 mg/sample
 EXHAUST DUCT: < MDL
 SECIRC DUCT: < MDL

TEST: PARTICULATE #5
DATE: 06-29-92 PM
METHOD: NIOSH 500

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

PAINT: LT GREEN PRIMER
OBJECT: DEC PANELS

D E INITIALS: BM & LJJ
Q A INITIALS: LJJ

GRID LOC	ACUREX SAMPLE #	FILTER #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	PRE #1 (g)	PRE #2 (g)	POST #1 (g)	POST #2 (g)	AVG FLOW (L/MIN)	PRE AVG (g)	POST AVG (g)	PART WT PARTICULATE (mg/M3)
1	900151	108	55	3010	3033	68	0.0122	0.0122	0.0123	0.0123	3.022	0.0122	0.0123	0.0001
2	900152	175	42	3060	3033	68	0.0126	0.0127	0.0127	0.0126	3.017	0.0127	0.0127	0.0000
3	900153	145	54	3024	2994	68	0.0130	0.0129	0.0129	0.0129	3.009	0.0130	0.0129	0.0000
4	900154	114	25	3000	2997	68	0.0117	0.0117	0.0117	0.0117	2.999	0.0117	0.0117	0.0000
5	900155	212	49	3040	3005	68	0.0131	0.0132	0.0131	0.0131	3.073	0.0131	0.0131	0.0000
6	900156	135	47	3060	3075	68	0.0128	0.0128	0.0127	0.0127	3.068	0.0128	0.0127	0.0000
6 DUP	900157	156	19	3035	3003	68	0.0129	0.0129	0.0128	0.0129	3.019	0.0129	0.0129	0.0000
7	900158	176	12	3002	3040	68	0.0133	0.0132	0.0133	0.0133	3.021	0.0132	0.0133	0.0001
8	900159	110	35	3036	3006	68	0.0136	0.0135	0.0136	0.0135	3.053	0.0136	0.0135	0.0000
9	900160	120	33	3040	3069	68	0.0123	0.0123	0.0123	0.0123	3.026	0.0123	0.0123	0.0000
10	900161	66	32	3040	3069	68	0.0123	0.0124	0.0124	0.0124	3.065	0.0123	0.0124	0.0001
11	900162	23	46	3000	3051	68	0.0135	0.0135	0.0134	0.0134	3.026	0.0135	0.0134	0.0001
12	900163	182	30	3033	3021	68	0.0127	0.0127	0.0127	0.0127	3.027	0.0127	0.0127	0.0000
21	900164	119	48	3035	3103	67	0.0125	0.0125	0.0125	0.0125	3.069	0.0125	0.0125	0.0000
22	900165	60	51	3000	3015	68	0.0130	0.0130	0.0131	0.0131	3.008	0.0130	0.0131	0.0001
23	900166	159	29	3003	2965	68	0.0119	0.0119	0.0122	0.0122	2.994	0.0119	0.0122	0.0003
24	900167	20	34	3006	2948	68	0.0117	0.0117	0.0118	0.0118	2.987	0.0117	0.0118	0.0001
13	900168	122	18	3010	3048	68	0.0134	0.0134	0.0135	0.0134	3.029	0.0134	0.0134	0.0000
14	900169	181	20	3040	3033	68	0.0128	0.0128	0.0129	0.0129	3.037	0.0128	0.0130	0.0002
15	900170	167	45	3068	3048	68	0.0130	0.0130	0.0133	0.0133	3.058	0.0130	0.0133	0.0003
16	900171	146	53	3050	3033	68	0.0120	0.0120	0.0121	0.0121	3.042	0.0120	0.0121	0.0001
17	900172	81	50	3050	3033	67	0.0120	0.0121	0.0122	0.0122	3.042	0.0121	0.0122	0.0001
18	900173	155	21	3045	3045	68	0.0133	0.0133	0.0134	0.0134	3.045	0.0133	0.0134	0.0001
19	900174	112	40	3040	3082	68	0.0128	0.0131	0.0134	0.0135	3.061	0.0131	0.0134	0.0001
20	900175	198	17	3040	3021	68	0.0128	0.0129	0.0129	0.0130	3.033	0.0129	0.0130	0.0001
20 DUP	900176	121	15	3015	3015	69	0.0133	0.0132	0.0132	0.0132	3.015	0.0133	0.0133	0.0000
P over	900141	35	31	3030	2965	67	0.0125	0.0124	0.0126	0.0127	3.008	0.0125	0.0126	0.0001
P under	900142	140	52	3050	3027	68	0.0132	0.0131	0.0132	0.0131	3.039	0.0132	0.0131	0.0000
1A	900143	128	28	3040	3012	67	0.0127	0.0127	0.0127	0.0128	3.026	0.0127	0.0127	0.0000
2A	900145	202	43	2990	3024	67	0.0120	0.0120	0.0119	0.0119	3.007	0.0120	0.0119	0.0000
3A	900146	211	16	3060	3119	67	0.0127	0.0127	0.0126	0.0125	3.049	0.0127	0.0126	0.0000
18	900147	113	14	2980	3012	68	0.0124	0.0124	0.0124	0.0124	2.998	0.0124	0.0124	0.0000
28	900148	197	4	2975	2884	67	0.0139	0.0138	0.0138	0.0138	2.930	0.0138	0.0138	0.0000
18 DUP	900149	190	1	2990	3033	68	0.0125	0.0125	0.0125	0.0125	3.012	0.0125	0.0125	0.0000
34	900150	191	7	2990	3033	68	0.0130	0.0130	0.0130	0.0130	2.924	0.0130	0.0130	0.0000
F BLANK	900165	170	3	2940	2887	68	0.0119	0.0120	0.0120	0.0119	3.000	0.0119	0.0120	0.0001
EXHAUST							0.0000	0.0000	0.0000	0.0000	0.000	0.0000	0.0000	no sample
RECIRC							0.0000	0.0000	0.0000	0.0000	0.000	0.0000	0.0000	no sample

TEST: PARTICULATE #5
 DATE: 06-29-92 PM
 METHOD: WIOSH 500

TRAVIS AFB
 PAINT BOOTH TESTS
 AGRON PROJECT B485

D E INITIALS: BM & LJJ
 G A INITIALS: LJJ

GRID CHART - PARTICULATE

Painter Over 0.5		EXHAUST GRID										Field Blank 0.5	
Painter Under < MDL		1	0.5	2	< MDL	3	< MDL	4	< MDL				
		5	< MDL	6	< MDL < MDL	7	0.5	8	< MDL				
		9	< MDL	10	0.5	11	0.5	12	< MDL				
		21	< MDL	22	0.5	23	1.5	24	0.5				
		13	< MDL	14	1.0	15	1.4	16	0.5				
		17	0.5	18	0.5	19	1.0	20	< MDL				
INLET GRID A		INLET GRID B											
1A < MDL		1B < MDL < MDL											
2A < MDL		2B < MDL											
3A < MDL		3B < MDL											

PAINT TYPE: LT GREEN PRIMER
 OBJECT: REC PANELS
 UNITS: mg/M3
 OSMA TWA: 77 mg/M3
 GRID MDL: 0.1 mg/SAMPLE
 PAINTER MDL: 0.1 mg/SAMPLE
 EXHAUST DUCT: no sample
 RECIRC DUCT: no sample

TEST: SINGLE PASS PARTICULATE #1 TRAVIS AFB
 DATE: 07-01-92 AM2
 METHOD: NIOSH 500

PAINT: PRIMER & GRAY TOPCOAT
 OBJECT: RAMP & DEC PANELS

D E INITIALS: BM & LJJ
 Q A INITIALS: LJJ

GRID LOC	ACUREX SAMP #	FILTER #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	PRE #1 (g)	PRE #2 (g)	POST #1 (g)	POST #2 (g)	RAW DATA, BALANCE ACCURACY (0.0001)	AVG FLOW (L/MIN)	PRE (g)	AVG (g)	POST (g)	PART WT (g)	PARTICULATE (mg/M3)
1	900185	68	45	3009	3033	62	0.0133	0.0133	0.0133	0.0133	0.0133	3.021	0.0133	0.0133	0.0133	0.0000	< MDL
2	900186	213	11	3009	3033	63	0.0128	0.0128	0.0128	0.0128	0.0128	3.021	0.0128	0.0128	0.0128	0.0000	< MDL
3	900187	46	28	2957	2968	62	0.0132	0.0132	0.0132	0.0132	0.0132	2.963	0.0132	0.0132	0.0132	0.0000	< MDL
3 DUP	900214	44	53	2994	3030	62	0.0116	0.0116	0.0116	0.0116	0.0116	3.012	0.0116	0.0116	0.0116	0.0000	< MDL
4	900188	75	43	2991	2980	62	0.0126	0.0127	0.0127	0.0127	0.0127	2.966	0.0126	0.0127	0.0127	0.0001	0.5
5	900189	125	29	3000	2994	62	0.0127	0.0127	0.0128	0.0127	0.0127	2.997	0.0127	0.0127	0.0128	0.0001	0.5
6	900190	10	33	3009	2957	62	0.0123	0.0123	0.0124	0.0124	0.0124	2.983	0.0123	0.0124	0.0124	0.0001	0.5
7	900191	7	51	2994	3006	62	0.0121	0.0121	0.0122	0.0122	0.0122	3.000	0.0121	0.0121	0.0122	0.0001	0.5
8	900192	48	18	3027	3003	62	0.0132	0.0131	0.0132	0.0132	0.0132	3.015	0.0131	0.0131	0.0132	0.0001	0.5
9	900193	117	24	3003	3060	62	0.0121	0.0121	0.0123	0.0124	0.0124	3.032	0.0121	0.0121	0.0124	0.0003	1.6
10	900194	138	19	2991	2977	62	0.0123	0.0124	0.0128	0.0128	0.0128	2.964	0.0123	0.0123	0.0128	0.0005	2.7
11	900195	87	17	3009	3015	62	0.0117	0.0117	0.0123	0.0123	0.0123	3.012	0.0117	0.0117	0.0123	0.0006	3.2
11 DUP	900213	187	35	2968	2983	1	0.0123	0.0123	0.0123	0.0123	0.0123	2.976	0.0123	0.0123	0.0123	0.0000	< MDL
12	900196	177	5	3027	3018	63	0.0127	0.0126	0.0130	0.0129	0.0129	3.023	0.0127	0.0127	0.0129	0.0002	1.1
21	900197	127	42	2994	3030	62	0.0133	0.0133	0.0136	0.0135	0.0135	3.012	0.0133	0.0133	0.0136	0.0003	1.6
22	900198	143	7	2965	2971	62	0.0133	0.0133	0.0140	0.0139	0.0139	2.968	0.0133	0.0133	0.0139	0.0006	3.3
22 DUP	900212	52	31	2977	2960	63	0.0127	0.0127	0.0130	0.0129	0.0129	2.959	0.0127	0.0127	0.0130	0.0003	1.6
23	900199	104	54	2983	2965	62	0.0126	0.0126	0.0135	0.0135	0.0135	2.964	0.0126	0.0126	0.0135	0.0009	4.9
24	900200	169	50	3033	2998	62	0.0131	0.0131	0.0134	0.0133	0.0133	3.016	0.0131	0.0131	0.0134	0.0003	1.6
13	900201	103	30	3000	2994	62	0.0128	0.0128	0.0132	0.0132	0.0132	2.997	0.0128	0.0128	0.0132	0.0004	2.2
14	900202	107	20	2960	2974	62	0.0136	0.0135	0.0133	0.0133	0.0133	2.977	0.0135	0.0135	0.0133	0.0018	9.8
15	900203	95	13	3030	2991	61	0.0125	0.0125	0.0140	0.0140	0.0140	3.011	0.0125	0.0125	0.0140	0.0015	8.2
15 DUP	900210	204	55	3006	3012	62	0.0120	0.0120	0.0134	0.0134	0.0134	3.009	0.0120	0.0120	0.0134	0.0014	7.5
16	900204	130	47	3000	2988	62	0.0121	0.0122	0.0125	0.0124	0.0124	2.994	0.0121	0.0121	0.0124	0.0003	1.6
17	900205	142	34	3009	3009	62	0.0133	0.0133	0.0153	0.0152	0.0152	3.009	0.0133	0.0133	0.0152	0.0019	10.2
18	900206	174	15	2968	2983	63	0.0126	0.0126	0.0148	0.0149	0.0149	2.976	0.0126	0.0126	0.0148	0.0022	11.7
19	900207	4	12	3006	3048	62	0.0117	0.0116	0.0137	0.0137	0.0137	3.027	0.0117	0.0117	0.0137	0.0020	10.7
20	900208	78	10	3015	3110	63	0.0127	0.0127	0.0137	0.0137	0.0137	3.063	0.0127	0.0127	0.0137	0.0010	5.2
P over	900184	106	49	2983	2925	62	0.0124	0.0125	0.0123	0.0123	0.0123	2.954	0.0125	0.0125	0.0123	0.0000	< MDL
P under	900183	102	52	3036	3012	62	0.0127	0.0127	0.0127	0.0127	0.0127	3.024	0.0127	0.0127	0.0127	0.0000	< MDL
1A	900177	196	39	2965	2994	61	0.0129	0.0129	0.0130	0.0129	0.0129	2.990	0.0129	0.0129	0.0129	0.0000	< MDL
2A	900178	161	36	2985	3042	61	0.0125	0.0124	0.0124	0.0124	0.0124	3.014	0.0124	0.0124	0.0124	0.0000	< MDL
3A	900179	72	1	2968	2934	62	0.0120	0.0120	0.0120	0.0120	0.0120	2.951	0.0120	0.0120	0.0120	0.0000	< MDL
1B	900180	111	6	3018	3009	62	0.0134	0.0133	0.0134	0.0133	0.0133	3.014	0.0134	0.0134	0.0133	0.0000	< MDL
2B	900181	147	16	2977	3000	62	0.0124	0.0124	0.0124	0.0123	0.0123	2.969	0.0124	0.0124	0.0123	0.0000	< MDL
3B	900182	158	32	2994	2977	61	0.0122	0.0122	0.0122	0.0121	0.0121	2.966	0.0122	0.0122	0.0121	0.0000	< MDL
F BLANK7												0.000	0.0000	0.0000	0.0000	0.0000	no sample
EXHAUST												0.000	0.0000	0.0000	0.0000	0.0000	no sample
RECIRC												0.000	0.0000	0.0000	0.0000	0.0000	no sample

TEST: SINGLE PASS PARTICULATE #1
DATE: 07-01-92 AM2
METHOD: NIOSH 500

EXHAUST GRID

[illegible]

PAINT TYPE: PRIMER & GRAY TOPCOAT	UNITS: mg/MS	GRID VOL: 0.1 ml/SAMPLE	EXHAUST DUCT: no sample
NO SERV. SAND & GEC SAMPLES	OSMA TLM: 27 mg/MS	PAINTER VOL: 0.1 ml/SAMPLE	RECIRC DUCT: no sample

