AP-30

Monitoring Report

August, 2012

HESS CORPORATION
1 Hess Plaza
Woodbridge, NJ 07095

Donald G. Bull
Senior Specialist
Corporate EHS&SR
(732) 750-7099
FAX: (732) 352-7792

February 28, 2013

Mr. Glenn Von Gonten
New Mexico Oil Conservation District
1220 South St. Francis Drive
Santa Fe, NM 87505

VIA: Priority Mail and Delivery Confirmation

Re: Groundwater Monitoring Report
WP Byrd Ranch Tank Battery AP-30
Lea County, New Mexico

Dear Mr. Von Gonten:

Enclosed please find the Groundwater Monitoring Report for the WP Byrd Ranch Tank Battery located in Monument, NM. The report includes pertinent historical site information as well as data collected during groundwater sampling in August 2012.

Please note that Hess proposes to conduct a bail down test at monitoring well MW-3 to determine liquid phase hydrocarbons (LPH) well yields. This information will be used to select the most appropriate LPH recovery method.

If you have any questions or require additional information, please contact the undersigned at 732-750-7099.

Sincerely,

Donald G. Bull
Senior Specialist

cc: Rex Meyer, GeoMonitoring Services
Jim Griswold, New Mexico Oil Conservation Division

WP BYRD TANK BATTERY

LEA COUNTY, NEW MEXICO

GROUNDWATER MONITORING REPORT
SAMPLED AUGUST 2012

Prepared for:

Hess Corporation
One Hess Plaza
Woodbridge, New Jersey 07095

Prepared by:

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1.0 INTRODUCTION

The Byrd Tank Battery site is located northwest of Monument, New Mexico in southern Lea County. The site lies within the Pecos River Valley section of the Great Plains physiographic province and is located in the southern margin of the Llano Estacado. The site consists of a tank battery, a ranch house and associated structures owned by Mr. Red Byrd. The site also contains a domestic water well near the Byrd ranch house, and a water supply well located near a series of aboveground tanks at the northern end of the site. Neither of these wells are in use. A regional location map showing the site location is included as **Figure 1**.

On March 21, 2000, the New Mexico Oil Conservation Division (NMOCD) sampled the domestic water well located near the Byrd ranch house and the water supply well near the tanks. The analytical results from these water samples indicated that both water wells onsite contained hydrocarbon contamination.

On May 3, 2000, the NMOCD sent a letter to Raymond and Red Byrd notifying them of hydrocarbon contamination found in the water wells on their property.

On May 22, 2000, the NMOCD sent a letter to Hess Corporation (Hess) requiring a work plan be submitted to investigate the extent of the groundwater contamination.

On September 7, 2000, Hess submitted a work plan to the NMOCD which included a proposal to install four monitoring wells onsite to delineate the extent of the groundwater contamination. On October 27, 2000, the NMOCD approved the work plan.

Beginning March 14, 2001, four monitoring wells (MW-1 through MW-4) were installed at the site. Upon completion of the four monitoring wells, it was discovered that two of the monitoring wells contained liquid phase hydrocarbon (LPH).

On April 16, 2001, a Phase II Site Assessment Report was submitted for the installation and sampling of groundwater in MW-1 through MW-4. The report indicated that LPH was found in monitoring well MW-3 and that a sheen was found in monitoring wells MW-1 and MW-2. The laboratory analysis indicated that Chloride concentrations were above NMOCD guidelines for all monitoring wells onsite and the water supply well near the Byrd ranch house. It was then determined that additional monitoring wells would need to be installed onsite to determine the extent of the contamination.

In June 2001, four additional monitoring wells were installed at the site (MW-5 through MW-8).

On August 29, 2001, a second Phase II Site Assessment Report was submitted to the NMOCD including the groundwater sampling results from monitoring wells MW-5 through MW-8 as well as additional groundwater sampling of monitoring wells MW-1 through MW-4. The analytical results indicated chloride concentrations above NMOCD guidelines in all eight monitoring wells. The second Phase II Site Assessment Report

also stated that extent of contamination could not be conclusively delineated and that the aquifer upgradient of the Byrd Tank Battery contains significant chloride concentrations and that Hess had concluded that they are not the source of contamination and that no further work is planned.

On October 29, 2001, a letter from NMOCD was sent stating that the results from the groundwater investigation were above the New Mexico Water Quality Control Commission (NM WQCC) Guidelines and that at Stage I Abatement Plan should be submitted before December 31, 2001.

On December 21, 2001, a Stage I Abatement Plan was submitted which proposed quarterly sampling and evaluation of selected wells for one year.

On April 11, 2002, a letter was sent to NMOCD confirming the scope of work agreed to in a March 19, 2002 meeting. At this meeting it was agreed that a pump would be installed in monitoring well MW-3 to pump out the LPH. It was also agreed that one additional monitoring well would be installed to the southeast of the battery site, and to develop a schedule for groundwater sampling of the existing monitoring wells onsite.

On April 22, 2003, a letter was sent to the NMOCD informing them that monitoring well MW-9 had been installed to the southeast of the battery site as agreed upon in the March 19, 2002 meeting. The letter also stated that due to unexpected delays, the pump should be operational in monitoring well MW-3 in mid-May.

On May 21, 2003, an email was sent to the MNOCD informing them that the pump had been installed in monitoring well MW-3 and ran from 8:45 AM to 3:00 PM on May 20, 2003. The pump was set approximately ½ inch below the top of the fluid. On May 20, 2003, the pump removed approximately 1 gallon of oil and 25 gallons of water from the well. The email stated that the pump would continue to run for six to seven hours each day for the remainder of the week in order to obtain a pumping schedule.

Monitoring wells MW-2, MW-4, MW-6, and MW-8 were sampled on February 11, 2004 and again on August 17, 2005. The analytical data from these sampling events indicated chloride levels above NMOCD guidelines for all monitoring wells during both sampling events. It is unclear if a pumping schedule was set for monitoring well MW-3 or how long the pump was operational.

Currently, the site is situated on and surrounded by a ranch owned by Mr. Red Byrd.

2.0 MONITORING WELL GAUGING ACTIVITIES

Monitoring wells MW-4, MW-5, MW-6, MW-7, and MW-9 were gauged on August 20-21, 2012. Monitoring well MW-8 was gauged on July 18, 2012 and did not contain water. Monitoring well MW-1 through MW-3 were gauged on July 18-24, 2012. Monitoring

wells MW-1 and MW-2 contained a sheen and odor, and monitoring well MW-3 contained 1.25 feet (ft) of LPH. The monitoring well locations are shown on **Figure 2**.

The depth to water (DTW) and presence of LPH, if any, were gauged using an oil/water interface probe capable of measuring to the nearest 0.01 ft. The groundwater level measurements were converted to groundwater elevations using the top of monitoring well casing elevations. Groundwater elevations were adjusted for the presence of LPH, as appropriate.

As shown in **Table 1** and on **Figure 3**, groundwater elevations ranged from 3,526.70 feet mean sea level (ft msl) in monitoring well MW-5 to 3,525.20 ft msl in monitoring well MW-7. The interpreted groundwater flow direction is to the southeast, which is consistent with the historical groundwater flow directions in the area.

3.0 MONITORING WELL DEVELOPMENT ACTIVITIES

Due to the long period of time since the previous sampling event, monitoring wells MW-1 through MW-7, and MW-9 were redeveloped using a surge block, monitoring well MW-8 was not redeveloped because it did not contain water. On July 18-24, 2012, BBC International, Inc. developed monitoring wells MW-1 through MW-7, and MW-9 to ensure that the well recharge rates would be sufficient for sampling and that accurate water samples would be obtained. During well development, monitoring well DTW ranged from 32.71 ft below TOC in monitoring well MW-7 to 34.40 ft below TOC in monitoring well MW-5. Between 6 and 9 gallons of groundwater were purged from each well during well development. LPH was detected in monitoring well MW-3 with a thickness of 1.25 ft, also monitoring wells MW-1 and MW-2 contained a sheen and odor during well development, so these three wells were not sampled during this sampling event. Well development data can be found on **Table 3**.

