Y/SUB--96-99069C/Y22/2
Y/SUB/96-99069C/Y22/2

**SITE STATUS MONITORING
REPORT
FOR
UNDERGROUND STORAGE
TANK 0134-U
AT BUILDING 9204-2**

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

March 1996

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

MASTER

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

contributed to the preparation of this document and should not
be considered an eligible contractor for its review.

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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**

MASTER

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LIST OF ACRONYMS

BGS	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
Energy Systems	Lockheed Martin Energy Systems, Inc.
LEL	lower explosive limit
TDEC	Tennessee Department of Environment and Conservation
TGD	Technical Guidance Document
TPH-GRO	total petroleum hydrocarbons-gasoline range organics
UEFPC	Upper East Fork Poplar Creek
UST	underground storage tank
ΣBTX	total benzene, toluene, and xylenes

SIGNATURE PAGE

SITE STATUS MONITORING FOR THE BUILDING 9204-2 SITE

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

William D. Keefer

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

William D. Keefer / TN 3328

Signature TN Lic./Reg. #

3/20/96

Date

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

(Print or Type)

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

County of Anderson State of Tennessee

Subscribed and Sworn to before me this

20 day of March, 19 96.

Suzanne Knott

Notary Public

NOTARY PUBLIC STATE OF TENNESSEE AT LARGE.

MY COMMISSION EXPIRES: Dec. 22, 1999.

BONDED THROUGH NOTARY PUBLIC UNDERWRITERS.

My Commission expires: _____ (Notary Seal)

CERTIFICATION STATEMENT

SITE STATUS MONITORING FOR THE BUILDING 9204-2 SITE FACILITY ID 0-010117

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

4/11/96
Date Signed

Lockheed Martin Energy Systems, Inc.
Co-Operator

By:

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

3/29/96
Date Signed

NOTARY
(Stamp/Seal)

Note: Both signatures have been notarized per requirements.

1.0 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) 0134-U at the Oak Ridge Y-12 Plant Building 9204-2 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 March 9, 1995). This document presents the results of the second semiannual site status monitoring that was performed in March 1996. Site ranking, as part of the Monitoring Only Program, has also been performed using the March 1996 groundwater data. 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 water level measurement and sampling of monitoring wells GW-204, GW-656, GW-805, GW-806, and GW-807. Section 3 presents data from vapor monitoring conducted in subsurface utilities present at the site.

1.2 SITE DESCRIPTION

The Building 9204-2 Site is located within the central portion of the Oak Ridge Y-12 Plant in Oak Ridge, Tennessee (Figure 1-1). This area is within the Protected Area of the Y-12 Plant, which is access restricted. The UST site is generally defined as the area directly east of Building 9204-2 and southwest of Building 9720-30 (Figure 1-2). The site was previously the location of a gasoline UST used to fuel an emergency generator at Building 9204-2. The tank has been excavated and removed from the site.

The UST was a 117-gallon gasoline tank that was first suspected of leaking in 1988. Tank 0134-U was excavated on August 26, 1988, and several small holes were observed in the tank wall during removal. Initial Abatement/Tank Removal and Site Investigation/Environmental Assessment sampling indicated no presence of petroleum contamination in soil above applicable TDEC Closure Action Levels, but petroleum contamination of groundwater above applicable TDEC Closure Action Levels was identified. A Corrective Action Plan (CAP) for groundwater remediation was prepared and approved, and Baseline Monitoring was performed in August 1993 in support of corrective action. Baseline monitoring data were submitted to TDEC in March 1994 as part of a Closure Report. Additional soil and groundwater samples were collected to support Site Ranking before determining the disposition of the site. These samples 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.

BUILDING 9204-2

Figure 1-1.

MARTIN MARIETTA ENERGY SYSTEMS, INC.
ENVIRONMENTAL MANAGEMENT DEPARTMENT
LOCATION OF THE BUILDING 9204-2 SITE
AT THE OAK RIDGE Y-12 PLANT

Figure 1-2. Building 9204-2 Site Map.

The topography of the Building 9204-2 Site gently decreases in elevation from northwest to southeast across the facility. A surface water and groundwater divide coincident with the trace of Upper East Fork Poplar Creek (UEFPC) lies approximately 700 ft southeast of the site. Given the nature of the surface topography in the vicinity of the Building 9204-2 Site, any petroleum contamination resulting from past UST operations would be expected to generally migrate southeast away from the source area.

