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Y/SUB/96-99069C/Y22/1

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**SITE STATUS MONITORING
REPORT FOR
UNDERGROUND STORAGE
TANK 2331-U
AT BUILDING 9201-1**

**OAK RIDGE Y-12 PLANT
OAK RIDGE, TENNESSEE
FACILITY ID #0-010117**

October 1995

**Environmental Management Department
Health, Safety, Environment,
and Accountability Organization**

**MANAGED BY
MARTIN MARIETTA ENERGY SYSTEMS, INC.
FOR THE UNITED STATES
DEPARTMENT OF ENERGY**

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UNDERGROUND STORAGE TANK 2331-U
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**OAK RIDGE Y-12 PLANT
OAK RIDGE, TENNESSEE
FACILITY ID #0-010117**

October 1995

**Environmental Management Department
Health, Safety, Environment,
and Accountability Organization**

Prepared by

**Science Applications International Corporation
Under Subcontract 22B-99069C
for the
Oak Ridge Y-12 Plant
Oak Ridge, Tennessee 37831**

Managed by

**Lockheed Martin Energy Systems, Inc.
for the
U.S. Department of Energy
Under Contract No. DE-AC05-84OR21400**

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LIST OF ACRONYMS

BGS	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
BTOC	below top of casing
CAP	Corrective Action Plan
GRO	gasoline range organic
LEL	lower explosive limit
MSL	mean sea level
OVM	organic vapor meter
TDEC	Tennessee Department of Environment and Conservation
TPH	total petroleum hydrocarbon
TWA	time weighted average
UEFPC	Upper East Fork Poplar Creek
UST	underground storage tank

**SIGNATURE PAGE FOR THE
SITE STATUS MONITORING REPORT FOR
THE UNDERGROUND STORAGE TANK 2331-U,
AT BUILDING 9201-1**

I certify under penalty of law, including but not limited to penalties for perjury, that the information contained in this report and on any attachments, is true, accurate, and complete to the best of my knowledge, information, and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for intentional violations.

See Attached Certification

Owner/Operator (Print)

Signature

Date

W. David Keefer

P.E. or P.G. (Print)

William D. Keefer TN 3328

Signature TN Lic./Reg. #

11/11/95

Date

If a P.E. signs this report, please indicate the area of expertise.

(Print or Type)

County of Anderson State of Tennessee

(P.E./P.G. Stamp/Seal)

Subscribed and Sworn to before me this

1 day of November, 1995

Suzanne Krott
Notary Public

My Commission expires: 01-27-96 (Notary Seal)

**CERTIFICATION STATEMENT FOR THE
SITE STATUS MONITORING REPORT FOR
THE UNDERGROUND STORAGE TANK 2331-U,
AT BUILDING 9201-1**

I certify that this document and all enclosures were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

U.S. Department of Energy
Owner and Operator

By:

R.J. Spence
Department of Energy, Y-12 Site Manager

11/20/95
Date Signed

In Commission Expires:
10/25/97

Martin Marietta Energy Systems, Inc.
Co-Operator

By:

T.R. Butz
Martin Marietta Energy Systems, Inc.
Y-12 Plant Manager

11/8/95
Date Signed

NOTARY 11/8/95
(Stamp/Seal)

Note: Both signatures have been notarized per requirements.

1. INTRODUCTION

1.1 Purpose and Scope

The purpose of this document is to present potentiometric, groundwater quality and vapor monitoring data required for site status monitoring of underground storage tank (UST) 2331-U at the Building 9201-1 Site. Site status monitoring has been conducted at the site as part of a Monitoring Only program approved by the Tennessee Department of Environment and Conservation (TDEC) based on review and approval of Site Ranking (Site Ranking Form approved May 23, 1994). This document presents the results of the third semiannual site status monitoring that was performed in October 1995. Site status monitoring and preparation of this report have been conducted in accordance with the requirements of TDEC Rule 1200-1-15 and the TDEC *UST Reference Handbook, Second Edition* (TDEC 1994) Technical Guidance Document (TGD) 007.