4.0 MONITORING WELL SAMPLING ACTIVITIES

On August 20-21, 2012, monitoring wells MW-4, MW-5, MW-6, MW-7, and MW-9 were sampled. Monitoring wells MW-1 and MW-2 contained a sheen and odor and were not sampled; monitoring well MW-3 was gauged with 1.25 ft of LPH and was not sampled, and monitoring well MW-8 did not contain water and was not sampled.

Groundwater samples were collected via a downhole pneumatic pump utilizing a low flow purging and sampling method. Air flow into the pump was controlled by a GeoTech Micropurge control panel. Disposable Teflon-lined polypropylene tubing was used at each sampling point and sampling equipment was decontaminated after each use. Each monitoring well was purged and sampled at a rate of 300 milliliters/minute or less. Actual purging and sampling rates can be found in **Table 1**.

Prior to collection of water samples, field readings were taken at each well for pH, Conductivity, Dissolved Oxygen (D.O.), Temperature, Salinity, and Oxygen Redox Potential (ORP). During this sampling event, the pH ranged from 6.62 standard units (s.u.) at monitoring well MW-9 to 7.09 s.u. at monitoring well MW-6. Conductivity ranged from 19,001 micro-ohms per centimeter squared (µohms/cm^2) at monitoring well MW-9 to 35,346 µohms/cm^2 at monitoring well MW-7. D.O. ranged from 0.45 mg/L at monitoring well MW-9 to 1.99 mg/L at monitoring well MW-4. Temperature ranged from 19.82 °C at monitoring well MW-9 to 22.25 °C at monitoring well MW-7. Salinity ranged from 12.78 parts per thousand in monitoring well MW-9 to 23.65 parts per thousand in monitoring well MW-7. And ORP ranged from -123.8 milliVolts (mV) in monitoring well MW-6 to 86.3 mV in monitoring well MW-5.

Groundwater laboratory analysis included Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) tested under EPA Method No. 8260B, Polynuclear Aromatic Hydrocarbons (PAHs) analysis under EPA Method No. 8270C, and Chlorides under EPA Method No. 300.

Benzene was detected in all five monitoring wells sampled. Monitoring well MW-4 had a benzene detection of 2.0 µg/L, monitoring well MW-5 had a benzene detection of 0.82J µg/L, monitoring well MW-6 had a benzene detection of 1.4 µg/L, monitoring well MW-7 had a benzene detection of 0.44J µg/L, and monitoring well MW-9 had a benzene detection of 0.38J µg/L. However, these concentrations are all below the NM WQCC Standard of 10 µg/L.

Toluene, Ethylbenzene, and Xylenes were not detected in the groundwater samples from any monitoring well.

PAHs analysis identified Phenanthrene in monitoring wells MW-4, MW-6, and MW-7. Monitoring well MW-4 had a Phenanthrene concentration of 0.10J µg/L, monitoring well MW-6 was 0.081J µg/L, and monitoring well MW-7 was 0.25 µg/L. All other PAHs were non-detect.

Chloride was detected above the NM WQCC Standard of 250 mg/L in all five of the monitoring wells sampled. The sample from monitoring well MW-4 had a Chloride concentration of 14,400 mg/L, monitoring well MW-5 was 15,600 mg/L, monitoring well MW-6 was 16,400 mg/L, monitoring well MW-7 was 16,000 mg/L, and monitoring well MW-9 was 8,150 mg/L. **Table 2** and **Figure 3** provides a summary of the groundwater analytical results. The laboratory analytical report is included in **Appendix A.**

5.0 CONCLUSIONS AND PROPOSALS

Chloride was detected above the NM WQCC Standard of 250 mg/L in all five of the monitoring well sampled. Benzene was also detected in all five of the monitoring wells sampled but were well below NM WQCC standard of 10 µg/L. Monitoring wells MW-1 and MW-2 contained a hydrocarbon sheen and odor, and monitoring well MW-3

contained 1.25 ft of LPH. Based on these results, Hess proposes to conduct a bail down test at monitoring well MW-3 to determine LPH well yields. This information will be used to select the most appropriate LPH recovery method. Bail down testing will be completed during the next groundwater monitoring event, which is scheduled for the 1st quarter in 2013.

Table 1
Groundwater Field Data Summary
WP Byrd Tank Battery
August 20-21, 2012

Well No.	Casing Diameter (inches)	Date	Top of Casing to Water (feet)	Top of Casing Elevation (feet)	Groundwater Elevation (feet)	Top of Casing to Bottom of Well (feet)	Purge pumping Rate (ml/min)	Sampling pump Rate (ml/min)	Amount Purge (gals)	LPH Films Detected by Interface Probe During Well Development	Field Reading	pH s.u.	Conductivity μ ohms/cm^2	Dissolved Oxygen mg/L	Temperature °C	Salinity ppt	ORP (mv)
MW-1	2	7/18/2012	33.32	3,559.30	3,525.98	42.53	--	--	--	LPH odor	Initial Reading	--	--	--	--	--	--
										Well Not Sampled	Stabilized Reading	--	--	--	--	--	--
MW-2	2	7/18/2012	32.73	3,558.40	3,525.67	41.25	--	--	--	LPH sheen	Initial Reading	--	--	--	--	--	--
										Well Not Sampled	Stabilized Reading	--	--	--	--	--	--
MW-3	2	7/24/2012	33.33	3,558.20	3,524.87	42.00	--	--	--	LPH in Well (1.25 feet)	Initial Reading	--	--	--	--	--	--
										Well Not Sampled	Stabilized Reading	--	--	--	--	--	--
MW-4	2	8/21/2012	34.30	3,580.70	3,526.40	42.30	250	250	2.5	None	Initial Reading	7.19	33,277	1.97	21.50	22.69	45.5
										None	Stabilizad Reading	7.02	32,861	1.99	20.91	22.65	53.6
MW-5	2	8/21/2012	34.40	3,561.10	3,526.70	41.70	235	235	2.25	None	Initial Reading	7.22	32,732	2.51	21.85	21.93	15.8
										None	Stabilized Reading	6.87	32,014	1.64	21.02	21.83	86.3
MW-6	2	8/21/2012	34.00	3,560.30	3,526.30	42.66	250	250	1.25	None	Initial Reading	7.11	32,648	1.99	21.67	21.96	-81.1
										None	Stabilized Reading	7.09	32,422	1.96	21.33	21.97	-123.8
MW-7	2	8/20/2012	32.80	3,558.00	3,525.20	42.87	160	160	1.5	None	Initial Reading	6.76	36,410	0.54	23.11	24.00	68.0
										None	Stabilized Reading	6.72	35,346	0.94	22.25	23.65	58.1
MW-8	2	7/18/2012	Dry	3,557.94	Dry	31.70	--	--	--	Dry	Initial Reading	--	--	--	--	--	--
										Well Not Sampled	Stabilized Reading	--	--	--	--	--	--
MW-9	2	8/20/2012	32.60	3,558.48	3,525.68	44.30	240	240	1.25	None	Initial Reading	8.49	21,541	0.03	20.81	14.26	79.0
										None	Stabilized Reading	6.62	19,001	0.45	19.82	12.78	66.4

NOTE:
LPH = liquid phase hydrocarbon
Dry = Well Dry
ml/min = milliliters per minute
gals = gallons
s.u. = standard unit
μ ohms/cm^2 = micro-ohms per centimeter squared
mg/L = milligrams per liter
°C = degrees Celsius
mv = millivolts
-- = reading not taken or not applicable

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Table 2
Summary of Groundwater Monitoring Results - Byrd Tank Battery
August 20-21, 2012