TEST: S.P. PARTICULATE #2				TRAVIS AFB				PAINT: GRAY TOPCOAT				D E INITIALS: DM & LJJ			
DATE: 07-01-92 PM				PAINT BOOTH TESTS				OBJECT: BOX, PIPES & TABLE				G A INITIALS:			
METHOD: NIOSH 500				ACUREX PROJECT 0485											
GRID LOC	ACUREX SAMPLE #	FILTER #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	PRE #1 (g)	PRE #2 (g)	POST #1 (g)	POST #2 (g)	AVG FLOW (L/MIN)	PRE AVG (g)	POST AVG (g)	PART MT (g)	PARTICULA (mg/M3)
1	900209	249	55	3012	2974	67	0.0119	0.0121	0.0120	0.0120	2.993	0.0120	0.0120	0.0000	< MDL
2	900215	216	15	2983	3033	68	0.0128	0.0128	0.0127	0.0127	3.006	0.0128	0.0127	0.0000	< MDL
2 DUP	900216	236	24	3060	3091	68	0.0119	0.0119	0.0119	0.0119	3.076	0.0119	0.0119	0.0000	< MDL
3	900217	255	18	3003	3000	68	0.0121	0.0123	0.0124	0.0124	3.002	0.0122	0.0124	0.0002	1.0
4	900218	246	39	2994	3072	68	0.0121	0.0122	0.0125	0.0124	3.033	0.0121	0.0125	0.0004	1.9
5	900219	251	11	3033	3129	68	0.0127	0.0130	0.0131	0.0131	3.081	0.0129	0.0131	0.0002	1.0
6	900220	240	1	3036	2977	68	0.0124	0.0124	0.0125	0.0125	3.007	0.0124	0.0125	0.0001	0.5
7	900221	230	43	2980	2966	68	0.0129	0.0129	0.0131	0.0131	2.983	0.0129	0.0131	0.0002	1.0
8	900222	219	28	2968	2948	68	0.0120	0.0120	0.0122	0.0122	2.958	0.0120	0.0122	0.0002	1.0
9	900223	234	53	3030	3048	68	0.0134	0.0134	0.0137	0.0137	3.039	0.0134	0.0137	0.0003	1.5
10	900224	229	10	3060	3075	68	0.0129	0.0129	0.0137	0.0136	3.068	0.0129	0.0137	0.0008	3.8
11	900225	252	29	2994	2895	68	0.0133	0.0134	0.0144	0.0144	2.945	0.0134	0.0144	0.0010	5.0
12	900226	221	30	2994	2934	68	0.0132	0.0132	0.0138	0.0138	2.944	0.0132	0.0138	0.0006	3.0
12 DUP	900227	244	50	2998	3027	68	0.0121	0.0124	0.0128	0.0128	3.013	0.0122	0.0128	0.0006	2.9
21	900228	241	35	2983	2994	67	0.0125	0.0129	0.0132	0.0131	2.969	0.0127	0.0131	0.0004	2.0
22	900229	217	7	2971	2965	68	0.0122	0.0121	0.0131	0.0131	2.968	0.0121	0.0131	0.0010	5.0
22 DUP	900230	220	5	3018	3003	69	0.0117	0.0117	0.0124	0.0125	3.011	0.0117	0.0124	0.0007	3.4
23	900231	237	34	3009	2988	68	0.0119	0.0119	0.0133	0.0132	2.999	0.0119	0.0133	0.0014	6.9
24	900232	232	42	3030	3021	68	0.0132	0.0132	0.0139	0.0139	3.026	0.0132	0.0139	0.0007	3.4
13	900233	233	33	2957	2959	68	0.0131	0.0131	0.0134	0.0135	2.958	0.0131	0.0134	0.0003	1.5
14	900234	225	6	3009	3018	68	0.0124	0.0123	0.0136	0.0136	3.014	0.0123	0.0136	0.0013	6.3
15	900235	222	47	2988	2957	68	0.0132	0.0126	0.0143	0.0143	2.972	0.0129	0.0143	0.0014	6.9
16	900236	247	54	2965	2959	68	0.0123	0.0124	0.0131	0.0131	2.964	0.0124	0.0131	0.0007	3.5
16 DUP	900237	253	20	2974	2954	68	0.0129	0.0128	0.0138	0.0137	2.995	0.0128	0.0137	0.0009	4.5
17	900238	227	17	3015	2974	67	0.0123	0.0124	0.0140	0.0139	3.027	0.0125	0.0140	0.0017	8.4
18	900239	245	16	3000	3054	67	0.0123	0.0124	0.0140	0.0139	3.027	0.0125	0.0140	0.0015	7.3
19	900240	235	45	3033	3027	68	0.0127	0.0130	0.0136	0.0136	3.042	0.0128	0.0136	0.0008	3.9
20	900241	254	36	3042	3045	68	0.0131	0.0133	0.0153	0.0154	3.029	0.0132	0.0153	0.0021	10.2
P over	900249	243	52	3012	3045	68	0.0123	0.0123	0.0129	0.0129	2.977	0.0123	0.0129	0.0006	3.0
P under	900250	224	49	2974	2980	67	0.0113	0.0115	0.0115	0.0114	2.929	0.0114	0.0114	0.0000	< MDL
1A	900242	250	31	2941	2917	67	0.0126	0.0126	0.0126	0.0125	2.945	0.0126	0.0125	0.0000	< MDL
2A	900244	248	32	2977	2912	67	0.0128	0.0126	0.0127	0.0127	2.948	0.0128	0.0127	0.0000	< MDL
3A	900245	231	19	2977	2959	67	0.0123	0.0128	0.0127	0.0127	3.012	0.0124	0.0123	0.0000	< MDL
1B	900246	239	13	2991	3033	66	0.0119	0.0125	0.0118	0.0123	2.960	0.0119	0.0118	0.0000	< MDL
2B	900247	238	12	3048	3072	68	0.0117	0.0118	0.0117	0.0117	2.990	0.0117	0.0117	0.0000	< MDL
3B	900248	218	51	3006	2974	68	0.0117	0.0117	0.0117	0.0117	0.000	0.0000	0.0000	0.0000	no sample
F BLANK?											0.000	0.0000	0.0000	0.0000	no sample
EXHAUST											0.000	0.0000	0.0000	0.0000	no sample
SECURE											0.000	0.0000	0.0000	0.0000	no sample

TEST: S.P. PARTICULATE #2
 DATE: 07-01-97 PM
 METHOD: NIOSH 500

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS: DM & LJJ
 G A INITIALS: LJJ

GRID CHART - PARTICULATE

Painter Over 10.2		Field Blank	
Painter Under 3.0			
INLET GRID A		INLET GRID B	
1A < MDL		15 < MDL	
2A < MDL		25 < MDL	
3A < MDL		35 < MDL	
EXHAUST GRID			
1 < MDL	2 < MDL < MDL	3 1.0	4 1.9
5 1.0	6 0.5	7 1.0	8 1.0
9 1.5	10 3.8	11 5.0	12 3.0 2.9
21 2.8	22 5.0 3.4	23 6.9	24 3.4
13 1.5	14 6.3	15 7.9	16 6.9 3.5
17 4.5	18 8.4	19 7.3	20 3.9

PAINT TYPE: GRAY TOPCOAT
 OBJECT: BOX, PIPES & TABLE
 UNITS: mg/m3
 OSHA TWA: 77 mg/m3
 GRID MDL: 0.1 mg/sample
 PAINTER MDL: 0.1 mg/sample
 EXHAUST DUCTING sample
 RECIRC DUCTING sample

TEST: METALS #1
DATE: 06-22-92 PM
METHOD: NIOSH 7500

TRAVIS AFB
PAINT ROOM TESTS
ACUREX PROJECT 0485

PAINT: LT GREEN PRIMER
OBJECT: COMFORT PALLET

D E INITIALS:
Q A INITIALS:

LJL

GRID LOC	ACUREX BASE SAMPLE #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	AVG FLOW (L/MIN)	LEAD (ug/MS)	ZINC (ug/MS)	STRONTIUM (ug/MS)	CHROMIUM (ug/MS)
1	39 EX921067	41	3045	3039	47 <	0.075	0.80	0.57	3.042	< MDL	5.6	5.6	4.0
2	18 EX921068	35	3023	2956	46 <	0.075	1.72	1.22	2.993	< MDL	7.7	12.5	8.9
3	7 EX921069	23	3042	3036	47 <	0.075	1.46	4.52	3.039	< MDL	10.2	52.3	31.6
4	26 EX921070	43	2980	2994	46 <	0.075	0.42	9.63	2.987	< MDL	3.1	115.6	70.1
5	22 EX921071	31	3000	2994	46 <	0.075	0.45	2.37	2.957	< MDL	3.3	17.2	10.9
6	24 EX921072	12	3085	3151	46 <	0.075	0.72	3.64	3.115	< MDL	5.0	42.3	25.4
7	1 EX921073	30	2983	3003	46 <	0.075	1.29	9.50	2.993	< MDL	9.4	117.0	69.0
8	15 EX921074	4	2997	2959	46 <	0.075	24.92	14.68	2.973	< MDL	5.0	181.9	107.2
9	21 EX921075	8	2980	2988	47 <	0.075	5.78	3.54	2.964	< MDL	7.6	41.2	25.2
10	6 EX921076	6	3021	3027	47 <	0.075	0.48	24.34	3.024	< MDL	3.4	171.3	101.1
11	25 EX921077	14	2988	2993	47 <	0.075	0.86	18.80	2.945	< MDL	6.2	227.5	135.8
12	78 EX921078	1	3066	3029	47 <	0.075	0.50 <	0.30 <	3.048	< MDL	3.5	< MDL	< MDL
12 DUP	16 EX921091	34	3006	3000	46 <	0.075	0.63	33.62	3.003	< MDL	4.6	416.8	244.8
21	40 EX921087	10	3091	3171	47 <	0.075	1.29	5.06	3.131	< MDL	8.8	55.2	34.4
22	19 EX921088	11	2974	3042	47 <	0.075	0.75	26.12	3.008	< MDL	5.3	184.8	111.8
23	27 EX921089	33	3021	3021	46 <	0.075	0.62	59.14	3.021	< MDL	4.5	425.6	260.2
24	11 EX921090	24	3066	3158	47 <	0.24	3.08	72.09	3.112	1.6	21.1	492.9	291.1
13	10 EX921079	36	3054	3075	46	0.14	2.25	12.58	3.085	1.0	16.0	89.2	52.8
14	29 EX921080	9	3000	2926	48 <	0.075	0.50	40.12	2.963	< MDL	3.5	282.1	170.3
15	4 EX921081	42	2985	2959	46 <	0.075	0.56	19.54	2.972	< MDL	4.1	242.6	142.9
15 DUP	77 EX921092	28	3045	3012	46 <	0.075	0.41	30.64	3.029	< MDL	2.9	219.9	132.2
16	20 EX921082	18	3021	2991	46 <	0.075	0.44	70.80	3.006	< MDL	3.2	512.0	307.2
17	20 EX921083	7	3006	3043	46 <	0.073	0.56	3.52	3.035	< MDL	4.0	25.2	24.1
18	23 EX921084	5	3033	3018	47 <	0.075	0.51	16.68	3.026	< MDL	3.6	117.3	71.9
19	12 EX921085	25	3075	3129	46	0.16	0.51	49.35	3.102	1.0	3.6	577.7	345.8
20	2 EX921086	16	3021	3027	46	0.10	0.41	82.44	3.024	0.7	2.9	1024.1	589.1
P over	14 EX921127	19	3003	2957	45 <	0.075	0.62	51.22	2.980	< MDL	4.6	382.0	225.3
P under	9 EX921126	32	2988	2974	45 <	0.075	0.46	6.78	2.981	< MDL	3.4	50.5	31.8
1A	13 EX921061	20	3021	3012	46 <	0.075	0.42 <	0.30 <	3.017	< MDL	3.0	< MDL	8.5
2A	30 EX921062	3	3003	3009	45 <	0.075	0.62 <	0.30 <	3.006	< MDL	4.6	< MDL	< MDL
3A	5 EX921063	27	3012	2994	45 <	0.075	0.48 <	0.30 <	3.003	< MDL	3.6	< MDL	< MDL
1B	3 EX921064	29	3000	2977	46 <	0.075	0.48 <	0.30 <	2.989	< MDL	3.5	< MDL	< MDL
2B	28 EX921065	13	3097	3280	45 <	0.075	0.64 <	0.30 <	3.187	< MDL	4.5	< MDL	13.0
3B	8 EX921066	40	3009	3009	46 <	0.075	0.44	0.39	3.009	< MDL	3.2	3.3	2.8
P over	212 EX921279	18	3024	2988	38 <	0.075	0.58	60.14	3.006	< MDL	5.1	526.5	308.9
P under	213 EX921280	21	3012	2934	38 <	0.075	0.58	14.52	2.973	< MDL	5.1	128.5	76.1
BLANK									0.000	no sample	no sample	no sample	no sample

LOCATION	SAMPLES	ACETONE	NITRIC	FILTER	IMPINGER	SAMPLE (CU FT)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	SAMPLE (MS)	LEAD (ug/MS)	ZINC (ug/MS)	STRONTIUM (ug/MS)	CHROMIUM (ug/MS)
EXHAUST	EX921376	EX921377	EX921378	EX921379	38.80	38.80	0	32.05	15.85	25.4	1.098	< MDL	24.4	14.4	23.1
RECIRC	EX921380	EX921381	EX921384	EX921385	48.98	48.98	2.5	133	15.4	87.4	1.346	1.8	96.0	11.1	63.1
	EXHAUST	ACETONE	EX921376				2.5	1.85	7.3	4.50	1.093	< MDL	1.7	6.6	4.1
		NITRIC	EX921377				0.5	5.2	7.7	7.20	1.098	< MDL	< MDL	7.0	6.6
		FILTER	EX921378				2.5	1.25	0.65	1.70	1.098	< MDL	< MDL	0.8	1.5

17

GRID LOC	ACUREX SAMPLE #	BASE SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	AVG FLOW (L/MIN)	LEAD (ug/M3)	ZINC (ug/M3)	STRONTIUM (ug/M3)	CHROMIUM (ug/M3)
IMPINGER EX921379 < 0.5															
								25	< 0.2		12.00	< MDL	1.098	< MDL	10.9
RECIRC															
							2.5	15	5.3		5.40	< MDL	1.306	< MDL	3.9
							1.0	60	8.5		26.00	< MDL	43.3	6.1	18.8
							2.5	18	1.6		44.00	1.396	13.0	1.2	31.7
							< 0.5	40	< 0.2		12.00	< MDL	28.9	< MDL	8.7

TEST: METALS #1
 DATE: 06-22-92 PM
 METHOD: NIOSH 7500
 GRID CHART 2 - ZINC

TRAVIS AFB
 PAINT BOOTHS TESTS
 ACDREX PROJECT 8485

D E INITIALS: LJJ 0
 Q A INITIALS:

EXHAUST GRID				INLET GRID A				INLET GRID B			
1	5.6	2	7.7	3	10.2	4	3.1	18	3.5		
5	3.3	6	5.0	7	9.4	8	5.0	28	4.5		
9	7.6	10	3.4	11	6.2	12	3.5 4.6	38	3.2		
21	8.8	22	5.3	23	4.5	24	21.1				
13	16.0	14	3.5	15	4.1 2.9	16	3.2				
17	4.0	18	3.6	19	3.6	20	2.9				
Painter Over 4.6 5.1 2nd Painter Under 3.4 5.1 2nd				1A 3.6				2A 4.6			
3A 3.6											

PAINT TYPE: LT GREEN PALMER UNITS: ug/m3 GRID MDL: 0.3 ug/SAMPLE EXHAUST DUCT: 29.2
 OBJECT: COMFORT PALLET OSHA TWA: 1000 ug/m3 PAINTER MDL: 0.3 ug/SAMPLE NIOSH DUCT: 96.0

TEST: METALS #1
 DATE: 06-22-92 PM
 ME: MOD: NIOSH 7500

GRID 3 - STRONTIUM

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8405

D E INITIALS: LJJ
 Q A INITIALS: 0

EXHAUST GRID				INLET GRID A			
1	5.6	2	12.5	3	52.3	4	115.6
5	17.2	6	42.3	7	117.0	8	181.9
9	41.2	10	171.3	11	227.5	12	< MDL 416.8
21	55.2	22	184.8	23	425.6	24	492.9
13	89.2	14	282.1	15	242.4 219.9	16	512.0
17	25.2	18	117.3	19	377.7	20	1025.1
EXHAUST GRID				INLET GRID B			
				18	< MDL		
				28	< MDL		
				38	3.3		

PAINT TYPE: LT GREEN PRIMER
 OBJECT: COMFORT PALLET
 UNITS: ug/m3
 OSHA TWA: 77 ug/m3
 GRID MDL: 0.3 ug/SAMPLE
 PAINTER MDL: 0.3 ug/SAMPLE
 EXHAUST DUCT: 14.4
 RECIRC DUCT: 11.1