This document is organized into three sections. Section 1 presents introductory information relative to the site including the regulatory initiative and a site description. Section 2 includes the results of measurement and sampling of monitoring wells GW-193, GW-657, GW-707, GW-708, GW-808, GW-809, and GW-810. Section 3 presents data from vapor monitoring conducted in subsurface utilities present at the site.

1.2 Site Description

The Building 9201-1 Site is located within the south central portion of the Oak Ridge Y-12 Plant in Oak Ridge, Tennessee (Figure 1-1). This area is within the Exclusion Zone of the Y-12 Plant, which is access restricted. The site is generally defined as the area directly south of the Building 9201-1 concrete ramp/loading dock (Figure 1-2). The site was previously the location of a gasoline UST used to fuel gasoline-powered equipment in the area. The tank has been excavated and removed from the site.

The UST was a 560-gallon gasoline UST that was first suspected of leaking in 1988. Tightness testing confirmed that the tank was leaking and the tank was subsequently excavated and removed. An Initial Site Characterization and Environmental Assessment identified the presence of petroleum contamination above applicable TDEC Closure Action Levels. A Corrective Action Plan (CAP) was prepared and approved and Baseline Monitoring was performed in support of corrective action (11/93). However, site ranking performed in accordance with the newly issued TGD-014 (1/94) indicated that contaminant concentrations were sufficiently low and contaminant exposure sufficiently limited in extent to qualify for a monitoring only program in lieu of active remediation.

The topography of the Building 9201-1 Site gently decreases in elevation from north to south across the facility. A surface water and groundwater divide coincident with the trace of Upper East Fork Poplar Creek (UEFPC) lies approximately 230 ft south of the site. Given the nature of the surface topography at the Building 9201-1 Site, any petroleum contamination resulting from past UST operations would be expected to migrate south/southeast away from the source area.

Figure 1-1. Location of the Building 9201-1 Site at the Y-12 Plant

All location information presented in this figure is based upon MMES engineering drawings, results of previous MMES investigations, and/or field determinations of feature and sampling locations. No representation or warranty, expressed or implied, is made as to the accuracy of the information or statements presented in this figure.

Legend

- Building
- Fence

All location information presented in this figure is based upon MMES engineering drawings, results of previous MMES investigations, and/or field determinations of feature and sampling locations. No representation or warranty, expressed or implied, is made as to the accuracy of the information or statements presented in this figure.

REV. 2 - 05/12/95 SAIC FILE: 95021R1/DWGS/131MON

Legend

- ▲ GW-193 Groundwater Monit
(18.4 BGS) Total Depth Below

ing Well Location
round Surface (BGS)

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Environmental Management Department

FIGURE 2-1
Building 9201-1 Site
Monitoring Well Location Map

**Table 2-1. Water level measurements at the Building 9201-1 Site
for the periods of May 1995 and October 1995**

Monitoring well number	Date measured	Well depth (from TOC)	Top of casing (ft-MSL)	Top of casing to water level (ft-BTOC)	Potentiometric surface elevation (ft-MSL)
GW-193	05/04/95	21.0	934.00	7.76	926.24
	10/19/95	21.0	934.00	8.44	925.56
GW-657	05/04/95	15.2	930.53	6.38	924.15
	10/19/95	15.2	930.53	6.18	924.35
GW-707	05/04/95	16.6	930.91	5.88	925.03
	10/19/95	16.6	930.91	5.89*	925.02
GW-708	05/04/95	13.1	930.87	4.65	926.22
	10/19/95	13.1	930.87	4.83	926.04
GW-808	05/04/95	36.1	930.75	7.70	923.05
	10/19/95	36.1	930.75	8.02	922.73
GW-809	05/04/95	36.0	931.04	8.69	922.35
	10/19/95	36.0	931.04	8.27	922.77
GW-810	05/04/95	26.1	931.44	8.35	923.09
	10/19/95	26.1	931.44	9.42	922.02

Notes:

MSL = mean sea level

BTOC = below top of casing

TOC = top of casing

* = Apparent transcription error in field notes (water depth and water column height transposed)

All location information presented in this figure is based upon MMES engineering drawings, results of previous MMES investigations, and/or field determinations of feature and sampling locations. No representation or warranty, expressed or implied, is made as to the accuracy of the information or statements presented in this figure.