	Units	MW-4	MW-5	MW-6	MW-7	MW-9	NM WQCC Standards
Date Sampled		8/21/2012	8/21/2012	8/21/2012	8/20/2012	8/20/2012	
BTEX (Method 8260B)							
Benzene	µg/L	2.0	0.82J	1.4	0.44J	0.38J	10
Toluene	µg/L	<0.26	<0.26	<0.26	<0.26	<0.26	750
Ethylbenzene	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	750
Xylenes	µg/L	<0.71	<0.71	<0.71	<0.71	<0.71	620
PAHs (Method 8270C)							
Acenaphthene	µg/L	<0.042	<0.042	<0.042	<0.042	<0.042	NONE
Acenaphthylene	µg/L	<0.072	<0.072	<0.072	<0.072	<0.072	NONE
Anthracene	µg/L	<0.054	<0.054	<0.054	<0.054	<0.054	NONE
Benzo(a)anthracene	µg/L	<0.042	<0.042	<0.042	<0.042	<0.042	NONE
Benzo(a)pyrene	µg/L	<0.065	<0.065	<0.065	<0.065	<0.065	0.7
Benzo(b)fluoranthene	µg/L	<0.061	<0.061	<0.061	<0.061	<0.061	NONE
Benzo(g,h,i)perylene	µg/L	<0.068	<0.068	<0.068	<0.068	<0.068	NONE
Benzo(k)fluoranthene	µg/L	<0.056	<0.056	<0.056	<0.056	<0.056	NONE
Chrysene	µg/L	<0.045	<0.045	<0.045	<0.045	<0.045	NONE
Dibenzo(a,h)anthracene	µg/L	<0.060	<0.060	<0.060	<0.060	<0.060	NONE
Fluoranthene	µg/L	<0.046	<0.046	<0.046	<0.046	<0.046	NONE
Fluorene	µg/L	<0.065	<0.065	<0.065	<0.065	<0.065	NONE
Indeno(1,2,3-cd)pyrene	µg/L	<0.061	<0.061	<0.061	<0.061	<0.061	NONE
2-Methylnaphthalene	µg/L	<0.12	<0.12	<0.12	<0.12	<0.12	NONE
Naphthalene	µg/L	<0.076	<0.076	<0.076	<0.076	<0.076	NONE
Phenanthrene	µg/L	0.10J	<0.076	0.081J	0.25	<0.076	NONE
Pyrene	µg/L	<0.080	<0.080	<0.080	<0.080	<0.080	NONE
Chloride							
Chloride	mg/L	**14,400**	**15,600**	**16,400**	**16,000**	**8,150**	250

NOTE:
NM WQCC = New Mexico Water Quality Control Commission
µg/L = micrograms per Liter
mg/L - milligrams per Liter
J = Indicates an estimated value
NONE = no NM WQCC Standard for this constituent
BOLD values exceed NM WQCC Standards

Table 3
Byrd Tank Battery - Well Development Data
July 18-24, 2012

Well No.	Date	Top of Casing to Water *(feet)*	Top of Casing Elevation *(feet)*	Groundwater Elevation *(feet)*	Top of Casing to Bottom of Well *(feet)*	Top of Casing to Product *(feet)*	Product Thickness *(feet)*	Amount Purged *(gal)*
MW-1	7/18/2012	33.32	3,559.30	3,525.98	42.53	--	0	7
MW-2	7/18/2012	32.73	3,558.40	3,525.67	41.25	--	0	7
MW-3	7/24/2012	33.33	3,558.20	3,524.87	42.00	32.08	1.25	9
MW-4	7/18/2012	34.18	3,560.70	3,526.52	42.30	--	0	8
MW-5	7/18/2012	34.40	3,561.10	3,526.70	41.70	--	0	8
MW-6	7/18/2012	33.89	3,560.30	3,526.41	42.66	--	0	7
MW-7	7/18/2012	32.71	3,558.00	3,525.29	42.87	--	0	6
MW-8	7/18/2012	DRY	3,557.94	DRY	31.70	--	0	--
MW-9	7/18/2012	32.65	3,558.48	3,525.83	44.30	--	0	8

NOTE:
-- = not applicable or not taken
DRY = well dry

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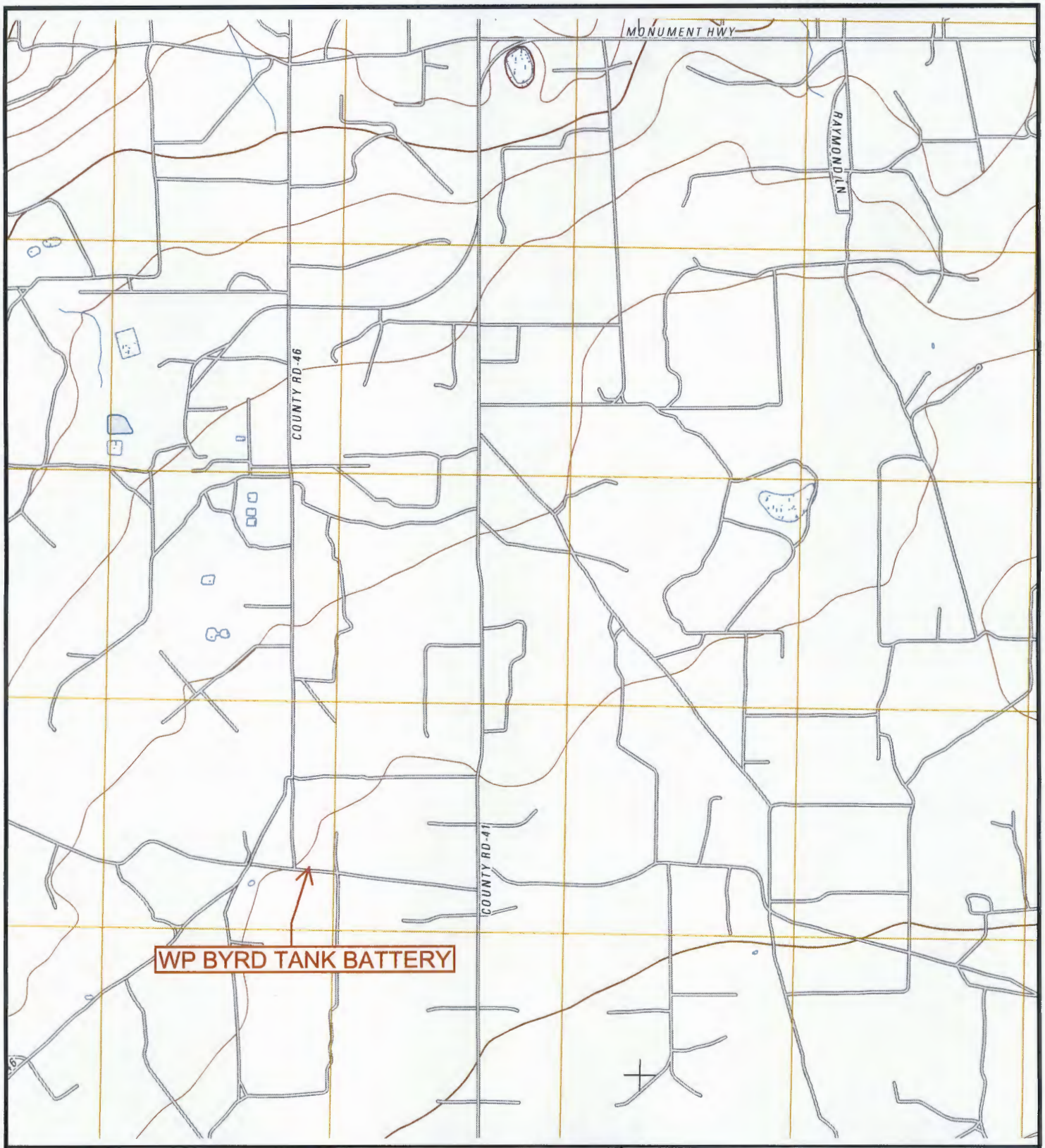
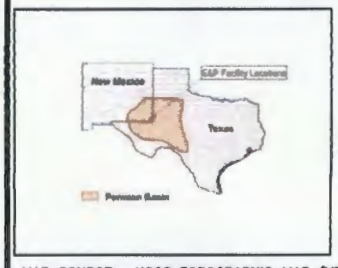