TEST: METALS #1
 DATE: 06-22-92 PM
 METHOD: NIOSH 7300

GRID CHART 4 - CHROMIUM

TRAVIS AFB
 PAINT BOOTH TESTS
 ACRUX PROJECT 8485

D E INITIALS: LHL
 G A INITIALS: 0

Painter Over
225.3
308.9 2nd
Painter Under
31.8
76.1 2nd

INLET GRID A
1A 8.5
2A < MDL
3A < MDL

EXHAUST GRID							
1	4.0	2	8.9	3	31.6	4	70.1
5	10.9	6	25.4	7	69.0	8	107.2
9	25.2	10	101.1	11	135.8	12	< MDL 244.8
21	34.4	22	111.2	23	260.2	24	291.1
13	52.8	14	170.3	15	142.9 132.2	16	307.2
17	24.1	18	71.9	19	345.8	20	589.1

INLET GRID B
1B < MDL
2B 15.0
3B 2.8

PAINT TYPE: LT GREEN PRIMER
 OBJECT: COMFORT PALLET
 UNITS: ug/MS
 OSHA TWA: 50 ug/MS
 GRID MDL: 0.3 ug/SAMPLE
 PAINTER MDL: 0.3 ug/SAMPLE
 EXHAUST DUCT: 23.1
 RECIRC DUCT: 63.1

TEST: METALS #2 DATE: 06-24-92 PM METHOD: NIOSH 7500				TRAVIS AFB PAINT BOOTH TESTS ACUREX PROJECT 8465				PAINT: LT GREEN PRIMER OBJECT: SPLITTERS				D E INITIALS: Q A INITIALS:			
GRID LOC	ACUREX SAMPLE #	BASE SAMPLE #	PUMP #	PRI-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	AVG FLOW (L/MIN)	LEAD (ug/M3)	ZINC (ug/M3)	STRONTIUM (ug/M3)	CHROMIUM (ug/M3)
1	120 EX921097	3006	3054	15	3054	66	< 0.075	0.34	0.72	0.57	3.030	< MDL	1.7	3.6	2.9
2	69 EX921098	3045	3021	40	3045	66	< 0.075	0.50	1.23	0.84	3.033	< MDL	2.5	6.1	4.2
2 DUP	79 EX921099	3066	3129	13	3066	64	< 0.075	0.45	1.58	1.05	3.096	< MDL	2.3	8.0	5.3
3	89 EX921100	3018	3032	25	3018	66	< 0.075	0.48	10.23	6.44	3.050	< MDL	2.4	50.8	32.0
4	91 EX921101	3003	2980	31	3003	66	< 0.075	0.88	27.44	17.02	2.992	< MDL	4.5	139.0	86.2
5	92 EX921102	3036	2991	34	3036	65	< 0.075	0.54	1.64	1.10	3.014	< MDL	2.8	8.4	5.6
6	45 EX921103	3021	3006	19	3021	66	< 0.075	0.50	9.86	6.03	3.014	< MDL	2.5	49.6	30.3
7	50 EX921104	3036	3015	4	3036	66	< 0.077	2.12	38.86	23.37	3.067	0.4	10.6	194.6	117.0
8	47 EX921105	3045	3088	11	3045	66	< 0.077	0.93	21.02	12.75	3.067	0.4	4.8	103.9	63.0
9	118 EX921106	3042	3000	6	3042	66	< 0.075	0.63	44.90	25.78	3.021	< MDL	3.2	225.2	129.3
10	34 EX921107	3006	2985	30	3006	66	< 0.075	0.71	87.57	51.41	2.996	< MDL	3.6	442.9	260.0
11	83 EX921108	3039	3119	24	3039	66	< 0.075	1.08	147.92	87.64	3.079	< MDL	5.3	727.9	431.3
12	95 EX921109	3063	3042	20	3063	66	< 0.075	0.62	82.74	48.74	3.053	< MDL	3.1	410.7	241.9
21	36 EX921110	3030	3091	10	3030	66	< 0.075	0.81	99.00	59.48	3.061	< MDL	4.0	152.3	88.5
22	31 EX921111	3039	3088	1	3039	67	< 0.079	0.71	173.30	102.72	3.058	< MDL	3.5	482.3	289.8
23	37 EX921112	3066	3049	8	3066	66	< 0.075	0.94	158.90	94.36	3.028	< MDL	4.6	846.0	501.4
23 DUP	35 EX921113	3020	3042	7	3020	66	< 0.075	0.78	91.50	55.22	3.056	< MDL	3.9	795.1	473.2
24	90 EX921114	3069	3042	42	3069	66	< 0.075	0.51	91.50	55.22	3.056	< MDL	2.5	453.7	273.8
13	43 EX921115	3072	3036	5	3072	66	< 0.075	0.66	33.16	19.91	3.054	< MDL	3.3	164.5	98.8
14	41 EX921116	3033	3003	18	3033	66	< 0.075	0.68	80.82	45.36	3.018	< MDL	3.4	405.7	227.7
14 DUP	99 EX921117	3066	3129	16	3066	66	< 0.075	3.14	91.05	51.96	3.042	< MDL	15.6	453.5	258.8
15	88 EX921118	3072	3033	16	3072	66	< 0.075	0.74	111.80	64.04	3.101	< MDL	3.6	346.3	313.0
16	94 EX921119	3063	3033	33	3063	66	< 0.075	0.88	122.56	68.46	3.048	< MDL	4.4	609.2	340.3
17	44 EX921120	3021	3012	41	3021	66	< 0.075	0.58	8.72	5.07	3.017	< MDL	2.9	43.8	25.5
18	108 EX921121	3030	3003	21	3030	66	< 0.075	1.44	74.46	41.82	3.017	< MDL	7.2	374.0	210.1
19	107 EX921122	3042	3066	36	3042	66	< 0.075	7.53	101.06	54.86	3.054	< MDL	37.4	501.4	282.1
20	93 EX921123	3036	3224	23	3036	66	< 0.085	0.63	91.47	50.81	3.130	0.4	3.0	442.8	246.0
P over	32 EX921124	3015	2942	32	3015	65	< 0.11	1.77	206.86	118.34	2.979	0.6	9.1	1068.5	611.3
P under	33 EX921125	3051	3027	35	3051	65	< 0.075	0.39	8.16	4.82	3.039	< MDL	2.0	41.3	24.4
1A	46 EX921093	2991	3006	28	2991	65	< 0.075	0.38	0.30	0.30	2.999	< MDL	1.9	< MDL	< MDL
2A	42 EX921094	3060	3054	43	3060	65	< 0.075	0.81	0.30	0.30	3.057	< MDL	4.1	< MDL	< MDL
3A	38 EX921095	3000	2985	3	3000	65	< 0.075	0.42	0.30	0.30	2.993	< MDL	2.2	< MDL	< MDL
3A DUP	49 EX921096	2985	2968	26	2985	1	< 0.075	0.36	0.30	0.30	2.977	< MDL	120.9	< MDL	< MDL
1B	113 EX921128	3018	3090	12	3018	65	< 0.075	0.33	0.30	0.30	3.054	< MDL	1.7	< MDL	< MDL
2B	48 EX921129	3024	2962	29	3024	65	< 0.075	0.41	0.36	0.32	2.993	< MDL	2.1	1.9	1.6
3B	103 EX921130	3036	2983	27	3036	65	< 0.075	0.32	0.33	0.28	3.010	< MDL	1.6	1.7	< MDL
FLO BLANK	104 EX921271			9		66	< 0.075	0.36	0.30	0.30	3.000	< 0.4	1.8	< 1.5	< 1.5

LOCATION	SAMPLES	ACETONE	NITRIC	FILTER	IMPINGER	SAMPLE (CU FT)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	SAMPLE (M3)	LEAD (ug/M3)	ZINC (ug/M3)	STRONTIUM (ug/M3)	CHROMIUM (ug/M3)
EXHAUST	EX921302	EX921303	EX921304	EX921305	EX921306	39.20	0	85.6	13.13	30.08	1.109	< MDL	77.2	11.8	27.1
RECIRC	EX921306	EX921307	EX921308	EX921309	EX921310	40.84	0	53.9	10.75	40.6	1.156	< MDL	46.6	9.3	35.1
	EXHAUST	ACETONE	EX921302	EX921303	EX921304	EX921305	2.5	5.6	8.4	5.4	1.109	< MDL	5.0	7.6	4.9
	NITRIC	EX921306	EX921307	EX921308	EX921309	EX921310	0.5	3.8	3.8	6.40	1.109	< MDL	12.6	3.4	5.8
	FILTER	EX921304	EX921305	EX921306	EX921307	EX921308	2.5	1.25	0.93	1.28	1.109	< MDL	< MDL	0.8	1.2
	IMPINGER	EX921305	EX921306	EX921307	EX921308	EX921309	0.5	66	< 0.2	17.00	1.109	< MDL	59.5	0.0	15.3

TEST: METALS #2
 DATE: 06-24-92 PM
 METHOD: NIOSH 7300

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

PAINT: LT GREEN PRIMER
 OBJECT: SPLITTERS

D E INITIALS:
 Q A INITIALS:

GRID LOC	ACUREX	BASE	SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	AVG FLOW (L/MIN)	LEAD (ug/MS)	ZINC (ug/MS)	STRONTIUM (ug/MS)	CHROMIUM (ug/MS)
	RECIRC	ACETONE	EX921386	<	2.5		10.9	4.2	10.9	4.9	1.156	<	NDL	9.4	3.6	4.2
		NITRIC	EX921387	<	0.5		20	5.7	1.25	10.00	1.156	<	NDL	17.3	4.9	15.6
		FILTER	EX921416	<	2.5		<	0.85	1.7	1.7	1.156	<	NDL	<	0.7	1.5
		IMPINGER	EX921417	<	0.5		23	< 0.2	16.00	16.00	1.156	<	NDL	19.9	0.0	13.8

TEST: METALS #2
 DATE: 06-24-92 PM
 METHOD: NIOSH 7300

GRID CHART 1 - LEAD

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS:
 O A INITIALS:

0
 0

EXHAUST GRID

Painter Over 0.6		FIELD BLANK < 0.4	
Painter Under < MDL			
INLET GRID A		INLET GRID B	
1A < MDL	1 < MDL	1B < MDL	1 < MDL
2A < MDL	2 < MDL < MDL	2B < MDL	2 < MDL < MDL
3A < MDL ** < MDL 1MIN	3 < MDL	3B < MDL	3 < MDL
	4 < MDL		4 < MDL
	5 < MDL		5 < MDL
	6 < MDL		6 < MDL
	7 0.4		7 0.4
	8 0.4		8 0.4
	9 < MDL		9 < MDL
	10 < MDL		10 < MDL
	11 < MDL		11 < MDL
	12 < MDL		12 < MDL
	13 < MDL		13 < MDL
	14 < MDL < MDL		14 < MDL < MDL
	15 0.4		15 0.4
	16 < MDL		16 < MDL
	17 < MDL		17 < MDL
	18 < MDL		18 < MDL
	19 < MDL		19 < MDL
	20 0.4		20 0.4
	21 < MDL		21 < MDL
	22 0.4		22 0.4
	23 < MDL < MDL		23 < MDL < MDL
	24 < MDL		24 < MDL

PAINT TYPE: LT GREEN PRIMER
 OBJECT: SPLITTERS
 UNITS: ug/m²
 OSHA TWA: 50 ug/m³
 GRID MDL: 0.075 ug/sample
 PAINTER MDL: 0.075 ug/sample
 EXHAUST DUCT: < MDL
 RECIRC DUCT: < MDL

TEST: METALS #2
 DATE: 06-24-92 PM
 METHOD: NIOSH 7300
 GRID CHART 2 - ZINC

TRAVIS AFB
 PAINT BOOTH TESTS
 ACDREX PROJECT 8485

D E INITIALS: 0
 O A INITIALS: 0

Painter Over 9.1		1		1.7		2		2.5		3		2.4		4		4.5		FIELD BLANK		1.8	
Painter Under 2.0								2.3													
INLET GRID A																		INLET GRID B			
1A 1.9		5		2.8		6		2.5		7		10.6		8		4.8		1B 1.7			
		9		3.2		10		3.6		11		5.3		12		3.1					
		21		4.0		22		3.5		23		4.6 3.9		24		2.5		2B 2.1			
		13		3.3		14		3.4 15.6		15		3.6		16		4.4					
		17		2.9		18		7.2		19		37.4		20		3.0		3B 1.6			
PAINT TYPE: LT GREEN PRIMER		UNITS: ug/M3		GRID MDL: 0.3 ug/SAMPLE		EXHAUST DUCT: 77.2															
OBJECT: SPLITTERS		OSHA TWA: 1000 ug/M3		PAINTER MDL: 0.3 ug/SAMPLE		RECIRC DUCT: 46.6															

TEST: METALS #2
DATE: 06-24-92 PM
METHOD: NIOSH 7300

GRID CHART 3 - STRONTIUM

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 84-85

D E INITIALS:
Q A INITIALS:

0
0

Painter Over 1068.5		EXHAUST GRID				FIELD BLANK < 1.5	
Painter Under 41.3		1	2	3	4		
		3.6	6.1 8.0	50.8	139.0		
INLET GRID A		5	6	7	8	INLET GRID B	
1A < MDL		8.4	49.6	194.6	103.9	18 < MDL	
2A < MDL		9	10	11	12	28 1.9	
3A < MDL ** < MDL 1MIN		225.2	442.9	727.9	410.7	38 1.7	
		21	22	23	24		
		152.3	482.3	846.0 795.1	453.7		
		13	14	15	16		
		164.5	405.7 453.5	546.3	609.2		
		17	18	19	20		
		43.8	374.0	501.4	442.8		

PAINT TYPE: LT GREEN PRIMER
OBJECT: SPLITTERS
UNITS: ug/MS
OSHA TWA: 77 ug/MS
GRID MDL: 0.3 ug/SAMPLE
PAINTER MDL: 0.3 ug/SAMPLE
EXHAUST DUCT: 11.8
RECIRC DUCT: 9.3

TEST: METALS #2
 DATE: 06-24-92 PM
 METHOD: NIOSH 7300
 GRID CHART 4 - CHROMIUM

TRAVIS AFB
 PAINT BOOTH TESTS
 ACOREX PROJECT 8465

D E INITIALS:
 Q A INITIALS:

0
 0

Painter Over 611.3		EXHAUST GRID								FIELD BLANK < 1.5	
Painter Under 26.4											
INLET GRID A										INLET GRID B	
1A < MDL		1	2.9	2	4.2 5.3	3	32.0	4	86.2	1B < MDL	
		5	5.6	6	30.3	7	117.0	8	63.0	2B 1.6	
		9	129.3	10	260.0	11	431.3	12	241.9	3B < MDL	
		21	88.5	22	289.8	23	501.4 473.2	24	273.8		
		13	98.8	14	227.7 258.8	15	313.0	16	340.3		
		17	25.5	18	210.1	19	282.1	20	246.0		
3A < MDL ** < MDL 1MIN											

PAINT TYPE: LT GREEN PRIMER UNITS: ug/M3 GRID MDL: 0.3 ug/SAMPLE EXHAUST DUCT: 27.1
 OBJECT: SPLITTERS OSHA TWA: 50 ug/M3 PAINTER MDL: 0.3 ug/SAMPLE RECIRC DUCT: 35.1

TEST: METALS #3
DATE: 06-25-92 AM1
METHOD: NIOSH 7300

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

PAINT: LT GREEN PRIMER
OBJECT: BRAKE PARTS, NUBS, RAMP

D E INITIALS:
Q A INITIALS:

LJL

GRID LOC	ACUREX SAMPLE #	BASE SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	AVG FLOW (L/MIN)	LEAD (ug/M3)	ZINC (ug/M3)	STRONTIUM (ug/M3)	CHROMIUM (ug/M3)
1	68 EX921208	25	2981	2968	58	1.610	3.99	1.61	1.32	2.975	9.3	23.1	9.3	7.7	
2	61 EX921209	10	3000	2980	59	0.660	2.56	0.99	0.75	2.990	3.7	14.5	5.6	< MDL	
3	87 EX921210	13	3033	3010	56	2.100	25.78	2.16	1.84	3.022	12.4	152.4	12.8	10.9	
4	112 EX921211	23	2977	3006	58	3.720	4.32	2.46	2.64	2.992	21.4	24.9	14.2	15.2	
5	105 EX921212	22	2997	3030	50	0.077	3.87	2.54	1.77	3.014	0.5	25.7	16.9	11.7	
6	71 EX921213	40	2991	3024	58	< 0.075	1.65	3.57	5.64	3.008	< MDL	9.5	20.5	32.3	
7	62 EX921214	17	3048	3015	58	< 0.075	1.92	5.73	5.01	3.032	< MDL	10.9	32.6	28.5	
7 DUP	117 EX921215	28	3030	3027	58	0.091	1.65	4.89	3.00	3.029	0.5	9.4	27.8	17.1	
8	76 EX921216	16	2991	2994	58	0.130	4.06	4.38	2.74	2.993	0.7	23.4	25.2	15.8	
9	74 EX921217	41	2977	2906	58	0.110	5.88	11.30	7.32	2.942	0.6	34.5	66.2	42.9	
10	130 EX921218	24	3018	3015	58	0.083	30.80	30.98	23.51	3.017	0.5	176.0	177.1	134.4	
11	55 EX921219	43	3082	3048	58	0.200	2.79	26.64	15.90	3.065	1.1	15.7	149.9	89.4	
12	96 EX921220	32	3088	3057	58	0.076	1.38	12.36	8.25	3.073	0.4	7.7	69.4	46.3	
21	100 EX921221	7	2994	2951	58	0.082	1.95	16.97	13.20	2.973	0.5	11.3	98.4	76.6	
22	53 EX921222	18	3057	3036	58	< 0.075	1.89	45.71	27.36	3.047	< MDL	10.7	258.7	154.8	
23	119 EX921223	42	3024	3042	58	< 0.075	1.44	25.71	15.27	3.033	< MDL	8.2	146.2	86.8	
24	65 EX921224	5	2962	2950	59	< 0.075	2.44	12.56	7.48	2.956	< MDL	14.0	72.0	42.9	
24 DUP	75 EX921225	14	3066	3039	58	< 0.075	15.62	18.03	10.65	3.053	< MDL	88.2	101.8	60.2	
13	52 EX921226	20	3036	3042	58	< 0.075	1.36	24.39	14.72	3.036	< MDL	7.7	138.5	83.6	
13 DUP	124 EX921227	8	3075	3042	59	< 0.075	2.82	24.50	14.62	3.059	< MDL	15.6	135.8	81.0	
14	64 EX921228	1	2991	3003	59	< 0.210	4.80	43.99	29.34	2.997	1.2	27.1	277.1	165.9	
15	75 EX921229	31	3018	2991	58	< 0.075	3.03	26.12	15.93	3.005	< MDL	17.4	149.9	91.4	
16	97 EX921230	21	3024	3007	58	< 0.075	7.32	26.88	16.17	3.016	< MDL	41.9	153.7	92.5	
17	115 EX921231	11	2980	2977	59	< 0.075	5.60	19.68	11.54	2.979	< MDL	31.9	112.0	65.7	
18	57 EX921232	34	3054	3021	58	< 0.090	4.89	40.80	24.50	3.038	0.5	27.8	231.6	139.1	
19	109 EX921233	15	2997	2985	58	< 0.093	5.60	69.80	41.68	2.991	0.5	32.3	402.4	240.3	
20	80 EX921234	29	2968	2928	58	< 0.075	3.71	19.77	11.96	2.958	< MDL	21.6	115.2	69.7	
P over	59 EX921269	30	3030	2940	57	< 0.100	3.32	19.18	11.56	2.985	0.6	19.5	112.7	67.9	
P under	66 EX921270	35	3060	2928	56	< 0.075	2.44	< 0.30	1.14	2.994	< MDL	14.6	< MDL	6.8	
1A	67 EX921201	33	3082	3021	57	20.460	6.18	< 0.75	4.35	3.052	117.6	35.5	< MDL	25.0	
2A	56 EX921202	27	3051	3006	57	0.680	1.95	< 0.75	0.75	3.029	3.9	11.3	< MDL	< MDL	
2A DUP	101 EX921203	6	3006	3033	57	0.250	0.88	< 0.75	0.75	3.020	1.5	5.1	< MDL	< MDL	
3A	58 EX921204	3	3012	2977	57	0.770	2.88	< 0.75	0.75	2.995	6.5	16.9	< MDL	< MDL	
1B	60 EX921205	19	3072	3012	57	1.880	5.91	< 0.75	0.75	3.042	10.8	34.1	< MDL	< MDL	
2B	107 EX921206	12	3012	2974	55	2.600	4.71	< 0.75	0.75	2.993	15.8	28.6	< MDL	< MDL	
3B	116 EX921207	4	3015	2940	56	2.880	4.98	< 0.75	0.75	2.978	17.3	29.9	< MDL	< MDL	
F BLANK	72 EX921278	26			53	0.530	1.98	0.32	0.75	3.000	1.9	11.4	1.8	< 4.3	

LOCATION	SAMPLES	ACETONE	NITRIC	FILTER	IMPINGER	SAMPLE (CU FT)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	SAMPLE (M3)	LEAD (ug/M3)	ZINC (ug/M3)	STRONTIUM (ug/M3)	CHROMIUM (ug/M3)
EXHAUST	EX921308	EX921309	EX921348	EX921391	EX921391	38.00	0	12.3	5.9	8.55	1.073	< MDL	11.4	5.5	8.0
RECIRC	EX921392	EX921393	EX921348	EX921349	EX921349	37.31	14.5	120.5	5.7	88.7	1.056	13.7	114.1	5.4	84.0
		EXHAUST													
		ACETONE	EX921388	EX921388	EX921388	< 2.5	2.5	5.5	5.1	3.8	1.075	< MDL	5.1	4.7	3.5
		NITRIC	EX921389	EX921389	EX921389	< 0.5	0.5	4.1	0.8	2.4	1.075	< MDL	3.8	0.7	2.2
		FILTER	EX921390	EX921390	EX921390	< 2.5	< 2.5	1.25	0.5	0.95	1.075	< MDL	< MDL	< MDL	0.9
		IMPINGER	EX921391	EX921391	EX921391	< 0.5	< 0.5	2.7	0.2	1.4	1.075	< MDL	2.5	< MDL	1.3

TEST: METALS #3
 DATE: 06-25-92 AM1
 METHOD: NIOSH 7300

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

PAINT: LT GREEN PRIMER
 OBJECT: BRAKE PARTS, NUBS, RAMP

O E INITIALS:
 O A INITIALS:

LJL

ACUREX BASE	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	AVG FLOW (L/MIN)	LEAD (ug/MS)	ZINC (ug/MS)	STRONTIUM (ug/MS)	CHROMIUM (ug/MS)
GRID LOC SAMPLE #	PUMP #											
RECIRC	ACETONE	EX921392	<	25	25	2.4	3	1.056	< MDL	23.7	2.3	2.8
	NITRIC	EX921393	<	12	34	3.3	72	1.056	11.4	32.2	3.1	68.2
	FILTER	EX921348	<	2.5	3.5	0.5	13.7	1.056	< MDL	3.3	< MDL	13.0
	IMPINGER	EX921349	<	0.5	58	0.2	0.2	1.056	< MDL	54.9	< MDL	< MDL

TEST: METALS #3
 DATE: 06-25-92 AM1
 METHOD: HIOSH 7500
 GRID CHART 1 - LEAD

TRAVIS AFB
 PAINT BOOTH TESTS
 AQUIRE PROJECT 84-65

D E INITIALS: LUL
 G A INITIALS: 0

EXHAUST GRID			
1	9.3	2	3.7
3	12.4	4	21.4
5	0.5	6	< MDL
7	< MDL 0.5	8	0.7
9	0.6	10	0.5
11	1.1	12	0.4
21	0.5	22	< MDL
23	< MDL	24	< MDL < MDL
13	< MDL < MDL	14	1.2
15	< MDL	16	< MDL
17	< MDL	18	0.5
19	0.5	20	< MDL

Painter Over
0.6
 Painter Under
< MDL

INLET GRID A
 1A 117.6
 2A 3.9
 1.5
 3A 4.5

INLET GRID B
 1B 10.8
 2B 15.8
 3B 17.3

Field Blank
1.9

PAINT TYPE: LT GREEN PRIMER
 OBJECT: BRACE PARTS, NUBS, RAMP
 UNITS: ug/M3
 GRID MDL: 0.075 ug/SAMPLE
 PAINTER MDL: 0.075 ug/SAMPLE
 EXHAUST DUCT: < MDL
 RECIRC DUCT: 13.7

TEST: METALS #3
 DATE: 06-25-92 AM1
 METHOD: NIOSH 7300
 GRID CHART 2 - ZINC

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS: LJI
 Q A INITIALS: 0

EXHAUST GRID			
1	23.1	2	16.5
		3	152.4
		4	24.9
5	25.7	6	9.5
		7	10.9 9.4
		8	23.4
9	34.5	10	176.0
		11	15.7
		12	7.7
21	11.3	22	10.7
		23	8.2
		24	14.0 88.2
13	7.7 15.6	14	27.1
		15	17.4
		16	41.9
17	31.9	18	27.8
		19	32.3
		20	21.6

Field Blank
11.4

INLET GRID A	
1A	35.5
2A	11.3 5.1
3A	16.9

INLET GRID B

1B	34.1
2B	28.6
3B	29.9

PAINT TYPE: LT GREEN PRIMER
 OBJECT: BRACE PARTS, NUBS, BAMP
 UNITS: ug/KS
 OSHA TWA: 1000 ug/
 GRID MDL: 0.3 ug/SAMPLE
 PAINTER MDL: 0.3 ug/SAMPLE
 EXHAUST DUCT: 11.4
 RECIRC DUCT: 116.1

TEST: METALS #3
 DATE: 06-25-92 AM1
 METHOD: NIOSH 7300
 GRID CHART 3 - STRONTIUM

TRAVIS AFB
 PAINT BOOTH TESTS
 AGRICEX PROJECT BARS

D E INITIALS: LJM 0
 Q A INITIALS:

EXHAUST GRID				INLET GRID B					
1	9.3	2	5.6	3	12.8	4	14.2	1B	< MDL
5	16.9	6	20.5	7	32.6 27.8	8	25.2	2B	< MDL
9	66.2	10	177.1	11	149.9	12	69.4	3B	< MDL
21	98.4	22	258.7	23	146.2	24	72.8 101.8		
13	138.5 135.8	14	277.1	15	149.9	16	153.7		
17	112.0	18	231.6	19	402.4	20	115.2		
Painter Over 112.7				Field Blank 1.8					
Painter Under < MDL									
INLET GRID A									
1A < MDL									
2A < MDL < MDL									
3A < MDL									

PAINT TYPE: LT GREEN PRIMER UNITS: ug/M3 GRID MDL: 0.3 ug/SAMPLE EXHAUST DUCT: 5.5
 OBJECT: BRONZE PARTS, RUBS, OSMA TUN: 77 ug/M3 PAINTER MDL: 0.3 ug/SAMPLE RECIRC DUCT: 5.4

TEST: METALS #3
 DATE: 06-25-92 AM1
 METHOD: NIOSH 7300
 GRID CHART 4 - CHROMIUM

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 0405

D E INITIALS: LJJ
 Q A INITIALS: 0

EXHAUST GRID			
1	7.7	2	< MDL
3	10.9	4	15.2
5	11.7	6	32.3
7	28.5 17.1	8	15.8
9	42.9	10	134.4
11	89.4	12	46.3
13	83.6 81.0	14	165.9
15	91.4	16	92.5
17	65.7	18	139.1
19	240.3	20	69.7
21	76.6	22	154.8
23	86.8	24	42.9 60.2
25		26	
27		28	
29		30	
31		32	
33		34	
35		36	
37		38	
39		40	
41		42	
43		44	
45		46	
47		48	
49		50	
51		52	
53		54	
55		56	
57		58	
59		60	
61		62	
63		64	
65		66	
67		68	
69		70	
71		72	
73		74	
75		76	
77		78	
79		80	
81		82	
83		84	
85		86	
87		88	
89		90	
91		92	
93		94	
95		96	
97		98	
99		100	
101		102	
103		104	
105		106	
107		108	
109		110	
111		112	
113		114	
115		116	
117		118	
119		120	
121		122	
123		124	
125		126	
127		128	
129		130	
131		132	
133		134	
135		136	
137		138	
139		140	
141		142	
143		144	
145		146	
147		148	
149		150	
151		152	
153		154	
155		156	
157		158	
159		160	
161		162	
163		164	
165		166	
167		168	
169		170	
171		172	
173		174	
175		176	
177		178	
179		180	
181		182	
183		184	
185		186	
187		188	
189		190	
191		192	
193		194	
195		196	
197		198	
199		200	
201		202	
203		204	
205		206	
207		208	
209		210	
211		212	
213		214	
215		216	
217		218	
219		220	
221		222	
223		224	
225		226	
227		228	
229		230	
231		232	
233		234	
235		236	
237		238	
239		240	
241		242	
243		244	
245		246	
247		248	
249		250	
251		252	
253		254	
255		256	
257		258	
259		260	
261		262	
263		264	
265		266	
267		268	
269		270	
271		272	
273		274	
275		276	
277		278	
279		280	
281		282	
283		284	
285		286	
287		288	
289		290	
291		292	
293		294	
295		296	
297		298	
299		300	
301		302	
303		304	
305		306	
307		308	
309		310	
311		312	
313		314	
315		316	
317		318	
319		320	
321		322	
323		324	
325		326	
327		328	
329		330	
331		332	
333		334	
335		336	
337		338	
339		340	
341		342	
343		344	
345		346	
347		348	
349		350	
351		352	
353		354	
355		356	
357		358	
359		360	
361		362	
363		364	
365		366	
367		368	
369		370	
371		372	
373		374	
375		376	
377		378	
379		380	
381		382	
383		384	
385		386	
387		388	
389		390	
391		392	
393		394	
395		396	
397		398	
399		400	
401		402	
403		404	
405		406	
407		408	
409		410	
411		412	
413		414	
415		416	
417		418	
419		420	
421		422	
423		424	
425		426	
427		428	
429		430	
431		432	
433		434	
435		436	
437		438	
439		440	
441		442	
443		444	
445		446	
447		448	
449		450	
451		452	
453		454	
455		456	
457		458	
459		460	
461		462	
463		464	
465		466	
467		468	
469		470	
471		472	
473		474	
475		476	
477		478	
479		480	
481		482	
483		484	
485		486	
487		488	
489		490	
491		492	
493		494	
495		496	
497		498	
499		500	
501		502	
503		504	
505		506	
507		508	
509		510	
511		512	
513		514	
515		516	
517		518	
519		520	
521		522	
523		524	
525		526	
527		528	
529		530	
531		532	
533		534	
535		536	
537		538	
539		540	
541		542	
543		544	
545		546	
547		548	
549		550	
551		552	
553		554	
555		556	
557		558	
559		560	
561		562	
563		564	
565		566	
567		568	
569		570	
571		572	
573		574	
575		576	
577		578	
579		580	
581		582	
583		584	
585		586	
587		588	
589		590	
591		592	
593		594	
595		596	
597		598	
599		600	
601		602	
603		604	
605		606	
607		608	
609		610	
611		612	
613		614	
615		616	
617		618	
619		620	
621		622	
623		624	
625		626	
627		628	
629		630	
631		632	
633		634	
635		636	
637		638	
639		640	
641		642	
643		644	
645		646	
647		648	
649		650	
651		652	
653		654	
655		656	
657		658	
659		660	
661		662	
663		664	
665		666	
667		668	
669		670	
671		672	
673		674	
675		676	
677		678	
679		680	
681		682	
683		684	
685		686	
687		688	
689		690	
691		692	
693		694	
695		696	
697		698	
699		700	
701		702	
703		704	
705		706	
707		708	
709		710	
711		712	
713		714	
715		716	
717		718	
719		720	
721		722	
723		724	
725		726	
727		728	
729		730	
731		732	
733		734	
735		736	
737		738	
739		740	
741		742	
743		744	
745		746	
747		748	
749		750	
751		752	
753		754	
755		756	
757		758	
759		760	
761		762	
763		764	
765		766	
767		768	
769		770	
771		772	
773		774	
775		776	
777		778	
779		780	
781		782	
783		784	
785		786	
787		788	
789		790	
791		792	
793		794	
795		796	
797		798	
799		800	
801		802	
803		804	