REV. 2 - 05/18/95 SAIC FILE: 95021R2/DWGS/131POTJN

Y-12 PLANT NORTH

Legend

- 925 — Groundwater Potentiometric Line (Feet Above MSL)
- - - 924 - - - Inferred Groundwater Potentiometric Contour Line (Feet Above MSL)
- ← Interpreted Groundwater Flow Direction

ic Contour

ntiometric
MSL)

low Direction

▲ GW-193 Groundwater Monitoring
Well Locations
(925.29') Water Level Measurement
May 1995

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Environmental Management Department

FIGURE 2-2

Building 9201-1 Site
Groundwater Potentiometric
Contour Map May 1995

All location information presented in this figure is based upon MMES engineering drawings, results of previous MMES investigations, and/or field determinations of feature and sampling locations. No representation or warranty, expressed or implied, is made as to the accuracy of the information or statements presented in this figure.

REV. 3 - 10/31/95 SAIC FILE: 95021R2/DWGS/275POTOT

Legend

- 925 — Groundwater Potention Line (Feet Above MSL)
- - 924 - - Inferred Groundwater P Contour Line (Feet Ab
- ← Interpreted Groundwater

ic Contour

entiometric
e MSL)

Flow Direction

▲ GW-193
(925.29')

Groundwater Monitoring
Well Locations
Water Level Measurement
May 1995

Martin Marietta Energy Systems, Inc.
Environmental Management Department

FIGURE 2-3

Building 9201-1 Site
Groundwater Potentiometric
Contour Map October 1995

Studies of the Y-12 Plant hydrogeology indicate that an overall south/southeasterly hydraulic gradient is present in the unconsolidated and bedrock intervals at the Building 9201-1 Site (HSW 1994). Seasonal variation in groundwater elevations is relatively small, but does produce an apparent northeasterly deflection of the water table in the vicinity of GW-707 and GW-810. However, the overall flow direction, for any petroleum contaminants entering groundwater from the former UST depicted for both periods of measurement, is from north to south/southeast across the site.

2.3 Groundwater Analytical Data

Analytical data for groundwater sampled at the site during site status and comprehensive monitoring are presented in Table 2-2. Original analytical laboratory results for environmental and quality control samples are presented in Appendix A. Quality control sampling (trip blank) for this round of site status monitoring indicate no cross-contamination of the samples for the analytes of interest occurred. Analytical results for this round of site status monitoring did not indicate any significant change in the level of contamination as compared to historical monitoring data. However, contaminant levels were slightly elevated as compared to the last round of site status monitoring data. This may be due to seasonal lowering of the water table during the summer, and flushing of perched contaminants during recent rainfall events.

Benzene and TPH-GRO values for GW-193 and GW-708 continued to exceed the applicable Closure Action Levels of 0.07 ppm for benzene and 1.0 ppm for TPH. Both of these wells have historically produced values in excess of these Closure Action Limits. These results produce no change in the horizontal area of groundwater contamination as defined by the comprehensive monitoring data. Analytical results for GW-657, GW-707, GW-808, GW-809, and GW-810 show no groundwater contamination detected above analytical quantitation limits, which are below the applicable Closure Action Levels. These data indicate that groundwater contamination has not migrated downgradient to the location of these wells, and suggest that the area of groundwater contamination is relatively stable over time.

These results are consistent with previous monitoring results and the calculated hydraulic gradient, velocity, and conductivity from slug testing of wells GW-193 and GW-707 (Energy Systems 1992). It is expected that contaminant levels will generally fall off slowly as contaminant degradation continues because of the slow migration and limited mixing of the contaminated groundwater.