N

0 0.25 0.5 1

APPROXIMATE SCALE IN MILES

MAP SOURCE: USGS TOPOGRAPHIC MAP (VERSION 2010) – MONUMENT SOUTH QUADRANGLE

GeoMonitoring Services

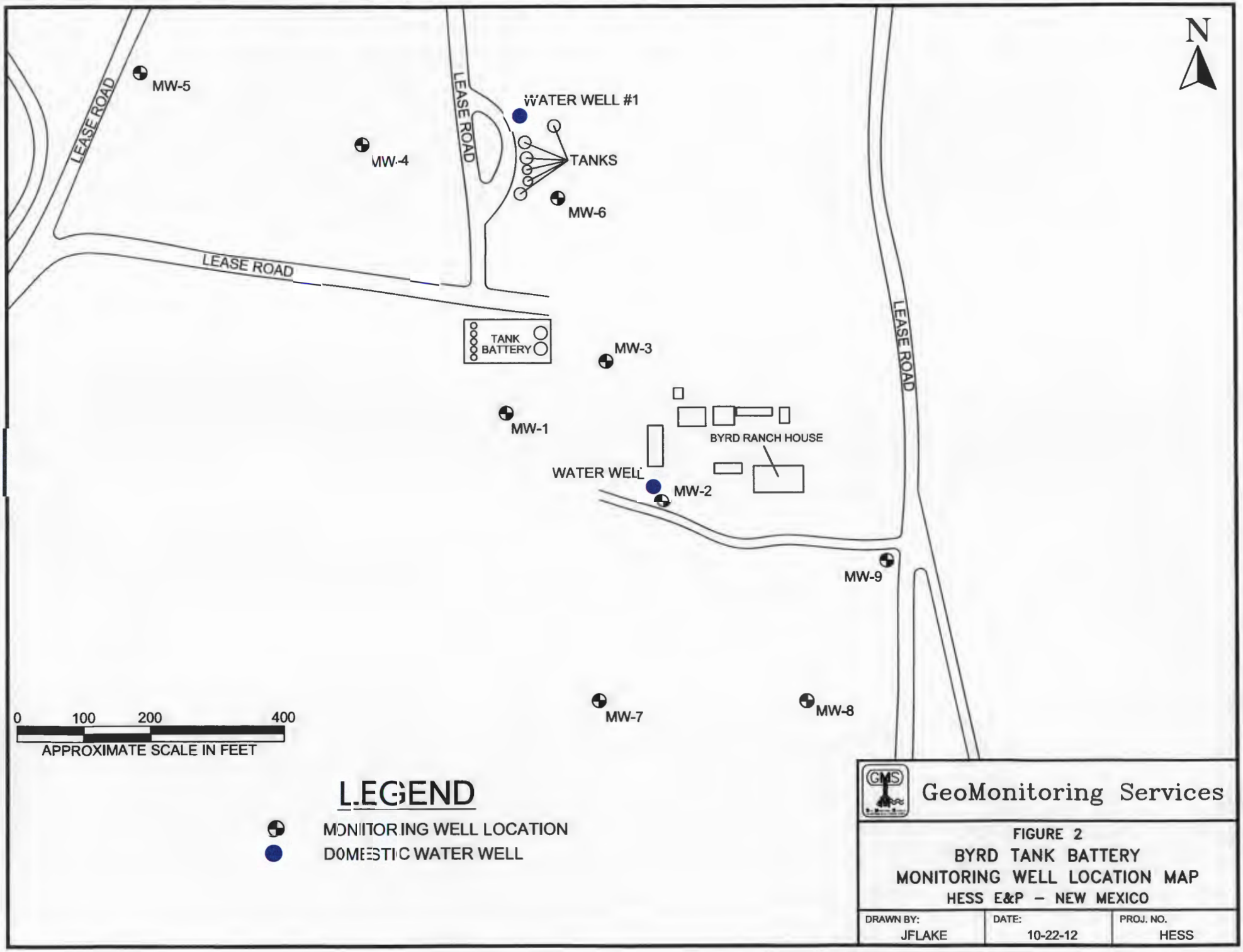
FIGURE 1

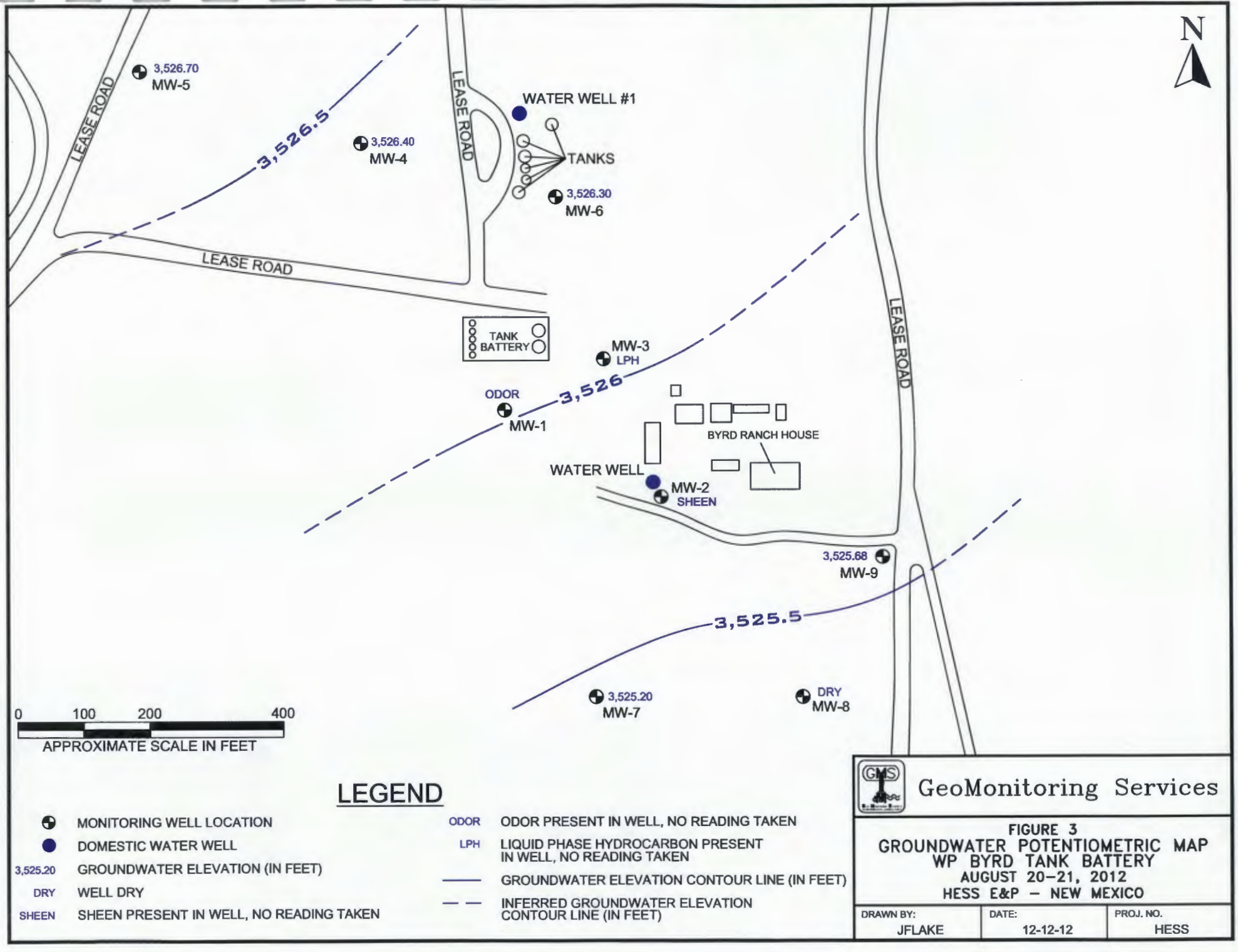
WP BYRD TANK BATTERY

REGIONAL LOCATION MAP

LEA COUNTY, NEW MEXICO

DRAWN BY:	DATE:	PROJ. NO.
JFLAKE	10-4-12	HESS


N
MW-5
LEASE ROAD
LEASE ROAD
WATER WELL #1
MW-4
TANKS
MW-6
LEASE ROAD
TANK BATTERY
MW-3
LEASE ROAD
MW-1
BYRD RANCH HOUSE
WATER WELL
MW-2
MW-9
MW-7
MW-8
0 100 200 400
APPROXIMATE SCALE IN FEET
LEGEND
MONITORING WELL LOCATION
DOMESTIC WATER WELL
GMS
GeoMonitoring Services
FIGURE 2
BYRD TANK BATTERY
MONITORING WELL LOCATION MAP
HESS E&P – NEW MEXICO
DRAWN BY: JFLAKE
DATE: 10-22-12
PROJ. NO. HESS