2.0 GROUNDWATER MONITORING

2.1 GROUNDWATER MEASUREMENT, SAMPLE COLLECTION, AND ANALYSIS

2.1.1 Well Locations

As directed by TDEC, all existing monitoring wells at the site have been measured and sampled as part of the Monitoring Only program. These wells are GW-204, GW-656, GW-805, GW-806, and GW-807. The locations of these wells are presented in Figure 2-1. Well installation reports and construction details for monitoring wells GW-204 and GW-656 are presented in the CAP for the Site [*Corrective Action Plan for Underground Storage Tank 0134-U at the Building 9204-2 Site*, Appendix C, Y/SUB-92-99928C/4 (Energy Systems 1992)]. Well installation reports and construction details for monitoring wells GW-805, GW-806, and GW-807 that were installed in July 1993, are presented in the Closure Report for the Site [*Closure Report for Underground Storage Tank 0134-U, Building 9204-2*, Appendix B, Y/SUB/94-99069C/Y15/5 (Energy Systems 1994)].

2.1.2 Groundwater Measurement and Sampling

All groundwater monitoring wells at the Building 9204-2 Site were measured for water level and sampled for the applicable petroleum constituents on March 8, 1996 as part of site status monitoring. All wells were measured for static water level and purged prior to sampling. Monitoring wells were purged of three well volumes except wells GW-204, which was purged to dryness after 2.0 well volumes, well GW-805, which was purged to dryness after 2.9 well volumes, and well GW-807, which was purged to dryness after 2.1 well volumes. Field measurement of pH, conductivity, temperature, and dissolved oxygen was conducted during purging to ensure representativeness for sampling. Well GW-805 demonstrated elevated water temperatures, but all other parameters were generally consistent across the site. Wells purged to dryness were allowed to recover prior to sampling. The wells were sampled for analysis, using a bailer, and then collected into pre-prepared bottles. No measurable free product or odors were encountered during water level measurement or sampling in any of these wells.

2.1.3 Sample Analysis

Groundwater samples were analyzed for total petroleum hydrocarbons-gasoline range organics (TPH-GRO), and for benzene, toluene, ethylbenzene, and xylenes (BTEX) at the Y-12 Plant Environmental Laboratory (a TDEC Division of UST-approved laboratory). Analytical laboratory reports for groundwater sampled during site status monitoring (3/96) are included in Appendix A.

Figure 2-1. Location of Groundwater Monitoring Wells at the Building 9204-2 Site.

2.2 POTENTIOMETRIC DATA

Potentiometric data for monitoring wells at the Building 9204-2 Site from site status monitoring (9/95 and 3/96) measurement events are presented in Table 2-1. Figures 2-2 and 2-3 present potentiometric contour maps from these two periods. These figures indicate the presence of a slightly irregular potentiometric surface with a generally east-southeasterly gradient. The apparent easterly deflection of the potentiometric gradient at the site may be due to small differences in head between unconsolidated and weathered bedrock wells and the degree of urbanization in this portion of the Y-12 Plant. The 800-series wells at the site were all completed in unconsolidated material at shallow depths [9.6-12.2 ft below ground surface (BGS)], whereas GW-204 and GW-656 were completed in weathered bedrock at 17.3 and 20.7 ft BGS, respectively.

Very little seasonal difference exists between the potentiometric surfaces and water levels in wells at the site remained consistent during this period. 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 9204-2 Site (HSW 1994). Seasonal variation in groundwater elevations is small, but does appear to produce a localized southerly gradient in the northern portion of the site during wetter weather and a generally southeastern gradient in drier weather. Overall, groundwater flow at the site is to the east/southeast toward Upper East Fork Poplar Creek.

2.3 GROUNDWATER ANALYTICAL DATA

Analytical results for groundwater sampled at the site during site status and comprehensive monitoring, and site ranking are presented in Table 2-2. Analytical results indicate the presence of TPH-GRO groundwater contamination above the applicable TDEC Closure Action Level of 1.0 ppm TPH at a single monitoring well (GW-656). Monitoring well GW-806 indicates the presence of TPH-GRO contamination above the analytical quantitation limit but well below the applicable TDEC Closure Action Level. Since GW-656 is bounded by the remaining four monitoring wells, the horizontal extent of TPH-GRO contamination in groundwater is well constrained. The level of TPH-GRO contamination is low, and the concentration of contamination has fallen off or remained the same over the past year. The extent of groundwater contamination has remained relatively stable at the site throughout the period monitored. This is consistent with previous monitoring results and the calculated hydraulic gradient, velocity, and conductivity from slug testing of wells GW-204 and GW-656 (Energy Systems 1992).