Table 2-2. Analytical results for groundwater samples collected during site status and comprehensive monitoring and baseline sampling

Sampling event	Sampling date	TPH-GRO ¹ (ppm)	Benzene (ppm)	Ethylbenzene (ppm)	Toluene (ppm)	Xylenes (ppm)
<i>GW-193</i>						
Site status monitoring	10-19-95	*3.900	*0.520	0.480	0.045	0.300
Site status monitoring	05-04-95	*2.400	*0.350	0.280	0.077	0.200
Site status monitoring	12-14-94	*3.000	*0.620	0.320	0.230B ²	0.360B
Comprehensive monitoring	6-21-94	*4.100	*0.420	0.400	0.200	0.480
<i>GW-657</i>						
Site status monitoring	10-19-95	<0.100J ³	0.010U ⁴	0.010U	0.010U	0.010U
Site status monitoring	05-04-95	<0.100	0.010U	0.010U	0.010U	0.010U
Site status monitoring	12-14-94	<0.100	0.010U	0.010U	0.010U	0.010U
Comprehensive monitoring	6-21-94	0.100U	0.010U	0.010U	0.010U	0.010U
<i>GW-707</i>						
Site status monitoring	10-19-95	0.100J	0.010U	0.010U	0.010U	0.010U
Site status monitoring	05-04-95	0.100	.010U	0.010U	0.010U	0.010U
Site status monitoring	12-14-94	0.100	.010U	0.010U	0.010U	0.010U
Comprehensive monitoring	6-21-94	0.042J	0.002J	0.010U	0.010U	0.001J

Table 2.2 (continued)

Sampling event	Sampling date	TPH-GRO ¹ (ppm)	Benzene (ppm)	Ethylbenzene (ppm)	Toluene (ppm)	Xylenes (ppm)
<i>GW-708</i>						
Site status monitoring	10-19-95	*6.700	*0.670	0.620	0.075	0.630
Site status monitoring	05-04-95	*6.400	*0.500	0.430	0.062	0.930
Site status monitoring	12-14-94	*5.300	*0.820	0.610	0.094B	1.200B
Comprehensive monitoring	6-21-94	*5.300	*0.980	0.620	0.110	0.690
<i>GW-808</i>						
Site status monitoring	10-19-95	<0.100J	.010U	0.010U	0.010U	0.010U
Site status monitoring	05-04-95	0.100	.010U	0.010U	0.010U	0.010U
Site status monitoring	12-14-94	0.100	.010U	0.010U	0.010U	<.010B
Comprehensive monitoring	6-21-94	0.012J	.010U	0.010U	0.010U	0.006J
<i>GW-809</i>						
Site status monitoring	10-19-95	<0.100J	.010U	0.010U	0.010U	0.010U
Site status monitoring	05-04-95	0.100	.010U	0.010U	0.010U	0.010U
Site status monitoring	12-14-94	0.100	.010U	0.010U	0.010U	0.010U
Comprehensive monitoring	6-21-94	0.010	.010U	0.010U	0.010U	0.010U

Table 2.2 (continued)

Sampling event	Sampling date	TPH-GRO ¹ (ppm)	Benzene (ppm)	Ethylbenzene (ppm)	Toluene (ppm)	Xylenes (ppm)
<i>GW-810</i>						
Site status monitoring	10-19-95	<0.100J	.010U	0.010U	0.010U	0.010U
Site status monitoring	05-04-95	0.100	.010U	0.010U	0.010U	0.010U
Site status monitoring	12-14-94	0.100	.010U	0.010U	0.010U	0.010U
Comprehensive monitoring	6-21-94	0.021J	.010U	0.010U	0.010U	0.010U

¹ TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics.

² B = Indicates the analyte was found in the associated blank as well as in the sample.

³ J = Value estimated for contaminant.

⁴ U = Contaminant was not detected above quantitation limit during the analysis.

* Denotes contamination above the applicable closure action levels for the site.

3. VAPOR MONITORING

3.1 Monitoring Methods and Locations

Site status vapor monitoring has been conducted as part of the Monitoring Only program at seven access points along subsurface stormwater and sewer drainage lines that cross the Building 9201-1 Site. However, none of the subsurface utilities present at the site crosses the groundwater plume defined by the most recent data. The locations of vapor monitoring locations are illustrated in Figure 3-1.

At each utility location, the internal atmosphere was monitored using direct reading instruments. Organic vapors were measured using a Thermo Environmental™ organic vapor meter (OVM) (serial number M249385). Oxygen and lower explosive limit (LEL) were monitored with an MSA-260 combination meter (serial number M205367).