TEST: METALS #4
DATE: 06-26-92 AM1
METHOD: NIOSH 7300

TRAVIS AFB
PAINT BOOTHS TESTS
ACUREX PROJECT 8485

PAINT: LT GREEN PRIMER
OBJECT: THRUST REVERSER

D E INITIALS: BM & LUL
Q A INITIALS:

GRID LOC	ACUREX SAMPLE #	BASE SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	AVG FLOW (L/MIN)	LEAD (ug/MS)	ZINC (ug/MS)	STRONTIUM (ug/MS)	CHROMIUM (ug/MS)
1	144 EX921242	2971	2903	77	< 0.075	0.48	1.11	0.71	2.937	< MDL	2.1	4.9	3.1		
2	125 EX921243	3029	3012	80	< 0.075	1.04	4.71	2.90	3.021	< MDL	4.3	19.5	12.0		
3	122 EX921244	29	3063	80	< 0.075	0.04	28.48	16.83	3.060	< MDL	3.4	116.3	68.7		
4	205 EX921245	3033	3079	81	< 0.075	1.02	45.36	26.64	3.056	< MDL	4.1	183.2	107.6		
5	98 EX921246	2988	3003	79	< 0.075	1.17	7.38	4.46	2.996	< MDL	4.9	31.2	18.8		
6	110 EX921247	3045	2994	79	< 0.075	1.10	31.25	21.71	3.020	< MDL	4.6	131.0	91.0		
6 DUP	51 EX921253	2988	3018	81	< 0.075	1.08	17.43	10.42	3.003	< MDL	4.4	71.7	42.8		
7	141 EX921248	3027	3051	81	< 0.075	0.52	83.54	49.76	3.039	< MDL	2.1	339.4	202.1		
8	85 EX921249	3030	3063	81	< 0.075	0.80	71.88	43.59	3.047	< MDL	3.2	291.3	176.6		
9	139 EX921250	3018	3063	78	< 0.075	0.42	39.45	22.78	3.041	< MDL	1.8	166.3	96.1		
10	84 EX921251	3033	3024	80	< 0.100	2.08	93.64	54.88	3.029	< MDL	8.6	386.5	226.5		
11	102 EX921252	21	3039	80	< 0.110	0.52	167.79	96.84	3.026	< MDL	2.1	693.2	400.1		
11 DUP	63 EX921254	2994	3003	81	< 0.11	0.62	175.76	106.70	2.999	< MDL	0.5	723.7	439.3		
12	145 EX921255	2997	3107	80	< 0.095	0.50	134.55	77.82	3.052	< MDL	2.0	551.1	318.7		
21	81 EX921265	3045	2977	78	< 0.075	0.48	5.18	29.54	3.011	< MDL	2.0	22.1	127.5		
22	142 EX921266	31	2988	80	< 0.09	0.51	122.61	71.22	2.977	< MDL	2.1	514.9	299.1		
23	151 EX921267	3057	3066	80	< 0.12	0.57	201.46	114.36	3.062	< MDL	2.3	822.6	466.9		
24	153 EX921268	3015	3091	80	< 0.11	0.30	180.76	104.70	3.053	< MDL	< MDL	740.1	428.7		
13	159 EX921256	3024	3027	79	< 0.1	0.32	119.18	11.56	3.026	< MDL	13.9	80.2	48.4		
14	147 EX921257	3033	2971	78	< 0.078	0.30	119.78	69.06	3.002	< MDL	< MDL	511.5	294.9		
15	133 EX921258	3024	2928	81	< 0.19	1.82	204.99	117.51	2.976	< MDL	7.6	850.4	487.5		
16	86 EX921259	2978	3015	80	< 0.095	0.38	145.74	85.04	2.997	< MDL	1.6	608.0	354.7		
17	192 EX921260	3036	2951	79	< 0.075	0.69	6.69	4.06	2.994	< MDL	2.9	28.3	17.2		
18	149 EX921261	3024	3018	78	< 0.077	0.66	45.44	26.90	3.021	< MDL	2.8	192.8	114.2		
18 DUP	143 EX921262	3003	3003	91	< 0.075	0.42	47.67	27.72	3.003	< MDL	1.7	196.0	114.0		
19	200 EX921263	3048	3072	80	< 0.098	1.10	107.84	62.74	3.060	< MDL	4.5	440.5	256.3		
20	114 EX921264	3009	3018	81	< 0.17	1.22	114.36	66.21	3.014	< MDL	5.0	468.5	271.2		
P over	111 EX921276	3048	3003	77	< 0.098	0.38	157.58	91.44	3.026	< MDL	1.6	676.4	392.5		
P under	82 EX921277	2971	2965	77	< 0.075	0.39	15.87	9.50	2.958	< MDL	1.7	69.7	41.7		
1A	70 EX921256	3018	3046	77	< 0.075	5.42	0.64	0.54	3.042	< MDL	23.1	2.7	2.3		
2A	123 EX921237	3021	3045	77	< 0.075	1.23	0.38	0.42	3.033	< MDL	5.3	1.6	1.8		
3A	54 EX921238	2985	3000	77	< 0.075	2.74	0.32	0.30	2.993	< MDL	11.9	1.4	1.3		
1B	148 EX921239	2965	2965	76	< 0.075	0.78	0.52	0.51	2.975	< MDL	3.4	2.3	2.3		
2B	127 EX921240	3015	3009	76	< 0.1	4.12	0.51	0.44	3.012	< MDL	18.0	2.2	1.9		
3B	166 EX921241	3012	3012	76	< 0.075	1.08	0.52	0.42	3.012	< MDL	4.7	2.3	1.8		
F BLANK	158 EX921235	7		79	< 0.075	3.58	0.30	0.30	0.000	no sample	15.1	< 1.3	< 1.3		

LOCATION	SAMPLES	NITRIC	FILTER	IMPINGER	SAMPLE (CU FT)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	SAMPLE (MS)	LEAD (ug/MS)	ZINC (ug/MS)	STRONTIUM (ug/MS)	CHROMIUM (ug/MS)
EXHAUST	EX921447	EX921448	EX921449	EX921450	48.30	0	25.5	16.8	21.58	1.367	< MDL	18.7	12.3	15.8
	EX921455	EX921456	EX921457	EX921458	46.09	0	56	14.08	43	1.304	< MDL	42.9	10.8	33.0
RECIRC	EXHAUST	ACETONE	EX921447	< 2.5	5.2	10.6	6.8	1.367	< MDL	3.8	7.8	5.0		
	NITRIC	EX921448	< 0.5	2.3	4.6	3.30	1.367	< MDL	1.7	3.4	2.6			
	FILTER	EX921449	< 2.5	< 1.25	1.8	1.88	1.367	< MDL	< MDL	< MDL	1.2	1.4		
	IMPINGER	EX921450	< 0.5	18	< 0.2	9.40	1.367	< MDL	13.2	< MDL	6.9			

TEST: METALS #4
 DATE: 06-26-92 AM1
 METHOD: NIOSH 7300

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT: 0405

PAINT: LT GREEN PRIMER
 OBJECT: THRUST REVERSER

D E INITIALS: BM & LJJ
 Q A INITIALS:

GRID LOC	ACUREX BASE SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM AVG FLOW (L/MIN)	LEAD (ug/MS)	ZINC (ug/MS)	STRONTIUM CHROMIUM (ug/MS)
	RECIRC		ACETONE ER921455	< 2.5		2.5	11	3.7	3.6	< MDL	8.4	2.8
			NITRIC ER921456	< 0.5		0.5	25	9.6	26.00	< MDL	19.2	19.9
			FILTER ER921457	< 2.5	< 1.25	1.25	20	0.78	1.4	< MDL	< MDL	1.1
			IMPINGER ER921458	< 0.5		0.5	20	0.2	12.00	< MDL	15.3	9.2

TEST: METALS 46
DATE: 06-26-92 AM1
METHOD: NIOSH 7300

GRID CHART 1 - LEAD

TRAVIS AFB
PAINT BOOTHS TESTS
ACUREX PROJECT 84-65

D E INITIALS: BM & LJJ
Q A INITIALS: 0

Painter Over 0.4		EXHAUST GRID				Field Blank < 0.3	
Painter Under < MDL		1 < MDL	2 < MDL	3 < MDL	4 < MDL		
INLET GRID A		5 < MDL	6 < MDL < MDL	7 < MDL	8 < MDL	INLET GRID B	
1A < MDL		9 < MDL	10 0.4	11 0.5 0.5	12 0.4	18 < MDL	
2A < MDL		21 < MDL	22 0.4	23 0.5	24 0.5	28 0.4	
3A < MDL		13 0.4	14 0.3	15 0.8	16 0.4	30 < MDL	
		17 < MDL	18 0.3 < MDL	19 0.4	20 0.7		
PAINT TYPE: LT GREEN PRIMER		UNITS: ug/M3		GRID MDL: 0.075 ug/SAMPLE		EXHAUST DUCT: < MDL	
OBJECT: THRUST REVERBER		OSMA TUA: 50 ug/M3		PAINTER MDL: 0.075 ug/SAMPLE		RECIRC DUCT: < MDL	

TEST: METALS #4
DATE: 06-26-92 AM1
METHOD: NIOSH 7300

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS: BM & LJJ
Q A INITIALS: 0

GRID CHART 2 - ZINC

PAINTER Over 1.6 Painter Under 1.7		EXHAUST GRID										Field Blank 15.1
INLET GRID A		1	2.1	2	4.3	3	3.4	4	4.1	INLET GRID 2		
1A	23.1	5	4.9	6	4.6 4.4	7	2.1	8	3.2	18	3.4	
2A	5.3	9	1.8	10	8.6	11	2.1 2.6	12	2.0	28	16.0	
3A	11.9	21	2.0	22	2.1	23	2.3	24	< MDL	38	4.7	
		13	13.9	14	< MDL	15	7.6	16	1.6			
		17	2.9	18	2.8 1.7	19	4.5	20	5.0			

PAINT TYPE: LY GREEN PRIMER UNITS: ug/m3 GRID MDL: 0.3 ug/SAMPLE EXHAUST DUCT: 18.7
OBJECT: THRUST REVERSER OSMA TMR: 1000 ug/m3 PAINTER MDL: 0.3 ug/SAMPLE RECIRC DUCT: 42.9

TEST: METALS 84
 DATE: 06-26-92 AM1
 METHOD: NIOSH 7500

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8485

D E INITIALS: BM & LJJ
 Q A INITIALS: 0

GRID CHART 3 - STRONTIUM

Painter Over 676.4 Painter Under 66.7		EXHAUST GRID								Field Blank < 1.3			
INLET GRID A		1A	2.7	9	166.3	10	386.5	11	693.2 723.7	12	551.1	1B	2.3
		2A	1.6	21	22.1	22	514.9	23	822.6	24	740.1	2B	2.2
		3A	1.4	13	80.2	14	511.5	15	850.4	16	608.0	3B	2.3
				17	28.3	18	192.8 196.0	19	440.5	20	468.5		
				5	31.2	6	131.0 71.7	7	339.4	8	291.3		

PAINT TYPE: LT GREEN PRIMER UNITS: ug/m3 GRID MDL: 0.3 ug/SAMPLE EXHAUST DUCT: 12.3
 OBJECT: THROAT NEWBERG COSM TUR: 77 ug/m3 PAINTER MDL: 0.3 ug/SAMPLE RECIRC DUCT: 10.8

TEST: METALS 84
DATE: 06-26-92 AM1
METHOD: NIOSH 7500

GRID CHART 4 - CHROMIUM

TRAVIS AFB
PAINT BOOTH TESTS
ACUREX PROJECT 8485

D E INITIALS: BN 2 L JL
Q A INITIALS: 0

PAINTER OVER 392.5		EXHAUST GRID		PAINTER UNDER 41.7	
INLET GRID A		INLET GRID B		Field Blank < 1.3	
1A	2.3	18	2.3		
2A	1.8	28	1.9		
3A	1.3	38	1.8		
1	3.1	2	12.0	3	68.7
5	18.8	6	91.0 42.8	7	202.1
9	96.1	10	226.5	11	400.1 439.3
21	127.5	22	299.1	23	466.9
13	48.4	14	294.9	15	487.5
17	17.2	18	114.2 114.0	19	256.3
				20	271.2
				24	428.7
				16	354.7
				8	176.6
				12	318.7
				4	107.6

PAINT TYPE: LT GREEN PRIMER UNITS: ug/m3 GRID MDL: 0.3 ug/SAMPLE EXHAUST DUCT: 15.8
OBJECT: THINUST REVERBER OSHA TMA: 50 ug/m3 PAINTER MDL: 0.3 ug/SAMPLE RECIRC DUCT: 33.0

DE INITIALS: **LJL**
QA INITIALS:

LOCATION	SAMPLES ACETONE	NITRIC	FILTER	IMPINGER	SAMPLE (CU FT)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CHROMIUM (ug)	SAMPLE (MS)	LEAD (ug/MS)	ZINC (ug/MS)	STRONTIUM (ug/MS)	CHROMIUM (ug/MS)
EXHAUST	EX921451	EX921452	EX921453	EX921454	49.30	0	51.4	0.93	16.73	1.395	< MDL	36.8	0.7	12.0
	EX921459	EX921460	EX921461	EX921462	44.26	5	49.6	0.58	30.83	1.253	4.0	39.6	0.5	24.6
RECIRC			EXHAUST											
			ACETONE	EX921451	< 2.5		24.0	0.93	1.06	1.395	< MDL	17.2	0.7	0.8
		NITRIC	EX921452	< 0.5		4.1	< 0.2		2.00	1.395	< MDL	2.9	< MDL	1.4
		FILTER	EX921453	< 2.5		1.3	< 0.5		0.65	1.395	< MDL	0.9	< MDL	0.5
		IMPINGER	EX921454	< 0.5			22	< 0.2	13.00	1.395	< MDL	15.8	< MDL	9.3

777

Non paint time deducted

ACUREX	BASE	GRID LOC	SAMPLE #	SAMPLE #	PUMP #

	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	LEAD (ug)	ZINC (ug)	STRONTIUM (ug)	CINCORIUM (ug)	AVG FLOW (L/MIN)	LEAD (ug/M3)	ZINC (ug/M3)	STRONTIUM (ug/M3)	CINCORIUM (ug/M3)
RECING												
ACETONE	EX921459	<	2.5		13	0.58	3.2	1.253	< MDL	10.4	0.5	2.6
NITRIC	EX921460	<	0.5		7.6	0.2	7.60	1.253	< MDL	6.1	< MDL	6.1
FILTER	EX921461	<	2.5		1.25	0.5	1.03	1.253	< MDL	< MDL	< MDL	0.8
IMPINGER	EX921462	<	0.5		29	0.2	19.00	1.253	< MDL	23.2	< MDL	15.2

RECINC	ACETONE	EX921459	<	2.5
	NITRIC	EX921460	<	0.5
	FILTER	EX921461	<	2.5
	IMPINGER	EX921462	<	0.5

10.4	0.5	2.6
6.1	< MDL	6.1
< MDL	< MDL	0.8
23.2	< MDL	15.2

TEST: METALS #5
 DATE: 06-26-92 AMZ
 METHOD: NIOS# 7500
 GRID CHART 1 - LEAD

TRAVIS AFR
 PAINT BOOTN TESTS
 AUREX PROJECT 8465

D E INITIALS: LJJ
 O A INITIALS: 0

PAINTER OVER < MDL		PAINTER DER < MDL		EXHAUST GRID		INLET GRID A		INLET GRID B	
1	< MDL	2	< MDL	3	< MDL	4	< MDL	18	< MDL
5	< MDL	6	< MDL < MDL	7	< MDL	8	< MDL	28	< MDL
9	< MDL	10	< MDL	11	< MDL	12	< MDL	38	< MDL
21	< MDL	22	< MDL	23	< MDL	24	< MDL		
13	< MDL	14	< MDL	15	< MDL	16	< MDL		
17	< MDL	18	< MDL	19	< MDL	20	< MDL < MDL		
1A < MDL		2A < MDL		3A 0.4					