LEGEND

- MONITORING WELL LOCATION
- DOMESTIC WATER WELL
- 3,525.20 GROUNDWATER ELEVATION (IN FEET)
- DRY WELL DRY
- SHEEN SHEEN PRESENT IN WELL, NO READING TAKEN
- ODOR ODOR PRESENT IN WELL, NO READING TAKEN
- LPH LIQUID PHASE HYDROCARBON PRESENT IN WELL, NO READING TAKEN
- GROUNDWATER ELEVATION CONTOUR LINE (IN FEET)
- INFERRED GROUNDWATER ELEVATION CONTOUR LINE (IN FEET)

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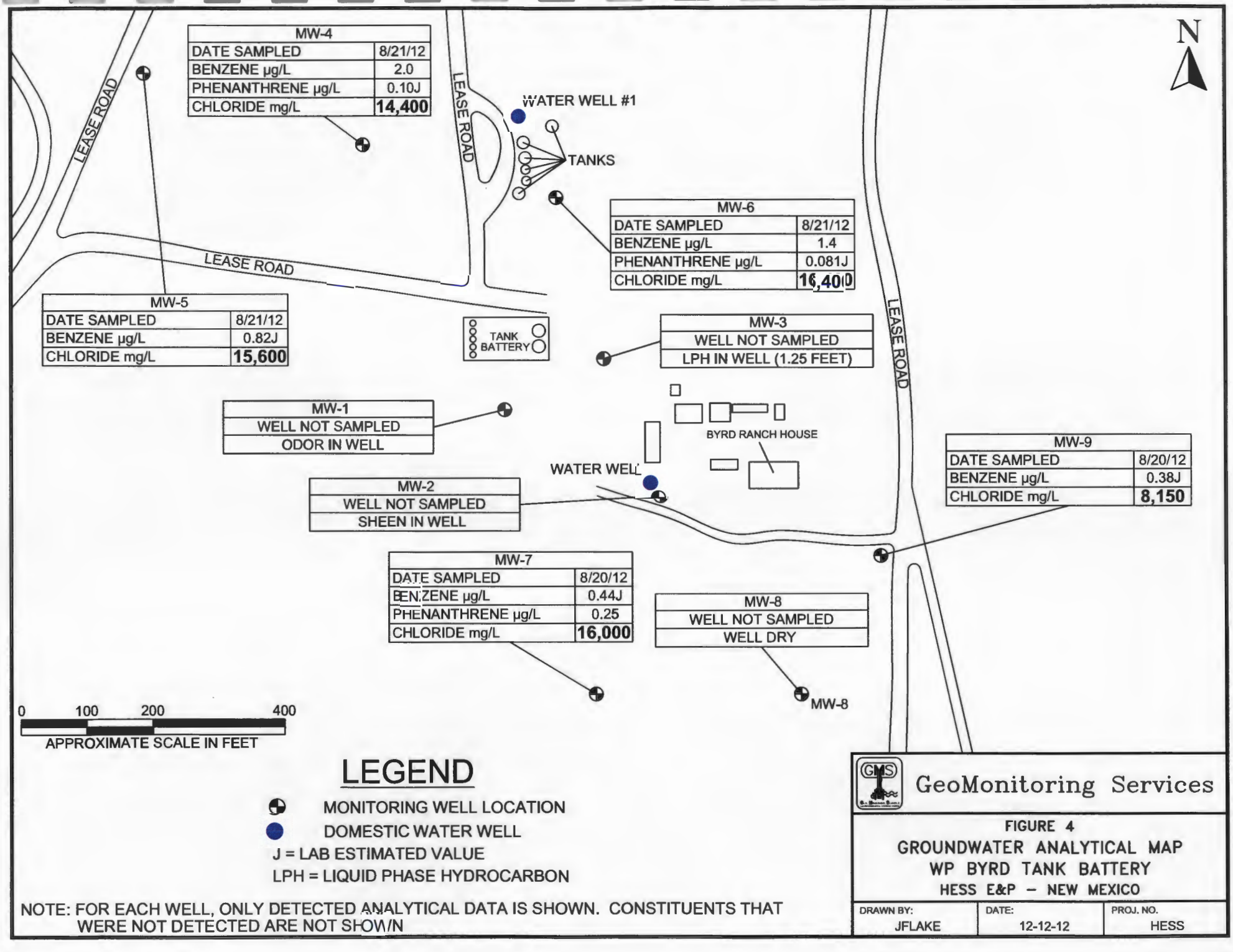
FIGURE 3
GROUNDWATER POTENTIOMETRIC MAP
WP BYRD TANK BATTERY
AUGUST 20–21, 2012
HESS E&P – NEW MEXICO

DRAWN BY:	DATE:	PROJ. NO.
JFLAKE	12-12-12	HESS


N
MW-4
DATE SAMPLED 8/21/12
BENZENE µg/L 2.0
PHENANTHRENE µg/L 0.10J
CHLORIDE mg/L 14,400
LEASE ROAD
LEASE ROAD
WATER WELL #1
TANKS
MW-6
DATE SAMPLED 8/21/12
BENZENE µg/L 1.4
PHENANTHRENE µg/L 0.081J
CHLORIDE mg/L 16,400
LEASE ROAD
MW-5
DATE SAMPLED 8/21/12
BENZENE µg/L 0.82J
CHLORIDE mg/L 15,600
TANK BATTERY
MW-3
WELL NOT SAMPLED
LPH IN WELL (1.25 FEET)
LEASE ROAD
MW-1
WELL NOT SAMPLED
ODOR IN WELL
BYRD RANCH HOUSE
WATER WELL
MW-9
DATE SAMPLED 8/20/12
BENZENE µg/L 0.38J
CHLORIDE mg/L 8,150
MW-2
WELL NOT SAMPLED
SHEEN IN WELL
MW-7
DATE SAMPLED 8/20/12
BENZENE µg/L 0.44J
PHENANTHRENE µg/L 0.25
CHLORIDE mg/L 16,000
MW-8
WELL NOT SAMPLED
WELL DRY
MW-8
0 100 200 400
APPROXIMATE SCALE IN FEET
LEGEND
MONITORING WELL LOCATION
DOMESTIC WATER WELL
J = LAB ESTIMATED VALUE
LPH = LIQUID PHASE HYDROCARBON
NOTE: FOR EACH WELL, ONLY DETECTED ANALYTICAL DATA IS SHOWN. CONSTITUENTS THAT WERE NOT DETECTED ARE NOT SHOWN
GMS GeoMonitoring Services
FIGURE 4
GROUNDWATER ANALYTICAL MAP
WP BYRD TANK BATTERY
HESS E&P – NEW MEXICO
DRAWN BY: JFLAKE
DATE: 12-12-12
PROJ. NO. HESS

Gulf Coast
ACCUTEST
LABORATORIES

09/04/12

Technical Report for

Geo Monitoring Services

WP Byrd Tank Battery

Accutest Job Number: TC15139

Sampling Dates: 08/20/12 - 08/21/12

Report to:

Geo Monitoring Services
P.O. Box 295
Fulshear, TX 77441
rex@geomon.net

ATTN: Rex Meyer

Total number of pages in report: **42**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Sylvia Garza 713-271-4700