3.2 Vapor Monitoring Results

The results of site status vapor monitoring conducted October 12, 1995 at the Building 9201-1 Site are presented in Table 3-1. Measured oxygen percentages are within the range of normal air concentrations. LEL readings of 0% indicate that an explosion hazard does not exist within any of the monitored utilities. Organic vapor readings were all at 0.0 ppm. These results indicate that no detectable organic vapors derived from petroleum contamination or natural sources are present in the monitored utilities at the site. These results are consistent with previous monitoring results. These results also suggest that the slightly elevated OVM readings reported during the May 1995 site status monitoring are attributable to a transient non-UST related source, since groundwater concentrations of petroleum constituents (the likely source for any vapors) have increased slightly since the last monitoring event.

Table 3-1. Vapor monitoring results for the Building 9201-1 Site,
October 12, 1995

Sampling location	O ₂ %	LEL %	Organic vapors (ppm)	Background organic vapors (ppm)
402A	20.8	0	0.0	0.0
409	20.8	0	0.0	0.0
C-4019	20.8	0	0.0	0.0
C-4021	20.8	0	0.0	0.0
C-4112	20.8	0	0.0	0.0
C-4111	20.8	0	0.0	0.0
C-4024	20.8	0	0.0	0.0

All location information presented in this figure is based upon MMES engineering drawings, results of previous MMES investigations, and/or field determinations of feature and sampling locations. No representation or warranty, expressed or implied, is made as to the accuracy of the information or statements presented in this figure.

REV. 2 - 05/12/95 SAIC FILE: 93021R1/DWGS/131VAPOR

Y-12 PLANT NORTH

Legend

- FTL Fuel Transfer Line
- CWL Chilled Water Line
- EC Electrical Conduit

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Environmental Management Department
FIGURE 3-1
Building 9201-1 Site
Vapor Monitoring Sampling
Location Map

REFERENCES

Energy Systems (Martin Marietta Energy Systems, Inc.) 1992. *Corrective Action Plan for Underground Storage Tank 2331-U at the Building 9201-1 Site*, Y/SUB-92-99928C/3.

Energy Systems 1994. *Corrective Action Baseline Report for Underground Storage Tank 2331-U, Building 9201-1*, Y/SUB/94-99069C/Y15/2.

HSW Environmental Consultants, Inc. 1994. *Calendar Year 1993 Groundwater Quality Report for the Upper East Fork Poplar Creek Hydrogeologic Regime, Y-12 Plant, Oak Ridge, Tennessee*, Y/SUB/94-EAQ10C/2/P1.

TDEC (Tennessee Department of Environment and Conservation) 1994. *Underground Storage Tank Reference Handbook*, Second Edition.

APPENDIX A
LABORATORY ANALYTICAL RESULTS FOR
SITE STATUS MONITORING
(10/19/95)

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No 20373

SAMPLER: (Signature)		Dept.		Building/Phone								REMARKS	
REQUISITION NUMBER	SAMPLING DATE	SAMPLING TIME	COMP.	GRAB	SAMPLE LOCATION	NO. OF CON- TAINERS	WATER	OIL	SOIL	SOLVENT	SLUDGE		OTHER
E952924415	10/19/90	0945			GW 193	4	/						UST's 9201-1
E952924417		1325			GW 657	4	/						
E952924420		1404			GW 707	4	/						
E952924422		0941			GW 708	4	/						
E952924423		1140			GW 808	4	/						
E952924424		1110			GW 809	4	/						
E952924425		1350			GW 810	4	/						
E952924449		0755			T/B	2	/						

UCN-15487 (2 10-84)

Signatures Required on Back

Relinquished By: (Signature) <i>[Signature]</i>	Date / Time 10/19/95 1510	Received By: (Signature) <i>[Signature]</i>	Date / Time 10/19/95 1510	Dept. 7224	Building 9207	Phone 14347
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time	Dept.	Building	Phone
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time	Dept.	Building	Phone
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Date / Time	Dept.	Building	Phone
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REMARKS:

RETURN TO: ENVIRONMENTAL MONITORING, 9704-1, MS - 1, 4-3980.