PAINT TYPE: GUNSHIP GRAY POLY UNITS: ug/MS GRID MDL: 0.075 ug/SAMPLE EXHAUST DUCT: < MDL
 SUBJECT: THRUST REVERSER OSHA TMA: 50 ug/MS PAINTER MDL: 0.075 ug/SAMPLE RECIRC DUCT: 4.0

TEST: METALS #5
 DATE: 06-26-92 AM2
 METHOD: NIOSH 7500
 Non paint time deducted
 GRID CHART 2 - ZINC

TRAVIS AFB
 PAINT BOOTH TESTS
 ADRUX PROJECT 8485

D E INITIALS: LJJ
 Q A INITIALS: 0

EXHAUST GRID			
1	4.6	2	1.7
3	1.5	4	1.7
5	2.3	6	< MDL 2.4
7	22.7	8	1.7
9	2.7	10	3.1
11	34.9	12	42.7
21	1.9	22	2.4
23	3.8	24	1.6
13	1.5	14	2.9
15	1.6	16	2.8
17	3.4	18	2.8
19	10.7	20	3.3 3.4

INLET GRID A	
1A	2.6
2A	29.0
3A	18.4

INLET GRID B	
1B	3.9
2B	3.9
3B	2.1

PAINT TYPE: GUNSHIP GRAY POLY UNITS: ug/MS GRID MDL: 0.3 ug/SAMPLE EXHAUST DUCT: 34.8
 OBJECT: THRUST REVERBER OSHA TWA: 1000 ug/MS PAINTER MDL: 0.3 ug/SAMPLE RECIRC DUCT: 39.6

DE INITIALS: LJJ
QA INITIALS: 0

INLET GRID 8

18 < MDL

28 < MDL

38 < MDL

EXHAUST DUCT:	0.7
RECIRC DUCT:	0.5

TEST: METALS #5
 DATE: 06-26-92 AM2
 METHOD: NIOSH 7503
 GRID CHART 4 - CHROMIUM

TRAVIS AFB
 PAINT BOOTH TESTS
 AOMEX PROJECT 84-85

Non paint time deducted
 D E INITIALS: LJJ
 O A INITIALS: 0

EXHAUST GRID			
1 < MDL	2 < MDL	3 < MDL	4 < MDL
5 < MDL	6 < MDL < MDL	7 < MDL	8 < MDL
9 < MDL	10 < MDL	11 < MDL	12 1.1
21 < MDL	22 < MDL	23 < MDL	24 < MDL
13 < MDL	14 < MDL	15 1.8	16 2.1
17 2.8	18 < MDL	19 1.7	20 < MDL 1.5

INLET GRID A	
1A < MDL	
2A < MDL	
3A < MDL	

INLET GRID B	
18 < MDL	
28 < MDL	
38 < MDL	

PAINT TYPE: GUNSHIP GRAY POLY UNITS: ug/M3 GRID MDL: 0.3 ug/SAMPLE EXHAUST DUCT: 12.0
 OBJECT: THRUST REVERSER OSMA TUA: 50 ug/M3 PAINTER MDL: 0.3 ug/SAMPLE RECIRC DUCT: 24.6

TEST: ISOCYANATES #1 TRAVIS AFB PAINT: WHITE TOPCOAT D E by: BM
 DATE: 06-23-92 AM PAINT BOOTH TESTS OBJECT: COMFORT PALLET Q A by:
 METHOD: OSHA 42/NIOSH 5521 Printed: 24-Sep

GRID LOC	ACUREX	BASE	PRE-CAL	POST-CAL	RUN TIME	MDI	AVG FLOW	MDI
FILTER #	SAMPLE #	PUMP #	(ml/min)	(ml/min)	(min)	(ug)	(L/MIN)	(ug/M3)
1	19 EX920714	41	927	920	60	ND	0.924	< MDL
2	21 EX920715	13	979	1058	58	ND	1.019	< MDL
3	9 EX920716	4	1009	1000	60	ND	1.005	< MDL
4	4 EX920717	35	974	990	60	ND	0.982	< MDL
5	14 EX920718	33	999	1018	60	ND	1.009	< MDL
6	20 EX920719	12	945	977	60	ND	0.961	< MDL
7	6 EX920720	20	975	981	60	ND	0.978	< MDL
8	13 EX920721	29	992	975	60	ND	0.996	< MDL
9	12 EX920722	15	993	1019	60	ND	1.006	< MDL
10	5 EX920723	18	969	987	60	ND	0.978	< MDL
11	8 EX920724	10	987	1056	61	ND	1.022	< MDL
12	17 EX920725	14	945	945	60	ND	0.945	< MDL
12 DUP	25 EX920726	43	995	970	60	ND	0.983	< MDL
21	33 EX920727	11	1001	1036	60	ND	1.019	< MDL
22	16 EX920728	24	979	1015	60	ND	0.997	< MDL
23	10 EX920729	9	993	1045	62	ND	1.019	< MDL
24	1 EX920730	34	993	985	60	ND	0.989	< MDL
13	30 EX920731	40	995	1011	60	ND	1.003	< MDL
14	31 EX920732	25	935	1040	46	ND	1.017	< MDL
15	35 EX920733	42	1003	971	60	ND	0.953	< MDL
15 DUP	26 EX920734	5	990	1008	60	ND	1.006	< MDL
16	27 EX920735	17	990	1004	61	ND	0.997	< MDL
17	34 EX920736	7	952	1160	60	ND	0.998	< MDL
18	24 EX920737	23	1034	1056	60	ND	1.056	< MDL
19	00511imp EX920051	19	984	963	59	16	0.974	278.6
P over	0050imp EX920050	30	962	1026	59	0.2	0.993	3.4
P under	18 EX920708	3	990	987	59	ND	0.989	< MDL
1A	29 EX920709	28	970	981	59	ND	0.976	< MDL
2A	28 EX920710	27	965	963	59	ND	0.966	< MDL
3A	11 EX920711	32	948	929	59	ND	0.939	< MDL
1B	32 EX920712	31	937	932	59	ND	0.935	< MDL
2B	15 EX920713	22	942	995	52	ND	0.969	< MDL
3B	F BLANK						0.000	no sample
EXHAUST 1	0049imp EX920049	36	915	999	51	0.8	0.927	16.9
RECIRC 1	0048imp EX920048	37	951	1053	52	0.9	1.002	17.3

TEST: ISOCTANATES #1
 DATE: 06-23-92 AM
 METHOD: OSHA 42/NIOSH 5521

TRAVIS AFB
 PAINT BOOTH TESTS

D E INITIALS: BM
 Q A INITIALS: 0

GRID CHART 4 - MDL

Painter Over 278.6		EXHAUST GRID										Painter Under 3.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
INLET GRID A		1A < MDL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

PAINT TYPE: WHITE TOPCOAT
 OBJECT: COMFORT PALLET

U/ITS: 40 UG/MS
 OSHA TWA: 40 UG/MS
 GRID MDL: 0.5 UG/SAMPLE
 PAINTER MDL: 0.05 UG/SAMPLE
 EXHAUST DUCT: 16.9
 RECIRC DUCT: 17.3

TEST: ISOCTAMATES #2
DATE: 06-25-92 AM2
METHOD: OSHA 42/NIOSH 5521

PAINT: WHITE TOPCOAT
OBJECT: BRAKE PARTS & RAMP
TRAVIS AFB PAINT BOOTH TESTS

DE by: L.J.L.
QA by:
Printed: 24-Sep

GRID LOC	ACUREX BASE FILTER # SAMPLE # PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	MDI (ug)	AVG FLOW (L/MIN)	MDI (ug/MS)
1	65 EX920603	41	948	66	ND	0.956	< MDL
2	60 EX920604	15	993	67	ND	0.999	< MDL
3	54 EX920605	23	1040	66	ND	1.044	< MDL
4	36 EX920606	28	991	65	ND	0.9905	< MDL
5	70 EX920607	20	968	66	ND	0.97	< MDL
6	63 EX920608	31	1002	66	ND	1.001	< MDL
7	69 EX920609	16	979	1000	66	0.9895	< MDL
7 DUP	53 EX920610	4	1006	66	ND	1.0045	< MDL
8	51 EX920611	1	1000	66	ND	0.9905	< MDL
9	2 EX920612	12	941	66	ND	0.957	< MDL
10	56 EX920613	14	1023	1078	66	1.0505	< MDL
11	64 EX920614	17	998	1005	65	1.0015	< MDL
12	38 EX920615	40	990	995	65	0.9925	< MDL
21	58 EX920616	25	995	1019	66	1.007	< MDL
22	39 EX920617	43	1007	993	66	1	< MDL
23	42 EX920618	29	1013	1020	65	1.0165	< MDL
24	68 EX920619	18	988	973	66	0.9805	< MDL
24 DUP	3 EX920700	10	1017	1026	66	1.0215	< MDL
13	61 EX920701	11	982	1008	67	0.995	< MDL
14	57 EX920702	22	971	1036	57	1.0035	< MDL
15	50 EX920703	13	964	1014	64	0.989	12.6
16	48 EX920704	21	1000	1003	65	1.0015	< MDL
17	44 EX920705	24	970	1017	66	0.9935	< MDL
18	55 EX920706	7	988	1014	66	1.001	< MDL
19	7 EX920707	42	1019	1016	65	1.0175	< MDL
20	47 EX920708	5	1007	1010	66	1.0085	< MDL
P over	00619imp EX920613	34	1048	1052	65	1.0525	43.9
P under	00612imp EX920612	33	1045	1060	65	1.0105	3.0
1A	66 EX920617	35	1005	1016	65	0.2	< MDL
2A	46 EX920618	6	995	975	66	0.984	< MDL
3A	62 EX920619	27	1000	1008	66	1.004	< MDL
1B	52 EX920620	38	1057	1071	66	1.064	< MDL
2B	43 EX920621	19	981	999	65	0.99	< MDL
3B	49 EX920622	8	1008	1015	66	1.0115	< MDL
F BLANK	45 EX920626	26	1000.2	1012.1	65.48571	0.9695	< MDL
EXHAUST C	67 EX920631	2	1007	1039	58	1.006157	7.6
RECIRC C	37 EX920632	32	1013	996	59	1.023	< MDL
EXHAUST I	00613imp EX920643	36	1058	1038	58	1.0045	< MDL
RECIRC I	00611imp EX920651	39	1003	1069	59	1.068	32.9
					0.2	1.036	3.3

TEST: ISOCYANATES #2
 DATE: 06-25-92 AMZ
 METHOD: OSHA 42 & NIOSH 5521

TRAVIS AFB
 PAINT BOOTH TESTS

D E INITIALS: 0
 O A INITIALS: 0
 printed: 26-Sep

GRID CHART 3 - MDI

Painter Over 43.9		EXHAUST GRID				Field Blank 7.6 Nominal value	
Painter Under 3.0		1 < MDL	2 < MDL	3 < MDL	4 < MDL		
		5 < MDL	6 < MDL	7 < MDL < MDL	8 < MDL		
		9 < MDL	10 < MDL	11 < MDL	12 < MDL		
		21 < MDL	22 < MDL	23 < MDL	24 < MDL < MDL		
		13 < MDL < MDL	14 12.6	15 < MDL	16 < MDL		
		17 < MDL	18 < MDL	19 < MDL	20 < MDL		
INLET GRID A							
1A < MDL							
2A < MDL							
3A < MDL							
INLET GRID B							
1B < MDL							
2B < MDL							
3B < MDL							

PAINT TYPE: WHITE TOPCOAT
 OBJECT: BRAKE PARTS & RAMP
 UNITS: ug/M3
 OSHA TWA: 40 ug/M3
 GRID MDL: 0.5 ug/SAMPLE
 PAINTER MDL: 0.05 ug/SAMPLE
 EXHAUST DUCT: < MDL CASSETTE
 32.9 IMPINGER
 RECIRC DUCT: < MDL CASSETTE
 3.3 IMPINGER

TEST: ISOCYANATES #3
 DATE: 06-25-92 PM
 METHOD: OSHA 42 & NIOSH 5521

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 0463

PAINT: CAMEL GRAY
 OBJECT: AIR SPLITTERS

D E INITIALS:
 Q A INITIALS:

LJL

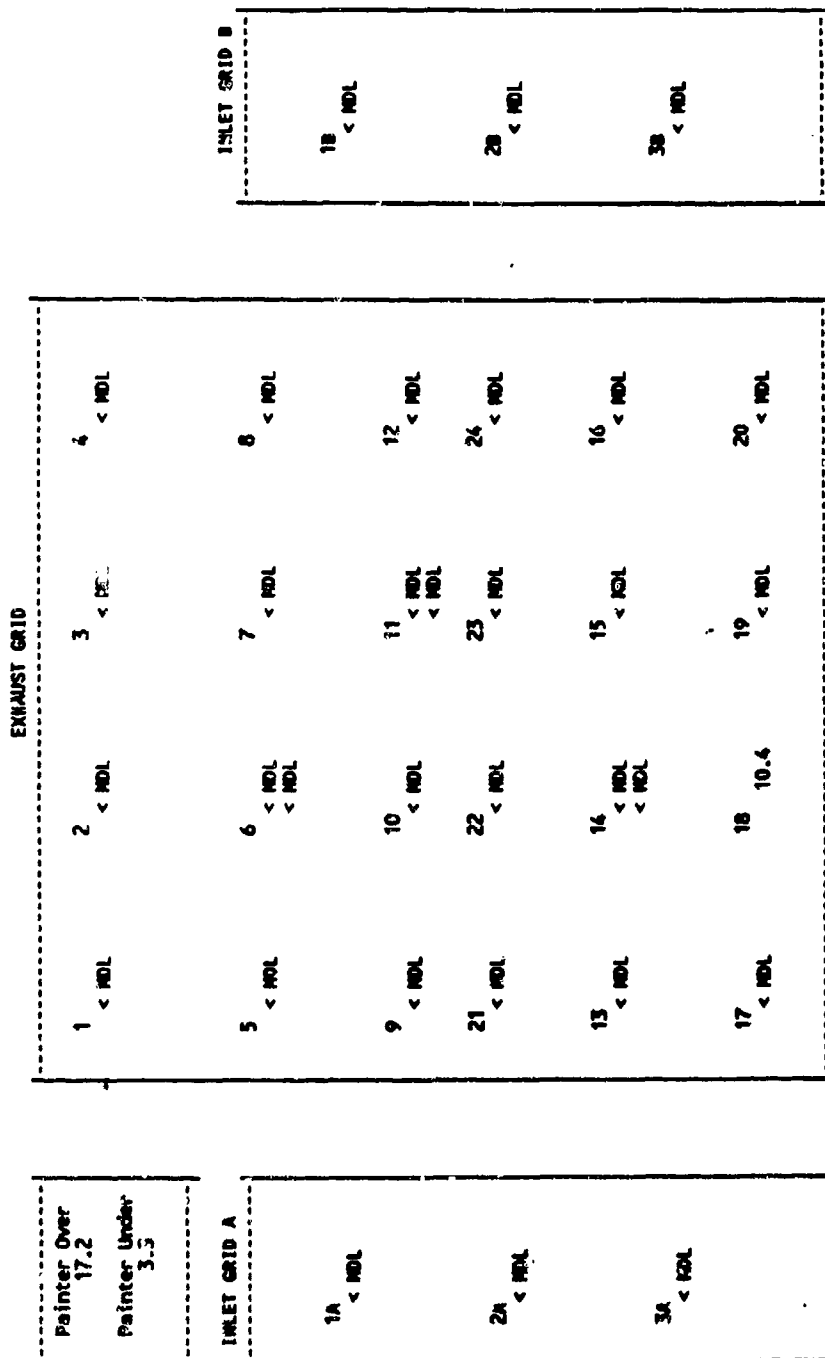
GRID LOC	ACUREX FILTER#	BASE SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	TDI (ug)	MDI (ug)	MDI (ug)	AVG FLOW (L/MIN)	TDI (ug/M3)	MDI (ug/M3)	MDI (ug/M3)
1	73	EX920537	13	1014	1018	56	ND	ND	ND	1.016	< MDL	< MDL	< MDL
2	94	EX920538	12	973	978	58	ND	ND	ND	0.9755	< MDL	< MDL	< MDL
3	77	EX920539	28	1006	1011	57	ND	ND	ND	1.0085	< MDL	< MDL	< MDL
4	78	EX920540	24	1017	1029	58	ND	ND	ND	1.023	< MDL	< MDL	< MDL
5	84	EX920541	31	1000	1001	57	ND	ND	ND	1.0005	< MDL	< MDL	< MDL
6	88	EX920542	21	1003	997	58	ND	ND	ND	1	< MDL	< MDL	< MDL
6 DUP	89	EX920567	11	1008	1008	58	ND	ND	ND	1.008	< MDL	< MDL	< MDL
7	82	EX920543	1	981	980	58	ND	ND	ND	0.9805	< MDL	< MDL	< MDL
8	79	EX920544	20	972	963	58	ND	ND	ND	0.97	< MDL	< MDL	< MDL
9	92	EX920545	14	1078	1074	58	ND	ND	ND	1.076	< MDL	< MDL	< MDL
10	85	EX920546	29	1020	1016	58	ND	ND	ND	1.018	< MDL	< MDL	< MDL
11	91	EX920547	4	1093	1104	58	ND	ND	ND	1.0985	< MDL	< MDL	< MDL
11 DUP	86	EX920568	22	1036	1067	50	ND	ND	ND	1.0515	< MDL	< MDL	< MDL
12	95	EX920548	41	964	951	59	ND	ND	ND	0.9575	< MDL	< MDL	< MDL
21	76	EX920557	23	1048	1046	58	ND	ND	ND	1.047	< MDL	< MDL	< MDL
22	97	EX920558	16	1000	1002	58	ND	ND	ND	1.001	< MDL	< MDL	< MDL
23	71	EX920559	10	973	1045	58	ND	ND	ND	1.009	< MDL	< MDL	< MDL
24	98	EX920560	25	1019	1024	58	ND	ND	ND	1.0215	< MDL	< MDL	< MDL
13	96	EX920549	15	1005	1004	58	ND	ND	ND	1.0045	< MDL	< MDL	< MDL
14	101	EX920550	17	1005	1000	58	ND	ND	ND	1.0025	< MDL	< MDL	< MDL
14 DUP	100	EX920569	7	1014	1017	58	ND	ND	ND	1.0155	< MDL	< MDL	< MDL
15	87	EX920551	18	1026	1024	58	ND	ND	ND	1.025	< MDL	< MDL	< MDL
16	99	EX920552	34	1052	1050	58	ND	ND	ND	1.051	< MDL	< MDL	< MDL
17	103	EX920553	43	993	995	58	ND	ND	ND	0.994	< MDL	< MDL	< MDL
18	93	EX920554	42	1016	1013	57	ND	ND	ND	1.0145	< MDL	< MDL	10.4
19	80	EX920555	5	1010	1003	59	ND	ND	ND	1.0065	< MDL	< MDL	< MDL
20	90	EX920556	40	995	989	57	ND	ND	ND	0.992	< MDL	< MDL	< MDL
P over	00541mp	EX920554	35	1016	1022	57	ND	ND	ND	1.019	< MDL	< MDL	17.2
P under	00551mp	EX920555	33	1060	1063	57	ND	ND	ND	1.0615	< MDL	< MDL	3.3
1A	83	EX920561	6	1008	1009	58	ND	ND	ND	1.0085	< MDL	< MDL	< MDL
2A	102	EX920562	27	1071	1073	58	ND	ND	ND	1.072	< MDL	< MDL	< MDL
3A	75	EX920563	3	975	966	58	ND	ND	ND	0.9805	< MDL	< MDL	< MDL
1B	74	EX920564	30	999	996	58	ND	ND	ND	0.9975	< MDL	< MDL	< MDL
2B	72	EX920565	19	1015	1008	58	ND	ND	ND	1.0115	< MDL	< MDL	< MDL
3B	105	EX920566	8	959	978	58	ND	ND	ND	0.9685	< MDL	< MDL	< MDL
F BLANK										0 no sample	< MDL	< MDL	< MDL
EXHAUST C	104	EX920535	2	1039	1061	51	ND	ND	ND	1.05	< MDL	< MDL	< MDL
RECIRC C	81	EX920536	32	996	989	52	ND	ND	ND	0.9925	< MDL	< MDL	< MDL
EXHAUST I	371mp	EX920037	36	1038	1058	51	ND	ND	ND	1.048	< MDL	< MDL	9.4
RECIRC I	391mp	EX920039	39	1069	1086	52	ND	ND	ND	1.0775	< MDL	< MDL	3.6

TEST: ISOCYANATES #3
 DATE: 06-25-92 PM
 METHOD: OSHA 42 & NIOSH 5521

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8463

D E INITIALS: 0
 G A INITIALS: 0

GRID CHART 3 - MDI



TEST: ISOCYANATES #4
 DATE: 06-30-92 AM1
 METHOD: OSHA 42 & NIOSH 5521

TRAVIS AFB
 PAINT BOOTHS TESTS
 ACUREX PROJECT 8463

PAINT: DARK GRAY TOPCOAT
 OBJECT: DEC PANELS (PLANE SIDING)

D E INITIALS:
 Q A INITIALS:

LJL

GRID	LOC	ACUREX SAMPLE #	BASE SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	TDI (ug)	MDI (ug)	AVG FLOW (L/MIN)	TDI (ug/MS)	MDI (ug/MS)	MDI (ug/MS)
1		145 EX920578		14	970	950	61	ND	ND	0.96	< MDL	< MDL	< MDL
2		156 EX920579		45	1042	1014	61	ND	ND	1.028	< MDL	< MDL	< MDL
3		159 EX920580		34	1010	994	61	ND	ND	1.002	< MDL	< MDL	< MDL
4		151 EX920581		31	1054	1066	61	ND	ND	1.06	< MDL	< MDL	< MDL
5		174 EX920582		1	990	944	62	ND	ND	0.967	< MDL	< MDL	< MDL
6		152 EX920583		19	1023	1001	61	ND	ND	1.0125	< MDL	< MDL	< MDL
6 DUP		155 EX920584		51	1031	994	61	ND	ND	1.143	< MDL	< MDL	< MDL
7		157 EX920585		17	1023	1283	61	ND	ND	0.9665	< MDL	< MDL	< MDL
8		147 EX920586		49	993	980	61	ND	ND	1.0245	< MDL	< MDL	< MDL
9		154 EX920587		11	1017	1032	62	ND	ND	1.0445	< MDL	< MDL	< MDL
10		173 EX920588		55	1021	928	61	ND	ND	0.999	< MDL	< MDL	< MDL
11		168 EX920589		43	1021	977	61	ND	ND	0.9945	< MDL	< MDL	< MDL
12		165 EX920590		13	987	1002	60	ND	ND	1.0395	< MDL	< MDL	< MDL
21		169 EX920591		25	1023	1056	61	ND	ND	1.017	< MDL	< MDL	< MDL
22		160 EX920592		21	1029	1005	61	ND	ND	1.0035	< MDL	< MDL	< MDL
23		150 EX920593		18	1011	996	61	ND	ND	1.014	< MDL	< MDL	< MDL
24		145 EX920594		54	1030	998	61	ND	ND	1.009	< MDL	< MDL	< MDL
13		164 EX920595		24	985	1033	61	ND	ND	1.012	< MDL	< MDL	< MDL
16		172 EX920596		42	1020	1004	61	ND	ND	1.032	< MDL	< MDL	< MDL
15		162 EX920597		28	1045	1019	61	ND	ND	1.053	< MDL	< MDL	< MDL
16		153 EX920598		16	1046	1060	62	ND	ND	1.0125	< MDL	< MDL	< MDL
17		171 EX920599		5	1021	1004	62	ND	ND	0.9985	< MDL	< MDL	< MDL
18		161 EX920600		32	1015	982	61	ND	ND	1.0215	< MDL	< MDL	< MDL
19		163 EX920601		50	1015	982	61	ND	ND	0.9985	< MDL	< MDL	< MDL
20		175 EX920602		39	1037	1006	61	ND	ND	1.0215	< MDL	< MDL	< MDL
20 DUP		167 EX920603		30	1045	1025	61	ND	ND	1.035	< MDL	< MDL	< MDL
P over		58imp EX920604		48	997	985	61	ND	ND	0.991	< MDL	< MDL	< MDL
P under		59imp EX920605		46	987	974	61	ND	ND	0.9805	< MDL	< MDL	< MDL
1A		143 EX920571		47	1011	1001	61	ND	ND	1.006	< MDL	< MDL	< MDL
2A		149 EX920572		12	949	964	61	ND	ND	0.9565	< MDL	< MDL	< MDL
3A		166 EX920573		33	1016	1004	61	ND	ND	1.01	< MDL	< MDL	< MDL
1B		158 EX920574		40	1028	1015	61	ND	ND	1.0315	< MDL	< MDL	< MDL
1B DUP		141 EX920575		6	1033	1039	61	ND	ND	1.036	< MDL	< MDL	< MDL
2B		170 EX920576		35	1033	1036	61	ND	ND	1.0345	< MDL	< MDL	< MDL
3B		142 EX920577		20	955	941	61	ND	ND	0.948	< MDL	< MDL	< MDL
F BLACK		0040imp EX920606		9	nominal values	nominal values	60	ND	ND	1	< MDL	< MDL	< MDL
F BLACK		146 EX920570		52	1002	994	60	ND	ND	0.998	< MDL	< MDL	< MDL
EXHAUST C		144 EX920532		55	998	940	55	ND	ND	0.979	< MDL	< MDL	< MDL
RECIRC C		214 EX920531		36	961	952	55	ND	ND	0.9565	< MDL	< MDL	< MDL
EXHAUST I		57imp EX92057		39	962	940	55	ND	ND	0.951	< MDL	< MDL	< MDL
PECING I		56imp EX92056						ND	ND		< MDL	< MDL	< MDL

TEST: ISOCYANATES #4
 DATE: 06-30-92 AM
 METHOD: OSHA 42 & NIOSH 5521
 GRID CHART 4 - MDL

TRAVIS AFB
 PAINT BOOTH TESTS
 ACUREX PROJECT 8463

D E INITIALS: LUL
 O A INITIALS:

EXHAUST GRID				Field Blank IMP 3.3 FILT < MDL nominal values	
1 < MDL	2 < MDL	3 < MDL	4 < MDL	INLET GRID B	
5 < MDL	6 < MDL < MDL	7 < MDL	3 < MDL		
9 < MDL	10 < MDL	11 < MDL	12 < MDL		
21 < MDL	22 < MDL	23 < MDL	24 < MDL		
13 < MDL	14 8.1	15 12.7	16 < MDL	INLET GRID A	
17 < MDL	18 < MDL	19 8.2	20 < MDL < MDL		
Painter Over 16.5				INLET GRID B	
Painter Under < MDL					
1A < MDL				INLET GRID B	
2A < MDL					
3A < MDL					
				INLET GRID B	
18 < MDL < MDL					
28 < MDL					
38 < MDL					
PRINT TYPE: DARK GRAY TOPCOAT				EXHAUST DUCT: < MDL CASSE	
OBJECT: GEC PANELS (PLANE SIDING)				19.0 IMP/INC	
UNITS: LB/MS				GRID MDL: 0.5 LB/SAMPLE	
USMA TMA: 40 LB/MS				PAINTER MDL: 0.05 LB/SAMPLE	

PAINT TYPE: DARK GRAY TOPCOAT
 UNITS: ug/M3
 GRID MDL: 0.5 ug/SAMPLE
 EXHAUST DUCT: < MDL CASSETTE
 19.0 IMPINGER
 OBJECT: GEC PANELS (PLANE SIDING) OSHA TWA: 40 ug/M3
 PAINTER MDL: 0.05 ug/SAMPLE
 RECIRC DUCT: < MDL CASSETTE
 3.8 IMPINGER

Note: The field (solution) blank for NIOSH 5521 (used on the painter and duct samples) contained 0.2 ug, or a nominal 3.3 ug/M3 for a 60 minute test at 1 liter/min. The sample levels here are calculated in terms of actual volume and time.

TEST: ISOCYANATES #5
 DATE: 06-30-92 AMZ
 METHOD: OSHA 42 & NIOSH 5521

TRAVIS AFB
 PAINT BOOTIN TESTS
 ACUREX PROJECT 8463

PAINT: PRIMER
 OBJECT: PLANE ENGINE

D E INITIALS:
 G A INITIALS:

LJL

GRID	LOC	ACUREX BASE SAMPLE #	PUMP #	PRE-CAL (ml/min)	POST-CAL (ml/min)	RUN TIME (min)	TDI (ug)	MDI (ug)	AVG FLOW (L/MIN)	TDI (ug/M3)	MDI (ug/M3)	MDI (ug/M3)
1		116 EX920610	30	1025	1013	56	ND	ND	1.019	< MDL	< MDL	< MDL
2		139 EX920611	40	1015	1010	56	ND	ND	1.0125	< MDL	< MDL	< MDL
3		140 EX920612	14	950	952	57	ND	ND	0.951	< MDL	< MDL	< MDL
3 DUP		107 EX920613	25	1056	1066	57	ND	ND	1.061	< MDL	< MDL	< MDL
4		124 EX920614	1	944	952	57	ND	ND	0.948	< MDL	< MDL	< MDL
5		131 EX920615	6	1039	1071	56	ND	ND	1.055	< MDL	< MDL	< MDL
6		121 EX920616	47	1001	1000	56	ND	ND	1.0005	< MDL	< MDL	< MDL
7		126 EX920617	17	954	947	56	ND	ND	0.9505	< MDL	< MDL	< MDL
8		115 EX920618	32	982	1007	56	ND	ND	0.9845	< MDL	< MDL	< MDL
9		122 EX920619	13	1002	1010	55	ND	ND	1.006	< MDL	< MDL	< MDL
10		114 EX920620	20	1019	955	56	ND	ND	0.948	< MDL	< MDL	< MDL
11		130 EX920621	28	1019	1037	56	ND	ND	1.028	< MDL	< MDL	< MDL
12		129 EX920622	21	1005	1013	56	ND	ND	1.009	< MDL	< MDL	< MDL
21		120 EX920623	16	1060	1076	56	ND	ND	1.068	< MDL	< MDL	< MDL
22		109 EX920624	34	994	996	56	ND	ND	0.995	< MDL	< MDL	< MDL
22 DUP		134 EX920625	5	1004	1001	57	ND	ND	1.0025	< MDL	< MDL	< MDL
23		135 EX920626	33	1004	1008	56	ND	ND	1.006	< MDL	< MDL	< MDL
24		123 EX920627	42	1004	1009	56	ND	ND	1.0065	< MDL	< MDL	< MDL
13		108 EX920628	29	1006	1011	56	ND	ND	1.0065	< MDL	< MDL	< MDL
14		125 EX920629	12	964	966	56	ND	ND	0.975	< MDL	< MDL	< MDL
15		110 EX920630	18	996	1000	56	ND	ND	0.998	< MDL	< MDL	< MDL
16		127 EX920631	45	1014	1033	57	ND	ND	1.0235	< MDL	< MDL	< MDL
17		136 EX920632	35	1036	1031	56	ND	ND	1.0335	< MDL	< MDL	< MDL
17 DUP		138 EX920633	11	1032	1029	57	ND	ND	1.0305	< MDL	< MDL	< MDL
18		111 EX920634	43	977	992	56	ND	ND	0.9845	< MDL	< MDL	< MDL
19		133 EX920635	50	982	975	56	ND	ND	0.9785	< MDL	< MDL	< MDL
20		118 EX920636	24	1033	1050	57	ND	ND	1.0415	< MDL	< MDL	< MDL
P over		41imp EX920041	48	985	994	56	ND	0.2	0.9855	< MDL	< MDL	3.6
P under		42imp EX920042	46	974	996	56	ND	0.2	0.965	< MDL	< MDL	3.6
1A		128 EX920604	31	1066	1063	56	ND	ND	1.0645	< MDL	< MDL	< MDL
2A		137 EX920605	49	980	984	56	ND	ND	0.982	< MDL	< MDL	< MDL
3A		119 EX920606	54	998	997	56	ND	ND	0.9975	< MDL	< MDL	< MDL
1B		106 EX920607	19	1001	1000	56	ND	ND	1.0005	< MDL	< MDL	< MDL
2B		117 EX920608	51	994	1030	56	ND	ND	1.012	< MDL	< MDL	< MDL
3B		112 EX920609	55	988	994	56	ND	ND	0.986	< MDL	< MDL	< MDL
F BLANK		113 EX920534	9	0	0	60	ND	ND	1	< MDL	< MDL	< MDL
EXHAUST I		43imp EX920043	36	952	956	51	ND	0.2	0.954	< MDL	< MDL	4.1
EXIN I dup		44imp EX920044	52	985	1082	51	ND	0.2	1.0335	< MDL	< MDL	3.8
RECIRC C		132 EX920533	53	960	996	52	ND	ND	0.978	< MDL	< MDL	< MDL
RECIRC I		45imp EX920045	39	940	1010	52	ND	0.2	0.975	< MDL	< MDL	3.9

APPENDIX H

QUALITY ASSURANCE/QUALITY CONTROL EVALUATION

A number of quality assurance/quality control (QA/QC) procedures were followed to assess the quality of the reported data. The data quality objectives (DQOs) are listed in Table H-1. The DQOs, defined in terms of measurement accuracy, precision, and completeness, were originally outlined in the Quality Assurance Project Plan (Reference 1). In response to the EPA QA review (Reference 2), the DQOs were subsequently revised and submitted in the Acurex Environmental letter dated 6 May 1992 (Reference 3). The high variability of normal booth operations causes difficulty in establishing DQOs.