Certifications: TX (T104704220-12-8) AR (11-028-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) OK (211-035)

Sections: 1 2 3 4 5 6 7

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-1-

Sample Summary

Geo Monitoring Services

Job No: TC15139

WP Byrd Tank Battery

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
TC15139-1	08/21/12	12:04	08/23/12	AQ	Ground Water	MW4
TC15139-2	08/21/12	11:15	08/23/12	AQ	Ground Water	MW5
TC15139-3	08/21/12	09:58	08/23/12	AQ	Ground Water	MW6
TC15139-4	08/20/12	12:08	08/23/12	AQ	Ground Water	MW7
TC15139-5	08/20/12	10:40	08/23/12	AQ	Ground Water	MW9
TC15139-6	08/20/12	00:00	08/23/12	AQ	Trip Blank Water	TRIP BLANK

Summary of Hits

Job Number: TC15139
Account: Geo Monitoring Services
Project: WP Byrd Tank Battery
Collected: 08/20/12 thru 08/21/12

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	MQL	SDL	Units	Method
TC15139-1	MW4					
Benzene		0.0020	0.0010	0.00025	mg/l	SW846 8260B
Phenanthrene		0.00010 J	0.00020	0.000076	mg/l	SW846 8270C BY SIM
Chloride		14400	500	250	mg/l	EPA 300/SW846 9056
TC15139-2	MW5					
Benzene		0.00082 J	0.0010	0.00025	mg/l	SW846 8260B
Chloride		15600	500	250	mg/l	EPA 300/SW846 9056
TC15139-3	MW6					
Benzene		0.0014	0.0010	0.00025	mg/l	SW846 8260B
Phenanthrene		0.000081 J	0.00020	0.000076	mg/l	SW846 8270C BY SIM
Chloride		16400	500	250	mg/l	EPA 300/SW846 9056
TC15139-4	MW7					
Benzene [a]		0.00044 J	0.0010	0.00025	mg/l	SW846 8260B
Phenanthrene		0.00025	0.00020	0.000076	mg/l	SW846 8270C BY SIM
Chloride		16000	500	250	mg/l	EPA 300/SW846 9056
TC15139-5	MW9					
Benzene		0.00038 J	0.0010	0.00025	mg/l	SW846 8260B
Chloride		8150	250	130	mg/l	EPA 300/SW846 9056
TC15139-6	TRIP BLANK					

No hits reported in this sample.

(a) Sample was not preserved to a pH < 2

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW4		
Lab Sample ID:	TC15139-1	Date Sampled:	08/21/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8260B	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K10145.D	1	08/27/12	AK	n/a	n/a	VK452
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	MQL	SDL	Units	Q
71-43-2	Benzene	0.0020	0.0010	0.00025	mg/l	
108-88-3	Toluene	0.00026 U	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	0.00025 U	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	0.00071 U	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		79-122%
17060-07-0	1,2-Dichloroethane-D4	97%		75-121%
2037-26-5	Toluene-D8	100%		87-119%
460-00-4	4-Bromofluorobenzene	124%		80-133%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW4		
Lab Sample ID:	TC15139-1	Date Sampled:	08/21/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V12407.D	1	08/30/12	GJ	08/28/12	OP24900	EV694
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	MQL	SDL	Units	Q
83-32-9	Acenaphthene	0.000042 U	0.00020	0.000042	mg/l	
208-96-8	Acenaphthylene	0.000072 U	0.00020	0.000072	mg/l	
120-12-7	Anthracene	0.000054 U	0.00020	0.000054	mg/l	
56-55-3	Benzo(a)anthracene	0.000042 U	0.00020	0.000042	mg/l	
50-32-8	Benzo(a)pyrene	0.000065 U	0.00020	0.000065	mg/l	
205-99-2	Benzo(b)fluoranthene	0.000061 U	0.00020	0.000061	mg/l	
191-24-2	Benzo(g,h,i)perylene	0.000068 U	0.00020	0.000068	mg/l	
207-08-9	Benzo(k)fluoranthene	0.000056 U	0.00020	0.000056	mg/l	
218-01-9	Chrysene	0.000045 U	0.00020	0.000045	mg/l	
53-70-3	Dibenzo(a,h)anthracene	0.000060 U	0.00020	0.000060	mg/l	
206-44-0	Fluoranthene	0.000046 U	0.00020	0.000046	mg/l	
86-73-7	Fluorene	0.000065 U	0.00020	0.000065	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.000061 U	0.00020	0.000061	mg/l	
91-57-6	2-Methylnaphthalene	0.00012 U	0.00020	0.00012	mg/l	
91-20-3	Naphthalene	0.000076 U	0.00020	0.000076	mg/l	
85-01-8	Phenanthrene	0.00010	0.00020	0.000076	mg/l	J
129-00-0	Pyrene	0.000080 U	0.00020	0.000080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		17-131%
321-60-8	2-Fluorobiphenyl	66%		15-137%
1718-51-0	Terphenyl-d14	100%		10-160%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW4		
Lab Sample ID:	TC15139-1	Date Sampled:	08/21/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
		Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Chloride	14400	500	250	mg/l	1000	08/31/12 12:27	ES	EPA 300/SW846 9056

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW5		
Lab Sample ID:	TC15139-2	Date Sampled:	08/21/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8260B	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K10146.D	1	08/27/12	AK	n/a	n/a	VK452
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	MQL	SDL	Units	Q
71-43-2	Benzene	0.00082	0.0010	0.00025	mg/l	J
108-88-3	Toluene	0.00026 U	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	0.00025 U	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	0.00071 U	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		79-122%
17060-07-0	1,2-Dichloroethane-D4	95%		75-121%
2037-26-5	Toluene-D8	98%		87-119%
460-00-4	4-Bromofluorobenzene	123%		80-133%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW5		
Lab Sample ID:	TC15139-2	Date Sampled:	08/21/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V12408.D	1	08/30/12	GJ	08/28/12	OP24900	EV694
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	MQL	SDL	Units	Q
83-32-9	Acenaphthene	0.000042 U	0.00020	0.000042	mg/l	
208-96-8	Acenaphthylene	0.000072 U	0.00020	0.000072	mg/l	
120-12-7	Anthracene	0.000054 U	0.00020	0.000054	mg/l	
56-55-3	Benzo(a)anthracene	0.000042 U	0.00020	0.000042	mg/l	
50-32-8	Benzo(a)pyrene	0.000065 U	0.00020	0.000065	mg/l	
205-99-2	Benzo(b)fluoranthene	0.000061 U	0.00020	0.000061	mg/l	
191-24-2	Benzo(g,h,i)perylene	0.000068 U	0.00020	0.000068	mg/l	
207-08-9	Benzo(k)fluoranthene	0.000056 U	0.00020	0.000056	mg/l	
218-01-9	Chrysene	0.000045 U	0.00020	0.000045	mg/l	
53-70-3	Dibenzo(a,h)anthracene	0.000060 U	0.00020	0.000060	mg/l	
206-44-0	Fluoranthene	0.000046 U	0.00020	0.000046	mg/l	
86-73-7	Fluorene	0.000065 U	0.00020	0.000065	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.000061 U	0.00020	0.000061	mg/l	
91-57-6	2-Methylnaphthalene	0.00012 U	0.00020	0.00012	mg/l	
91-20-3	Naphthalene	0.000076 U	0.00020	0.000076	mg/l	
85-01-8	Phenanthrene	0.000076 U	0.00020	0.000076	mg/l	
129-00-0	Pyrene	0.000080 U	0.00020	0.000080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		17-131%
321-60-8	2-Fluorobiphenyl	84%		15-137%
1718-51-0	Terphenyl-d14	100%		10-160%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW5		
Lab Sample ID:	TC15139-2	**Date Sampled:**	08/21/12
Matrix:	AQ - Ground Water	**Date Received:**	08/23/12
		Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Chloride	15600	500	250	mg/l	1000	08/31/12 12:44	ES	EPA 300/SW846 9056