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OFFICIAL REPORT

/30/95 09:00:56

Y-12 ANALYTICAL SERVICES ORGANIZATION

PAGE 1 OF 1

<u>SMITTER</u>	<u>ADDRESS</u>	<u>CUSTOMER ID</u>	<u>REQ NO</u>	<u>SAMPLE NO</u>	<u>MTC</u>	<u>STATUS</u>
Bohrman, Donald Edwa	Building 9115 MS 8219	UST GW-193		E952920015	8601	APPROVED
TE SAMPLED: 10/19/95 09:45:00	DATE NEEDED: 10/26/95	LOCATION: 9201-1 GW-193			CHARGE #:	S2205F26
TE RECEIVED: 10/19/95	DATE COMPLETED: 10/26/95	PROJECT CODE:			CASE:	U03130
MPLER: 13303	SAMPLE DESCRIPTION: GRAB					

FINAL APPROVAL:

REMARKS: FAC ID # 0-010117 FOR DON BOHRMAN , 1 WEEK TURNAROUND

ST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
EP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 10/24/95 11:39:00	APPROVER: E030124

<u>S NUMBER</u>	<u>DETERMINATION</u>	<u>DT</u>	<u>RESULT</u>	<u>CONFIDENCE</u>	<u>UNIT</u>
0	Gasoline Range Organics		3900		ug/L
432	Benzene		520		ug/L
10414	Ethylbenzene		480		ug/L
18883	Toluene		45		ug/L
130207	Xylene		300		ug/L
	GRO Quantitation Limit		100		ug/L
	BTEX Quantitation Limit		10		ug/L
	GRO Amount in Blank		NONE		ug/L

UNCLASSIFIED

*** LAST PAGE ***

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OFFICIAL REPORT

10/30/95 09:01:03

Y-12 ANALYTICAL SERVICES ORGANIZATION

PAGE 1 OF 1

<u>SUBMITTER</u>	<u>ADDRESS</u>	<u>CUSTOMER ID</u>	<u>REQ NO</u>	<u>SAMPLE NO</u>	<u>MTG</u>	<u>STATUS</u>
Bohrman, Donald Edwa	Building 9115 MS 8219	UST GW-657		E952920017	8601	APPROVED
DATE SAMPLED: 10/19/95 13:25:00	DATE NEEDED: 10/26/95	LOCATION: 9201-1 GW-657			CHARGE #:	S2205F26
DATE RECEIVED: 10/19/95	DATE COMPLETED: 10/26/95	PROJECT CODE:			CASE:	U03130
SAMPLER: 13303	SAMPLE DESCRIPTION: GRAB					

FINAL APPROVAL:

COMMENTS: FAC ID # 0-010117 FOR DON BOHRMAN , 1 WEEK TURNAROUND

TEST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
PREP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 10/24/95 13:04:00	APPROVER: E030124

CAS NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
GRO	Gasoline Range Organics		<100 J		ug/L
71432	Benzene		10 U		ug/L
100414	Ethylbenzene		10 U		ug/L
108883	Toluene		10 U		ug/L
1330207	Xylene		10 U		ug/L
	GRO Quantitation Limit		100		ug/L
	BTEX Quantitation Limit		10		ug/L
	GRO Amount in Blank		NONE		ug/L

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Y-12 ANALYTICAL SERVICES ORGANIZATION

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JBMITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
Bohrman, Donald Edwa	Building 9115 MS 8219	UST GW-707		E952920020	8601	APPROVED
DATE SAMPLED: 10/19/95 14:04:00	DATE NEEDED: 10/26/95	LOCATION: 9201-1 GW-707			CHARGE #:	S2205F26
DATE RECEIVED: 10/19/95	DATE COMPLETED: 10/26/95	PROJECT CODE:			CASE:	U03130
AMPLER: 13303	SAMPLE DESCRIPTION: GRAB					

FINAL APPROVAL:

REMARKS: FAC ID # 0-010117 FOR DON BOHRMAN , 1 WEEK TURNAROUND

TEST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
REP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 10/23/95 14:43:00	APPROVER: E030124

AS NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
30	Gasoline Range Organics		<100 J		ug/L
1432	Benzene		10 U		ug/L
30414	Ethylbenzene		10 U		ug/L
38883	Toluene		10 U		ug/L
330207	Xylene		10 U		ug/L
	GRO Quantitation Limit		100		ug/L
	BTEX Quantitation Limit		10		ug/L
	GRO Amount in Blank		NONE		ug/L