A. ASSESSMENT OF OVERALL DATA QUALITY

The DQO results are presented in Table H-2. Nearly all DQOs were achieved. Some objectives, for the integrated sampling, were not met for side-by-side duplicate samples taken at specific sampling locations. The variability detected from side-by-side duplicate analyses was due to sample orientation. Great effort was expended to ensure that the duplicate VOC, particulate, isocyanates, and metals sample systems had identical orientations. However, some samplers shifted slightly during painting.

1. Precision

To ensure data precision, air flow rate anemometer measurements at the booth exhaust and intake faces were obtained following each test. Duplicate anemometer measurements were taken at one randomly selected grid site per test. Split-flow duct flow rate measurements were taken according to EPA Method 2 prior to each sampling event. A duplicate measurement was taken every 2 days. Due to cyclonic flow patterns in the recirculation duct, it was not possible to measure the flow rate of the recirculated airstream using EPA Method 2. Therefore, the precision is undefinable.

To assess the precision of CEM sampling, the periodic zero, span, and reference gas response results were compared.

To assess precision of the integrated pollutant concentration measurements in the booth, duplicate samples were collected during each sampling event. Because sample collection occurred under dynamic operating conditions, a side-by-side sampling strategy was adopted to generate the required duplicates. The side-by-side samples were located and oriented as close to identically as possible, but under normal booth operating conditions the sampling system often shifted during the test. For this reason, the RPD at specific sampling locations was observed to be as high as 100 percent. However, when averaged over all the duplicate samples, the precision RPD DQO was met for each pollutant category.

Side-by-side duplicate samples were also collected in the integrated duct organic and isocyanate sampling events. Precision for EPA Method 5 and the Draft Multiple Metals trains could not be assessed because setting up side-by-side duplicate sampling trains was not possible.

TABLE H-1. DATA QUALITY OBJECTIVES.

Measurement Parameter	Measurement Method	Precision (RPD)	Accuracy (% Recovery)	Completeness (%)
Volume Flow				
Exhaust and intake faces	ACGIH Anemometer	20	± 40	90
Ventilation ducts	EPA Method 2	20	± 10	90
Particulate				
Exhaust and intake faces and painter	NIOSH 500	35	NM ^{a,b}	90
Ventilation ducts	EPA Method 5	NM ^c	NM ^c	90
Metals				
Exhaust and intake faces and painter	NIOSH 7300	35	± 30	90
Ventilation ducts	Draft EPA Multiple Metals	NM ^d	± 30	90
Organics				
Integrated	NIOSH 1300	35	± 30	90
Continuous	EPA Method 25A	20	± 20	90
	BAAQMD ST-7	20	± 20	90
Isocyanates				
Exhaust and intake faces and painter	OSHA 42	35	± 30	90
Ventilation ducts	NIOSH 5521	35	± 30	90
Paints				
% Volatile	Grab sample, wt. loss on drying	20	± 20	90
Usage rate	Observation, gravimetric analysis	NM ^e	NM ^e	90
Density	Grab sample, wt/vol analysis	20	± 20	90

^aNM = Not measured; not measurable.

^bMethod states that the bias is not significant.

^cThe primary error source is non-isokineticity. The isokineticity objective is 90 to 110 percent.

^dPrecision (as relative standard deviation) listed in the method ranges between 10 and 25 percent.

^eNot definable. Estimated at ± 50 percent.

TABLE H-2 DATA QUALITY RESULTS.

Measurement Parameter	Measurement Method	Precision (RPD)	Accuracy (% Recovery)	Completeness (%)
Volume Flow				
Exhaust and intake faces	ACGIH Anemometer	5	NM ^{a,b}	95
Exhaust duct	EPA Method 2	5	±2	95
Recirculation duct	EPA Method 2	NM ^b	NM ^b	NM ^b
Particulate				
Exhaust and intake faces and painter	NIOSH 500	32	NM ^c	90
Ventilation ducts	EPA Method 5	NM ^d	NM ^d	90
Metals				
Exhaust and intake faces and painter	NIOSH 7300	23	±15	90
Ventilation ducts	Draft EPA Multiple Metals	NM ^e	±20	90
Organics				
Integrated	NIOSH 1300	24	±30	86
Continuous	EPA Method 25A BAAQMD ST-7	10 10	±10 ±10	90 90
Isocyanates				
Exhaust and intake faces and painter	OSHA 42	10	NM ^f	95
Ventilation ducts	NIOSH 5521	10	±18	90
Paints				
% Volatile	Grab sample, wt. loss on drying	5	±13	100
Usage rate	Observation, gravimetric analysis	NM ^g	NM ^g	90
Density	Grab sample, wt/vol analysis	2	±9	100

^aNM = Not measured; not measurable.

^bFlow rate is not measurable due to cyclonic flow patterns in the duct.

^cMethod states that the bias is not significant.

^dThe primary error source is non-isokineticity. The isokineticity objective is 90 to 110 percent.

^ePrecision (as relative standard deviation) listed in the method ranges between 10 and 25 percent.

^fSpike analysis not conducted.

^gNot definable. Estimated at ±50 percent.

To assess precision of the paint percent volatile and density measurements, duplicate samples were collected and analyzed. The paint usage rate was determined gravimetrically. There is no practical method for assessing the precision or accuracy of this measurement.

2. Accuracy

Due to cyclonic flow patterns in the recirculation duct, the relative accuracy of the air flow rate measurements in the booth was not quantifiable. The accuracy of the measurement of the split-flow duct flow rate according to EPA Method 2 was established using calibrated standard pitot tubes.

To measure accuracy of the continuous organic concentration measurement, a mid-range standard reference gas that was not a zero or span gas was used. A solvent mass balance calculation provided an additional means of measuring accuracy, by comparing the quantity of solvent released into the booth to the quantity measured by the continuous monitors in the exhaust streams.

Accuracy of the metals sampling at the exhaust and intake faces was measured through the spike and recovery of filter samples according to NIOSH 7300. NIOSH 1300 sampling accuracy was measured through the spike and recovery analysis of unused sample tubes. The spike compounds and concentrations were selected based on the paint solvents measured in the charcoal tubes. Spike and recovery analyses of particulate samples were not possible. For the exhaust and intake faces and the painter, accuracy for particulate sampling was not measurable. For the ventilation ducts, particulate measurement was also not measurable because the primary error source is non-isokineticity. The isokineticity objective is 90 to 110 percent.

OSHA Method 42 was followed in the analysis of isocyanate compounds obtained at the exhaust face and in the vicinity of the painter. The method does not call for spike and recovery samples, and such were therefore not performed. Instead, isocyanates standards were tracked to watch for instrument drift, loss of column performance, and other errors. In addition, four standards for each analyte were run at both the beginning and end of each analytical run. For NIOSH 5521, the laboratory obtained percent recovery data by spiking samples with urea.

To assess the accuracy of the paint percent volatile and density measurements, published values from MSDSs for these parameters were obtained from manufacturers and compared to the analytical results. Usage rate accuracy was not measurable.

3. Completeness

The 90-percent completeness DQO was selected based on the successful completion of similar projects in the past involving paint spray booth emissions sampling and evaluation. A completeness level of 90 percent ensured that sufficient valid data of known quality were collected to evaluate project success. A completeness of 90 percent was achieved in all of the sampling events, with the exception of the integrated organic sampling, in which an 85-percent completeness was achieved, rather than the projected 90-percent, due to the malfunction of the pumps used in the NIOSH 1300 sampling procedures.

B. QUALITATIVE DATA QUALITY OBJECTIVES

The painting operations in the booth were highly variable and non-repetitious. Therefore, a primary concern was that the samples collected be representative of typical operations. For this reason, sampling occurred over a 3-week period.

Careful scheduling with the paint spray booth operator was required for the successful completion of this project. Acurex Environmental coordinated with the Travis AFB personnel to ensure that there was a sufficiently large workpiece backlog for each test series. Acurex Environmental also endeavored to ensure that a representative sample of each typical workpiece was evaluated.

C. REFERENCES

1. Hughes, S. E. and Ayer, J., Category III Quality Assurance Project Plan (QAPP), Acurex Environmental Corporation, Mountain View, California, prepared for U.S. Environmental Protection Agency, EPA Contract No. 68-D1-0146, Work Assignment 0/004, AEERL, Research Triangle Park, NC, March 1992.
2. EPA Quality Assurance Review of the Category III QAPP, EPA Contract No. 68-D1-0146, Work Assignment 0/004, April 1992.
3. Hughes, S. E. and Wolbach, C. D., Response to EPA Quality Assurance Review, May 6, 1992.

APPENDIX I
ECONOMIC CALCULATIONS

SUMMARY TABLE

Costs for Incineration Devices with 35% heat recovery (Thousands of dollars)					
Percent Recirc	Flowrate dscfm	Thermal Incineration		Catalytic Incineration	
		Capital Cost	Annual O&M Cost	Capital Cost	Annual O&M Cost
0	30000	\$392	\$383	\$550	\$297
50	15000	\$387	\$232	\$471	\$192
75	7500	\$333	\$147	\$368	\$127
90	3000	\$275	\$91	\$270	\$81

Economic Evaluation

ASSUMPTIONS

Capital cost for recirc/split-flow modification: \$60,000
 VOC concentration in the exhaust increases linearly as the % recirc increases
 Net heat of combustion of volatile compounds is approximately 3000 Btu/scf

Exhaust Stream Characteristics			
% recirc	[VOC] (ppm)	heat content	
		(Btu/scf)	(Btu/lb)
	10	0.03	0.41
0	20	0.06	0.81
50	40	0.12	1.62
75	100	0.3	4.06
90			

All calculations based on "Control Technologies for Hazardous Air Pollutants", EPA/625/6-91/014, June 1991.
 Calcs. in the manual are based on April 1988 dollars. Convert to August 1992 \$ with the following CE Equipment Indices:
 Apr. 1988 CE Equipment Index: 369.4
 Aug. 1992 CE Equipment Index: 390.8

Assume 10 year equipment lifetime and 10% annual interest rate.

Operating hours	40 hrs/wk
	50 wks/yr
Methane fuel cost	\$3.30 per 1000 cf
Electricity cost	\$0.06 per kWh
O&M labor cost	\$14.00 per hour
Flowrate	15000 dscfm
Heat Content	0.81 Btu/lb
Exhaust Temp.	77 F

SAMPLE THERMAL INCINERATION CALCULATION

Destruction Eff. 98 %
 Heat Recovery 35 %
 Air Heat Cap (Cp) 0.253 Btu/lb-F
 Temp. into Incin 610 F
 Combust. temp 1600 F

[the spreadsheet calcs are set for 0, 35, 50, OR 70% heat recovery]

Supplemental fuel (methane) requirements
 Total flow

369.7 scfm
 15369.7 scfm

ANNUAL OPERATING COSTS

DIRECT

Thermal Incinerator capital cost (Apr. 1988 \$)	\$162,627	Methane Fuel Cost	\$146,414
Purchased Equipment CAPITAL COSTS	\$191,900	Pressure Drop	8 in. H ₂ O
Total Thermal Incin. Capital Cost (Apr. 1988\$)	\$308,960	Electricity usage	44511 kWh/yr
Convert to Aug. 1992 dollars:	\$326,858	Electricity costs	\$2,626
Include the cost to modify duct	\$60,000	Oper. Labor Costs	\$1,750
TOTAL CAPITAL COST	\$386,858	Supervisory costs	\$263
		Maintenance labor and mat'l costs	\$3,500

INDIRECT

Overhead	\$3,308
Administrative	\$7,737
Property taxes	\$3,869
Insurance	\$3,869
Capital Recovery	\$62,981

TOTAL ANNUAL OPER. COSTS	\$232,447
---------------------------------	------------------

SAMPLE CATALYTIC INCINERATION CALCULATION

Temp at catalyst inlet	997 F
Temp at catalyst outlet	1000
Temp after heat recovery	400
Supplemental fuel (methane) requirements	221.9 scfm
Total flow	15221.9 scfm

ANNUAL OPERATING COSTS	
DIRECT	
Methane Fuel Cost	\$87,863
Pressure Drop	10 in. H ₂ O
Electricity usage	55103 kWh/yr
Electricity costs	\$3,251
Catalyst replacement cost	\$39,469
Oper. Labor Costs	\$1,750
Supervisory costs	\$263
Maintenance labor and mat'l costs	\$3,500
INDIRECT	
Overhead	\$3,308
Administrative	\$9,428
Property taxes	\$4,714
Insurance	\$4,714
Capital Recovery	\$34,118
TOTAL ANNUAL OPER. COSTS	\$192,377

Catalytic Incinerator capital cost (Apr. 1988 \$)	\$204,694
Purchased Equipment CAPITAL COSTS	\$241,538
Total Incin. Capital Cost (Apr. 1988\$)	\$388,377
Convert to Aug. 1992 dollars:	\$411,405
Include the cost to modify duct	\$60,000
TOTAL CAPITAL COST	\$471,405

Space Velocity	40,000 (1/hr)
Catalyst Bed Size	22.83 cu ft
Assume a 2-year catalyst life	
Precious metal cost	\$3,000 per cu ft

APPENDIX J

EXAMPLE CALCULATION WORKSHEET FOR PERCENT RECIRCULATION VERSUS PERCENT PARTICULATE REMOVAL EFFICIENCY

PROJECTED POLLUTANT LEVELS WITH RECIRCULATION

This calculation assumes no split-flow.

% REMOVAL OF STRONTIUM CHROMATE 85
 % REMOVAL OF ISOCYANATES: 85

RECIRCULATION RATE = 87.4%

This worksheet compares results to the TWA Em, not to the STEL

COMPOUNDS

	DETECTED LEVEL W/O RECIRC. mg/m3	Current 8-hour TWA PEL or TLV mg/m3	PROJECTED LEVEL mg/m3	Booth Em Calculation (dimensionless)
ORGANICS VS. Em				
VOC1:				
MEK	5.80	590	46	0.08
VOC2:				
MIBK	4.20	205	33	0.16
VOC3:				
TOLUENE	0.64	188	5	0.03
VOC4:				
N-BUTYL ACETATE	1.10	710	9	0.01
VOC5:				
XYLENES	0.11	434	1	0.00
VOC6:				
ETHYL ACETATE	0.26	1400	2	0.00
VOC7:				
2-BUTANOL	0.28	305	2	0.01
			ORGANIC Em	0.29
METAL Em CALCULATIONS				
STRONT CHROMATE as Cr	0.0063	0.05	0.050	Metal Em 1
ISOCYANATE Em CALCULATIONS				
HDI	0.000570	0.034	0.005	HDI Em 0.13