The analytical results do not indicate the presence of benzene contamination in any of the wells during site status monitoring. Quality control samples collected during this sampling include a duplicate (805A), a trip blank, and an equipment rinsate. Analytical results of quality control samples indicate the data presented in this report is reproducible and unaffected by cross-

Figure 2-2. Building 9204-2 Site Groundwater Potentiometric Contour Map, Sept. 1995.

Figure 2-3. Building 9204-2 Site Groundwater Potentiometric Contour Map, March 1996.

contamination. In general, it is expected that contaminant levels will fall off slowly as contaminant degradation proceeds because of the slow migration and limited mixing of the groundwater at the site.

**Table 2-1. Water Level Measurements at the Building 9204-2 Site
for the Periods of March 1996 and September 1995**

Monitoring well number	Date measured	Total well depth (ft-BGS)	Top of casing (ft-MSL)	Top of casing to water level (ft-BTOC)	Potentiometric surface elevation (ft-MSL)
GW-204	3/8/96	20.3	955.47	9.74	945.73
	9/7/95			9.76	945.71
GW-656	3/8/96	20.6	954.90	9.85	945.05
	9/7/95			10.40	944.50
GW-805	3/8/96	11.6	955.02	8.91	946.11
	9/7/95			8.75	946.27
GW-806	3/8/96	11.5	951.95	7.29	944.66
	9/7/95			7.42	944.53
GW-807	3/8/96	14.0	955.36	11.57	943.79
	9/7/95			12.0	943.36

Notes:

BGS - below ground surface

MSL - mean sea level

BTOC - below top of casing

**Table 2-2. Analytical Results for Groundwater Samples Collected During
Site Status and Comprehensive Monitoring, Site Ranking, and Baseline Sampling**

Sampling event	Sampling date	TPH-GRO ¹ (ppm)	Benzene (ppm)	Ethylbenzene (ppm)	Toluene (ppm)	Xylenes (ppm)
GW-204						
Site status monitoring	3-8-96	<0.100 ²	0.010U ³	0.010U	0.010U	0.010U
Site status monitoring	9-7-95	<0.100	0.010U	0.010U	0.010U	<0.010
Comprehensive monitoring	3-29-95	0.150	<0.010	<0.010	<0.010	0.010U
Site ranking	9-2-94	<0.100	0.010U	<0.010	<0.010	0.010U
GW-656						
Site status monitoring	3-8-96	*1.800	<0.010	0.010U	0.010U	0.010U
Site status monitoring	9-7-95	*1.800	<0.010	0.010U	0.010U	0.010U
Comprehensive monitoring	3-29-95	*2.300	<0.010	0.010U	0.010U	<0.010
Site ranking	9-2-94	*2.700D ⁴	<0.010	0.010U	0.010U	0.010U
GW-805						
Site status monitoring	3-8-96	<0.100	0.010U	0.010U	0.010U	0.010U
Site status monitoring	9-7-95	<0.100	0.010U	0.010U	0.010U	0.010U
Comprehensive monitoring	3-29-95	<0.100	0.010U	0.010U	0.010U	0.010U
Site ranking	9-2-94	0.280	0.010U	0.010U	0.010U	0.010U
GW-806						
Site status monitoring	3-8-96	0.160	0.010U	0.010U	0.010U	0.010U
Site status monitoring	9-7-95	0.110	0.010U	0.010U	0.010U	0.010U
Comprehensive monitoring	3-29-95	0.160	0.010U	0.010U	0.010U	0.010U
Site ranking	9-2-94	0.290	0.010U	0.010U	<0.010	0.010U

Table 2-2 (continued)

Sampling event	Sampling date	TPH-GRO ¹ (ppm)	Benzene (ppm)	Ethylbenzene (ppm)	Toluene (ppm)	Xylenes (ppm)
<i>GW-807</i>						
Site status monitoring	3-8-96	<0.100	0.010U	0.010U	0.010U	0.010U
Site status monitoring	9-7-95	<0.100	0.010U	0.010U	0.010U	0.010U
Comprehensive monitoring	3-29-95	<0100	0.010U	0.010U	0.010U	0.010U
Site ranking	9-2-94	<0.100	0.010U	0.010U	0.010U	0.010U

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

² < - Contaminant was not detected above quantitation limit during the analysis.

³ U - Contaminant was not detected above quantitation limit during the analysis.

⁴ D - Sample was diluted during analysis.