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UBMITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
ohrman, Donald Edwa	Building 9115 MS 8219	UST GW-708		E952920022	8601	APPROVED
ATE SAMPLED: 10/19/95 09:41:00	DATE NEEDED: 10/26/95	LOCATION: 9201-1 GW-708			CHARGE #:	S2205F26
ATE RECEIVED: 10/19/95	DATE COMPLETED: 10/26/95	PROJECT CODE:			CASE:	U03130
AMPLER: 13303	SAMPLE DESCRIPTION: GRAB					

FINAL APPROVAL:

OMMENTS: FAC ID # 0-010117 FOR DON BOHRMAN , 1 WEEK TURNAROUND

EST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
REP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 10/24/95 15:05:00	APPROVER: E030124

AS NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
RO	Gasoline Range Organics		6700		ug/L
1432	Benzene		670		ug/L
00414	Ethylbenzene		620		ug/L
08883	Toluene		75		ug/L
330207	Xylene		630		ug/L
	GRO Quantitation Limit		100		ug/L
	BTEX Quantitation Limit		10		ug/L
	GRO Amount in Blank		NONE		ug/L

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<u>SUBMITTER</u>	<u>ADDRESS</u>	<u>CUSTOMER ID</u>	<u>REQ NO</u>	<u>SAMPLE NO</u>	<u>MTC</u>	<u>STATUS</u>
Bohrman, Donald Edwa	Building 9115 MS 8219	UST GW-808		E952920023	8601	APPROVED
DATE SAMPLED: 10/19/95 11:00:00	DATE NEEDED: 10/26/95	LOCATION: 9201-1 GW-808			CHARGE #:	S2205F26
DATE RECEIVED: 10/19/95	DATE COMPLETED: 10/26/95	PROJECT CODE:			CASE:	U03130
AMPLER: 13303	SAMPLE DESCRIPTION: GRAB					

FINAL APPROVAL:

REMARKS: FAC ID # 0-010117 FOR DON BOHRMAN , 1 WEEK TURNAROUND

TEST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
IEP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 10/23/95 15:18:00	APPROVER: E030124

<u>IS NUMBER</u>	<u>DETERMINATION</u>	<u>DT</u>	<u>RESULT</u>	<u>CONFIDENCE</u>	<u>UNIT</u>
10	Gasoline Range Organics		<100 J		ug/L
1432	Benzene		10 U		ug/L
10414	Ethylbenzene		10 U		ug/L
18883	Toluene		10 U		ug/L
130207	Xylene		10 U		ug/L
	GRO Quantitation Limit		100		ug/L
	BTEX Quantitation Limit		10		ug/L
	GRO Amount in Blank		NONE		ug/L

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<u>WHITTER</u>	<u>ADDRESS</u>	<u>CUSTOMER ID</u>	<u>REQ NO</u>	<u>SAMPLE NO</u>	<u>MTC</u>	<u>STATUS</u>
Bohrman, Donald Edwa	Building 9115 MS 8219	UST GW-809		E952920024	8601	APPROVED
TE SAMPLED: 10/19/95 11:10:00	DATE NEEDED: 10/26/95	LOCATION: 9201-1 GW-809			CHARGE #: S2205F26	
TE RECEIVED: 10/19/95	DATE COMPLETED: 10/26/95	PROJECT CODE:			CASE: U03130	
MPLER: 13303	SAMPLE DESCRIPTION: GRAB					

FINAL APPROVAL:

REMARKS: FAC ID # 0-010117 FOR DON BOHRMAN , 1 WEEK TURNAROUND

TEST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
REP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 10/24/95 15:40:00	APPROVER: E030124

<u>S NUMBER</u>	<u>DETERMINATION</u>	<u>DT</u>	<u>RESULT</u>	<u>CONFIDENCE</u>	<u>UNIT</u>
10	Gasoline Range Organics		<100 J		ug/L
432	Benzene		10 U		ug/L
10414	Ethylbenzene		10 U		ug/L
18883	Toluene		10 U		ug/L
130207	Xylene		10 U		ug/L
	GRO Quantitation Limit		100		ug/L
	BTEX Quantitation Limit		10		ug/L
	GRO Amount in Blank		NONE		ug/L