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result >= SDL but < MQL

Report of Analysis

Client Sample ID:	MW6		
Lab Sample ID:	TC15139-3	Date Sampled:	08/21/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8260B	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K10147.D	1	08/27/12	AK	n/a	n/a	VK452
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	MQL	SDL	Units	Q
71-43-2	Benzene	0.0014	0.0010	0.00025	mg/l	
108-88-3	Toluene	0.00026 U	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	0.00025 U	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	0.00071 U	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		79-122%
17060-07-0	1,2-Dichloroethane-D4	93%		75-121%
2037-26-5	Toluene-D8	100%		87-119%
460-00-4	4-Bromofluorobenzene	124%		80-133%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW6		
Lab Sample ID:	TC15139-3	Date Sampled:	08/21/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V12409.D	1	08/30/12	GJ	08/28/12	OP24900	EV694
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	MQL	SDL	Units	Q
83-32-9	Acenaphthene	0.000042 U	0.00020	0.000042	mg/l	
208-96-8	Acenaphthylene	0.000072 U	0.00020	0.000072	mg/l	
120-12-7	Anthracene	0.000054 U	0.00020	0.000054	mg/l	
56-55-3	Benzo(a)anthracene	0.000042 U	0.00020	0.000042	mg/l	
50-32-8	Benzo(a)pyrene	0.000065 U	0.00020	0.000065	mg/l	
205-99-2	Benzo(b)fluoranthene	0.000061 U	0.00020	0.000061	mg/l	
191-24-2	Benzo(g,h,i)perylene	0.000068 U	0.00020	0.000068	mg/l	
207-08-9	Benzo(k)fluoranthene	0.000056 U	0.00020	0.000056	mg/l	
218-01-9	Chrysene	0.000045 U	0.00020	0.000045	mg/l	
53-70-3	Dibenzo(a,h)anthracene	0.000060 U	0.00020	0.000060	mg/l	
206-44-0	Fluoranthene	0.000046 U	0.00020	0.000046	mg/l	
86-73-7	Fluorene	0.000065 U	0.00020	0.000065	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.000061 U	0.00020	0.000061	mg/l	
91-57-6	2-Methylnaphthalene	0.00012 U	0.00020	0.00012	mg/l	
91-20-3	Naphthalene	0.000076 U	0.00020	0.000076	mg/l	
85-01-8	Phenanthrene	0.000081	0.00020	0.000076	mg/l	J
129-00-0	Pyrene	0.000080 U	0.00020	0.000080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		17-131%
321-60-8	2-Fluorobiphenyl	70%		15-137%
1718-51-0	Terphenyl-d14	97%		10-160%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW6		
Lab Sample ID:	TC15139-3	**Date Sampled:**	08/21/12
Matrix:	AQ - Ground Water	**Date Received:**	08/23/12
		Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Chloride	16400	500	250	mg/l	1000	08/31/12 13:35	ES	EPA 300/SW846 9056

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW7		
Lab Sample ID:	TC15139-4	Date Sampled:	08/20/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8260B	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	K10148.D	1	08/27/12	AK	n/a	n/a	VK452
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	MQL	SDL	Units	Q
71-43-2	Benzene	0.00044	0.0010	0.00025	mg/l	J
108-88-3	Toluene	0.00026 U	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	0.00025 U	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	0.00071 U	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		79-122%
17060-07-0	1,2-Dichloroethane-D4	95%		75-121%
2037-26-5	Toluene-D8	99%		87-119%
460-00-4	4-Bromofluorobenzene	124%		80-133%

(a) Sample was not preserved to a pH < 2

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW7		
Lab Sample ID:	TC15139-4	Date Sampled:	08/20/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V12330.D	1	08/27/12	GJ	08/25/12	OP24862	EV691
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	MQL	SDL	Units	Q
83-32-9	Acenaphthene	0.000042 U	0.00020	0.000042	mg/l	
208-96-8	Acenaphthylene	0.000072 U	0.00020	0.000072	mg/l	
120-12-7	Anthracene	0.000054 U	0.00020	0.000054	mg/l	
56-55-3	Benzo(a)anthracene	0.000042 U	0.00020	0.000042	mg/l	
50-32-8	Benzo(a)pyrene	0.000065 U	0.00020	0.000065	mg/l	
205-99-2	Benzo(b)fluoranthene	0.000061 U	0.00020	0.000061	mg/l	
191-24-2	Benzo(g,h,i)perylene	0.000068 U	0.00020	0.000068	mg/l	
207-08-9	Benzo(k)fluoranthene	0.000056 U	0.00020	0.000056	mg/l	
218-01-9	Chrysene	0.000045 U	0.00020	0.000045	mg/l	
53-70-3	Dibenzo(a,h)anthracene	0.000060 U	0.00020	0.000060	mg/l	
206-44-0	Fluoranthene	0.000046 U	0.00020	0.000046	mg/l	
86-73-7	Fluorene	0.000065 U	0.00020	0.000065	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.000061 U	0.00020	0.000061	mg/l	
91-57-6	2-Methylnaphthalene	0.00012 U	0.00020	0.00012	mg/l	
91-20-3	Naphthalene	0.000076 U	0.00020	0.000076	mg/l	
85-01-8	Phenanthrene	0.00025	0.00020	0.000076	mg/l	
129-00-0	Pyrene	0.000080 U	0.00020	0.000080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		17-131%
321-60-8	2-Fluorobiphenyl	56%		15-137%
1718-51-0	Terphenyl-d14	111%		10-160%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW7		
Lab Sample ID:	TC15139-4	Date Sampled:	08/20/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
		Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Chloride	16000	500	250	mg/l	1000	08/31/12 13:52	ES	EPA 300/SW846 9056

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW9		
Lab Sample ID:	TC15139-5	Date Sampled:	08/20/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8260B	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K10149.D	1	08/27/12	AK	n/a	n/a	VK452
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	MQL	SDL	Units	Q
71-43-2	Benzene	0.00038	0.0010	0.00025	mg/l	J
108-88-3	Toluene	0.00026 U	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	0.00025 U	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	0.00071 U	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		79-122%
17060-07-0	1,2-Dichloroethane-D4	94%		75-121%
2037-26-5	Toluene-D8	100%		87-119%
460-00-4	4-Bromofluorobenzene	123%		80-133%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW9		
Lab Sample ID:	TC15139-5	Date Sampled:	08/20/12
Matrix:	AQ - Ground Water	Date Received:	08/23/12
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V12331.D	1	08/27/12	GJ	08/25/12	OP24862	EV691
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	MQL	SDL	Units	Q
83-32-9	Acenaphthene	0.000042 U	0.00020	0.000042	mg/l	
208-96-8	Acenaphthylene	0.000072 U	0.00020	0.000072	mg/l	
120-12-7	Anthracene	0.000054 U	0.00020	0.000054	mg/l	
56-55-3	Benzo(a)anthracene	0.000042 U	0.00020	0.000042	mg/l	
50-32-8	Benzo(a)pyrene	0.000065 U	0.00020	0.000065	mg/l	
205-99-2	Benzo(b)fluoranthene	0.000061 U	0.00020	0.000061	mg/l	
191-24-2	Benzo(g,h,i)perylene	0.000068 U	0.00020	0.000068	mg/l	
207-08-9	Benzo(k)fluoranthene	0.000056 U	0.00020	0.000056	mg/l	
218-01-9	Chrysene	0.000045 U	0.00020	0.000045	mg/l	
53-70-3	Dibenzo(a,h)anthracene	0.000060 U	0.00020	0.000060	mg/l	
206-44-0	Fluoranthene	0.000046 U	0.00020	0.000046	mg/l	
86-73-7	Fluorene	0.000065 U	0.00020	0.000065	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.000061 U	0.00020	0.000061	mg/l	
91-57-6	2-Methylnaphthalene	0.00012 U	0.00020	0.00012	mg/l	
91-20-3	Naphthalene	0.000076 U	0.00020	0.000076	mg/l	
85-01-8	Phenanthrene	0.000076 U	0.00020	0.000076	mg/l	
129-00-0	Pyrene	0.000080 U	0.00020	0.000080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	49%		17-131%
321-60-8	2-Fluorobiphenyl	46%		15-137%
1718-51-0	Terphenyl-d14	110%		10-160%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW9		
Lab Sample ID:	TC15139-5	**Date Sampled:**	08/20/12
Matrix:	AQ - Ground Water	**Date Received:**	08/23/12
		Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Chloride	8150	250	130	mg/l	500	08/31/12 04:14	ES	EPA 300/SW846 9056