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

3.0 VAPOR MONITORING

3.1 MONITORING METHODS AND LOCATIONS

Vapor monitoring as part of site status monitoring was conducted at six access points along subsurface stormwater and sewer drainage lines in the vicinity of the Building 9204-2 Site. These points correspond to the points measured during comprehensive monitoring, and will be used throughout the Monitoring Only Program. However, none of the subsurface utilities present at the site cross the groundwater plume defined by the most recent data. The locations of vapor monitoring locations are illustrated in Figure 3-1.

At each location, the utility line and/or valve pit atmosphere was monitored using direct reading instruments. Organic vapors were measured using an organic vapor meter, and oxygen and lower explosive limit (LEL) were monitored with an MSA-260.

3.2 VAPOR MONITORING RESULTS

The results of site status vapor monitoring conducted March 12, 1996 at the Building 9204-2 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 of 0.0 to 0.1 ppm indicate no concentrations of volatile organic compounds above background are present in the utility line atmospheres.

**Table 3-1. Vapor Monitoring Results for the Building 9204-2 Site,
August 31, 1995**

Sampling location	O ₂ %	LEL %	Organic vapors (ppm)
B-1001	20.8	0	0.0
B-1002	20.8	0	0.0
B-1003	20.8	0	0.0
B-1004	20.8	0	0.0
B-1005	20.8	0	0.1
B-1006	20.8	0	0.0

Figure 3-1. Organic Vapor Monitoring Points at the Building 9204-2 Site.

REFERENCES

- Energy Systems (Martin Marietta Energy Systems, Inc.) 1992. *Corrective Action Plan for Underground Storage Tank 0134-U at the Building 9204-2 Site*, Y/SUB-92-99928C/4.
- Energy Systems 1994. *Closure Report for Underground Storage Tank 0134-U, Building 9204-2*, Appendix B, Y/SUB/94-99069C/Y15/5.
- 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
GROUNDWATER SAMPLING

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SMITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTIC	STATUS
Bohrman, Donald Edwa	Building 9115 Room 0102 M.S.8219	GW-204		E960660000	8601	APPROVED
DATE SAMPLED: 03/08/96 13:10:00	DATE NEEDED: 03/15/96	LOCATION: 9204-2 (GW-204)			CHARGE #:	S2205F29
DATE RECEIVED: 03/08/96	DATE COMPLETED: 03/14/96	PROJECT CODE:			CASE:	U03117
AMPLER: 029776	SAMPLE DESCRIPTION: GRAB	FINAL APPROVAL:				

MENTS: UST GROUNDWATER WELLS, 1 WEEK TURNAROUND/DON BOHRMAN. FAC.I.D.#0-010117

ST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
EP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 03/13/96 12:44:00	APPROVER: E030124

NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
64	Gasoline Range Organics		<100		ug/L
32	Benzene		10 U		ug/L
414	Ethylbenzene		10 U		ug/L
883	Toluene		10 U		ug/L
0207	Xylene		10 U		ug/L
72	GRO Quantitation Limit		100		ug/L
12	BTEX Quantitation Limit		10		ug/L
61	GRO Amount in Blank		NONE		ug/L

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SMITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
Bohrman, Donald Edwa	Building 9115 Room 0102 M.S.8219	GW-656		E960660001	8601	APPROVED
DATE SAMPLED: 03/08/96 13:22:00	DATE NEEDED: 03/15/96	LOCATION: 9204-2 (GW-656)			CHARGE #:	S2205F29
DATE RECEIVED: 03/08/96	DATE COMPLETED: 03/14/96	PROJECT CODE:			CASE:	U03117
AMPLER: 029776	SAMPLE DESCRIPTION: GRAB	FINAL APPROVAL:				

REMARKS: UST GROUNDWATER WELLS, 1 WEEK TURNAROUND/DON BOHRMAN. FAC. I.D. #0-010117

ST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
EP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 03/13/96 13:20:00	APPROVER: E030124

S. NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
564	Gasoline Range Organics		1800		ug/L
432	Benzene		<10		ug/L
0414	Ethylbenzene		10 U		ug/L
8883	Toluene		10 U		ug/L
30207	Xylene		10 U		ug/L
572	GRO Quantitation Limit		100		ug/L
912	BTEX Quantitation Limit		10		ug/L
561	GRO Amount in Blank		NONE		ug/L

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Y-12 ANALYTICAL SERVICES ORGANIZATION