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IBMITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
Bohrman, Donald Edwa	Building 9115 MS 8219	UST_GW-810		E952920025	8601	APPROVED
DATE SAMPLED: 10/19/95 13:50:00	DATE NEEDED: 10/26/95	LOCATION: 9201-1 GW-810			CHARGE #:	S2205F26
DATE RECEIVED: 10/19/95	DATE COMPLETED: 10/26/95	PROJECT CODE:			CASE:	U03130
AMPLER: 13303	SAMPLE DESCRIPTION: GRAB					

FINAL APPROVAL

REMARKS: FAC ID # 0-010117 FOR DON BOHRMAN , 1 WEEK TURNAROUND

TEST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
REP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 10/23/95 15:53:00	APPROVER: E030124

IS NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
10	Gasoline Range Organics		<100 J		ug/L
1432	Benzene		10 U		ug/L
10414	Ethylbenzene		10 U		ug/L
18883	Toluene		10 U		ug/L
130207	Xylene		10 U		ug/L
	GRO Quantitation Limit		100		ug/L
	BTEX Quantitation Limit		10		ug/L
	GRO Amount in Blank		NONE		ug/L

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JBMITTER ADDRESS CUSTOMER ID REQ NO SAMPLE NO MTC STATUS
 ngram, Edward Micha Building 9115 MS 8219 E952920049 8601 APPROVED
 DATE SAMPLED: 10/19/95 07:55:00 DATE NEEDED: 10/26/95 LOCATION: TRIP BLANK/UST9201-1 CHARGE #: S2205F26
 DATE RECEIVED: 10/19/95 DATE COMPLETED: 10/26/95 PROJECT CODE: CASE: U03130
 AMPLER: 13303 SAMPLE DESCRIPTION: GRAB FINAL APPROVAL:
 COMMENTS: UST-S AT 9201-1 *L. K. Paul*

EST: VOA624 Volatile Organics by GC/MS (EPA 624) REPLICATE: 1 STATUS: APPROVED
 REP MTH: VOA624 PROC MTH: EPA 624 PHASE: TIME ANALYZED: 10/24/95 13:57:00 APPROVER: E030124
 COMMENTS: Tentatively Identified Compounds

Number TICs found: 1 CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
	UNKNOWN	7:14	5	J

AS NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
4873	Chloromethane		10 U		ug/L
4839	Bromomethane		10 U		ug/L
5014	Vinyl chloride		10 U		ug/L
5003	Chloroethane		10 U		ug/L
5694	Trichlorofluoromethane		10 U		ug/L
5092	Methylene chloride		1 J		ug/L
5354	1,1-Dichloroethene		10 U		ug/L
5343	1,1-Dichloroethane		10 U		ug/L
56605	trans-1,2-Dichloroethene		10 U		ug/L
7663	Chloroform		10 U		ug/L
07062	1,2-Dichloroethane		10 U		ug/L
1556	1,1,1-Trichloroethane		10 U		ug/L
6235	Carbon tetrachloride		10 U		ug/L
5274	Bromodichloromethane		10 U		ug/L
10758	2-Chloroethylvinyl ether		10 U		ug/L
8875	1,2-Dichloropropane		10 U		ug/L
0061015	cis-1,3-Dichloropropene		10 U		ug/L
9016	Trichloroethene		10 U		ug/L
24481	Dibromochloromethane		10 U		ug/L
9005	1,1,2-Trichloroethane		10 U		ug/L
1432	Benzene		10 U		ug/L

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SAMPLE E952920049

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0061026	trans-1,3-Dichloropropene	10 U	ug/L
'5252	Bromoform	10 U	ug/L
27184	Tetrachloroethene	10 U	ug/L
'9345	1,1,2,2,-Tetrachloroethane	10 U	ug/L
08883	Toluene	10 U	ug/L
08907	Chlorobenzene	10 U	ug/L
00414	Ethylbenzene	10 U	ug/L

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