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MITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
Bohrman, Donald Edwa	Building 9115 Room 0102 M.S.8219	GW-805A		E960660002	8601	APPROVED
E SAMPLED: 03/08/96 13:33:00		DATE NEEDED: 03/15/96		LOCATION: 9204-2 (GW-805A)		CHARGE #: S2205F29
E RECEIVED: 03/08/96		DATE COMPLETED: 03/14/96		PROJECT CODE:		CASE: U03117
PLER: 029776		SAMPLE DESCRIPTION: GRAB		FINAL APPROVAL:		

MENTS: UST GROUNDWATER WELLS, 1 WEEK TURNAROUND/DON BOHRMAN. FAC. I.D.# 0-010117

T: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
P MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 03/13/96 14:03:00	APPROVER: E030124

NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
64	Gasoline Range Organics		<100		ug/L
32	Benzene		10 U		ug/L
414	Ethylbenzene		10 U		ug/L
883	Toluene		10 U		ug/L
0207	Xylene		10 U		ug/L
72	GRO Quantitation Limit		100		ug/L
12	BTEX Quantitation Limit		10		ug/L
61	GRO Amount in Blank		NONE		ug/L

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SMITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
Bohrman, Donald Edwa	Building 9115 Room 0102 M.S.8219	GW-805		E960660003	8601	APPROVED
DATE SAMPLED: 03/08/96 13:33:00	DATE NEEDED: 03/15/96	LOCATION: 9204-2 (GW-805)			CHARGE #:	S2205F29
DATE RECEIVED: 03/08/96	DATE COMPLETED: 03/14/96	PROJECT CODE:			CASE:	U03117
AMPLER: 029776	SAMPLE DESCRIPTION: GRAB	FINAL APPROVAL:				

REMARKS: UST GROUNDWATER WELLS, 1 WEEK TURNAROUND/DON BOHRMAN. FAC. I.D.#0-010117

ST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
EP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 03/13/96 14:38:00	APPROVER: E030124

S NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
664	Gasoline Range Organics		<100		ug/L
432	Benzene		10 U		ug/L
0414	Ethylbenzene		10 U		ug/L
8883	Toluene		10 U		ug/L
60207	Xylene		10 U		ug/L
672	GRO Quantitation Limit		100		ug/L
712	BTEX Quantitation Limit		10		ug/L
661	GRO Amount in Blank		NONE		ug/L

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SMITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
Bohrman, Donald Edwa	Building 9115 Room 0102 M.S.8219	GW-806		E960660004	8601	APPROVED
TE SAMPLED: 03/08/96 13:50:00	DATE NEEDED: 03/15/96	LOCATION: 9204-2 (GW-806)			CHARGE #:	S2205F29
TE RECEIVED: 03/08/96	DATE COMPLETED: 03/14/96	PROJECT CODE:			CASE:	U03117
AMPLER: 029776	SAMPLE DESCRIPTION: GRAB	FINAL APPROVAL:				

MENTS: UST GROUNDWATER WELLS, 1 WEEK TURNAROUND/DON BOHRMAN. FAC. I.D.#0-010117

ST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
EP MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 03/14/96 10:15:00	APPROVER: E030124

S NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
664	Gasoline Range Organics		160		ug/L
32	Benzene		10 U		ug/L
414	Ethylbenzene		10 U		ug/L
8883	Toluene		10U		ug/L
60207	Xylene		10 U		ug/L
672	GRO Quantitation Limit		100		ug/L
712	BTEX Quantitation Limit		10		ug/L
661	GRO Amount in Blank		NONE		ug/L

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Y-12 ANALYTICAL SERVICES ORGANIZATION

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MITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
Bohrman, Donald Edwa	Building 9115 Room 0102 M.S.8219	GW-807		E960660005	8601	APPROVED
E SAMPLED: 03/08/96 00:00:00	DATE NEEDED: 03/15/96	LOCATION: 9204-2 (GW-807)			CHARGE #:	S2205F29
E RECEIVED: 03/08/96	DATE COMPLETED: 03/14/96	PROJECT CODE:			CASE:	U03117
PLER: 029776	SAMPLE DESCRIPTION: GRAB	FINAL APPROVAL:				

MENTS: UST GROUNDWATER WELLS, 1 WEEK TURNAROUND/DON BOHRMAN. FAC. I.D. #0-010117

T: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
P MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 03/14/96 10:51:00	APPROVER: E030124

NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
64	Gasoline Range Organics		<100		ug/L
32	Benzene		10 U		ug/L
414	Ethylbenzene		10 U		ug/L
883	Toluene		10 U		ug/L
0207	Xylene		10 U		ug/L
72	GRO Quantitation Limit		100		ug/L
12	BTEX Quantitation Limit		10		ug/L
61	GRO Amount in Blank		NONE		ug/L

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Y-12 ANALYTICAL SERVICES ORGANIZATION

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SMITTER	ADDRESS	CUSTOMER ID	REQ NO	SAMPLE NO	MTC	STATUS
Bohrman, Donald Edwa	Building 9115 Room 0102 M.S.8219	EQPT. RINSE		E960660006	8601	APPROVED
DATE SAMPLED: 03/08/96 12:00:00	DATE NEEDED: 03/15/96	LOCATION: 9204-2 (EQPT.RINSE)			CHARGE #:	S2205F29
DATE RECEIVED: 03/08/96	DATE COMPLETED: 03/14/96	PROJECT CODE:			CASE:	U03117
AMPLER: 029776	SAMPLE DESCRIPTION: GRAB	FINAL APPROVAL:				

REMARKS: UST GW. WELLS EQPT. RINSE, 1 WK TURNAROUND/D.BOHRMAN. FAC.I.D.#0-010117

ST: GRO	TPH Gasoline Range Organics Including BTEX	REPLICATE: 1	STATUS: APPROVED
PROC MTH:	PROC MTH: SW846 8020 PHASE:	TIME ANALYZED: 03/14/96 11:27:00	APPROVER: E030124

NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
64	Gasoline Range Organics		<100		ug/L
32	Benzene		10 U		ug/L
414	Ethylbenzene		10 U		ug/L
883	Toluene		10 U		ug/L
0207	Xylene		10 U		ug/L
72	GRO Quantitation Limit		100		ug/L
12	BTEX Quantitation Limit		10		ug/L
61	GRO Amount in Blank		NONE		ug/L

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<u>MITTER</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 Room 0102 M.S.8219	TRIP BLANK		E960660007	8601	APPROVED
DATE SAMPLED: 03/08/96 12:00:00	DATE NEEDED: 03/15/96	LOCATION: 9207 (UST WELLS T.B)			CHARGE #: S2211601	
DATE RECEIVED: 03/08/96	DATE COMPLETED: 03/12/96	PROJECT CODE:			CASE: U03117	
AMPLER: 029776	SAMPLE DESCRIPTION: GRAB	FINAL APPROVAL:				

REMARKS: UST G.W. WELLS TRIP BLANK, 1 WK TURNAROUND/D. BOHRMAN. FAC. I.D.#0-010117

TEST: VOA624	Volatile Organics by GC/MS (EPA 624)	REPLICATE: 1	STATUS: APPROVED
PROC MTH: EPA624	PROC MTH: EPA 624	PHASE:	TIME ANALYZED: 03/11/96 12:50:00
			APPROVER: E030124

NUMBER	DETERMINATION	DT	RESULT	CONFIDENCE	UNIT
73	Chloromethane		10 U		ug/L
39	Bromomethane		10 U		ug/L
14	Vinyl chloride		10 U		ug/L
03	Chloroethane		10 U		ug/L
94	Trichlorofluoromethane		10 U		ug/L
92	Methylene chloride		10 U		ug/L
54	1,1-Dichloroethene		10 U		ug/L
43	1,1-Dichloroethane		10 U		ug/L
605	trans-1,2-Dichloroethene		10 U		ug/L
63	Chloroform		10 U		ug/L
062	1,2-Dichloroethane		10 U		ug/L
56	1,1,1-Trichloroethane		10 U		ug/L
35	Carbon tetrachloride		10 U		ug/L
74	Bromodichloromethane		10 U		ug/L
758	2-Chloroethylvinyl ether		10 U		ug/L
75	1,2-Dichloropropane		10 U		ug/L
61015	cis-1,3-Dichloropropene		10 U		ug/L
16	Trichloroethene		10 U		ug/L
481	Dibromochloromethane		10 U		ug/L
05	1,1,2-Trichloroethane		10 U		ug/L
32	Benzene		10 U		ug/L
61026	trans-1,3-Dichloropropene		10 U		ug/L
52	Bromoform		10 U		ug/L
184	Tetrachloroethene		10 U		ug/L
45	1,1,2,2,-Tetrachloroethane		10 U		ug/L
883	Toluene		10 U		ug/L
907	Chlorobenzene		10 U		ug/L
414	Ethylbenzene		10 U		ug/L

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