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Accutest Laboratories

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	TC15139-6	Date Sampled:	08/20/12
Matrix:	AQ - Trip Blank Water	Date Received:	08/23/12
Method:	SW846 8260B	Percent Solids:	n/a
Project:	WP Byrd Tank Battery		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K10090.D	1	08/24/12	AK	n/a	n/a	VK451
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	MQL	SDL	Units	Q
71-43-2	Benzene	0.00025 U	0.0010	0.00025	mg/l	
108-88-3	Toluene	0.00026 U	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	0.00025 U	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	0.00071 U	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		79-122%
17060-07-0	1,2-Dichloroethane-D4	95%		75-121%
2037-26-5	Toluene-D8	102%		87-119%
460-00-4	4-Bromofluorobenzene	123%		80-133%

U = Not detected SDL - Sample Detection Limit
MQL = Method Quantitation Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

PAGE 1 OF 1

ACCUTEST LABORATORIES

10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL: 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: TC15139

Client / Reporting Information

Company Name: Geo Monitoring Services
Street Address: 4123 5th St.
City: Brookshire State: TX Zip: 77423
Project Contact: Rex Meyer E-mail: rex@geomon.net
Phone #: 281-375-5101 Fax #:
Sampler(s) Name(s): James Flake Phone #: 843-343-6226

Project Information

Project Name: WP Byrd Tank Battery
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analyses

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZnAcNaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TBP	NaHSO4	ENCORE	OTHER	8260 BTEX	PAHSIM 8270	CHL										LAB USE ONLY
1	MW 4	8/21/12	1204	JF	GW	6	3											3	X	X	X										
2	MW 5	8/21/12	1115	JF	GW	6	3											3	X	X	X										
3	MW 6	8/21/12	958	JF	GW	6	3											3	X	X	X										
4	MW7	8/20/12	1208	JF	GW	6	3											3	X	X	X										
5	MW9	8/20/12	1040	JF	GW	6	3											3	X	X	X										
6	Trip Blank					2	2												X												

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [X] Standard
- [ ] 5 Day *RUSH*
- [ ] 4 Day *RUSH*
- [ ] 3 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 1 Day *EMERGENCY*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Labilnk

Data Deliverable Information

- [X] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 James E Flake	8/22/12 9:00	1	2	8/23/12	2
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice	Cooler Temp.
5		5					

4.1 4

TC15139: Chain of Custody
Page 1 of 4

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: TC15139 **Client:** GEO MONITORING **Project:** WP BYRD TANK BATTERY

Date / Time Received: 8/23/2012 **Delivery Method:** **Airbill #'s:** 535599232053,535599232042

No. Coolers: 2 **Therm ID:** IRGUN5; **Temp Adjustment Factor:** -0.4;

Cooler Temps (Initial/Adjusted): #1: (5/4.6); #2: (4.4/4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		

Quality Control Preservation	Y	or	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑		☐	☐	☑	☐
2. Trip Blank listed on COC:	☑		☐	☐		
3. Samples preserved properly:	☑		☐			
4. VOCs headspace free:	☑		☐	☐		

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:713.271.4700

10165 Harwin Drive
F: 713.271.4770

Houston, TX 77036
www/accutest.com

TC15139: Chain of Custody
Page 2 of 4

Sample Receipt Log

Job #: TC15139 **Date / Time Received:** 8/23/2012 9:15:00 AM **Initials:** BG

Client: GEO MONITORING

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TC15139-1	1000ml	1	3G	N/P	Note #2 - Preservative check not applicable.	IRGUN5	5	-0.4	4.6
1	TC15139-1	LAG	2	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	5	-0.4	4.6
1	TC15139-1	LAG	3	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	5	-0.4	4.6
1	TC15139-1	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	5	-0.4	4.6
1	TC15139-1	40ml	5	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	5	-0.4	4.6
1	TC15139-1	40ml	6	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	5	-0.4	4.6
1	TC15139-2	1000ml	1	3G	N/P	Note #2 - Preservative check not applicable.	IRGUN5	5	-0.4	4.6
1	TC15139-2	LAG	2	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	5	-0.4	4.6
1	TC15139-2	LAG	3	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	5	-0.4	4.6
1	TC15139-2	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	5	-0.4	4.6
1	TC15139-2	40ml	5	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	5	-0.4	4.6
1	TC15139-2	40ml	6	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	5	-0.4	4.6
2	TC15139-3	1000ml	1	3G	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-3	LAG	2	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-3	LAG	3	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-3	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-3	40ml	5	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-3	40ml	6	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-4	1000ml	1	3G	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-4	LAG	2	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-4	LAG	3	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-4	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-4	40ml	5	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4

TC15139: Chain of Custody
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ACCUTEST LABORATORIES

Sample Receipt Log

Job #: TC15139 **Date / Time Received:** 8/23/2012 9:15:00 AM **Initials:** BG

Client: GEO MONITORING

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
2	TC15139-4	40ml	6	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-5	1000ml	1	3G	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-5	LAG	2	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-5	LAG	3	4A	N/P	Note #2 - Preservative check not applicable.	IRGUN5	4.4	-0.4	4
2	TC15139-5	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-5	40ml	5	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-5	40ml	6	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4
2	TC15139-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN5	4.4	-0.4	4

TC15139: Chain of Custody
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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK451-MB	K10085.D	1	08/24/12	AK	n/a	n/a	VK451

The QC reported here applies to the following samples: Method: SW846 8260B

TC15139-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.71	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	79-122%
17060-07-0	1,2-Dichloroethane-D4	93%	75-121%
2037-26-5	Toluene-D8	101%	87-119%
460-00-4	4-Bromofluorobenzene	122%	80-133%

Method Blank Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK452-MB	K10141.D	1	08/27/12	AK	n/a	n/a	VK452

The QC reported here applies to the following samples: Method: SW846 8260B

TC15139-1, TC15139-2, TC15139-3, TC15139-4, TC15139-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.71	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	79-122%
17060-07-0	1,2-Dichloroethane-D4	92%	75-121%
2037-26-5	Toluene-D8	100%	87-119%
460-00-4	4-Bromofluorobenzene	126%	80-133%

Blank Spike Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK451-BS	K10083.D	1	08/24/12	AK	n/a	n/a	VK451

The QC reported here applies to the following samples: Method: SW846 8260B

TC15139-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	22.8	91	76-118
100-41-4	Ethylbenzene	25	23.5	94	75-112
108-88-3	Toluene	25	23.3	93	77-114
1330-20-7	Xylene (total)	75	71.6	95	75-111

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	79-122%
17060-07-0	1,2-Dichloroethane-D4	94%	75-121%
2037-26-5	Toluene-D8	102%	87-119%
460-00-4	4-Bromofluorobenzene	122%	80-133%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK452-BS	K10139.D	1	08/27/12	AK	n/a	n/a	VK452

The QC reported here applies to the following samples: Method: SW846 8260B

TC15139-1, TC15139-2, TC15139-3, TC15139-4, TC15139-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.7	95	76-118
100-41-4	Ethylbenzene	25	24.0	96	75-112
108-88-3	Toluene	25	23.7	95	77-114
1330-20-7	Xylene (total)	75	72.6	97	75-111

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	79-122%
17060-07-0	1,2-Dichloroethane-D4	94%	75-121%
2037-26-5	Toluene-D8	100%	87-119%
460-00-4	4-Bromofluorobenzene	121%	80-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC15158-1MS	K10093.D	1	08/24/12	AK	n/a	n/a	VK451
TC15158-1MSD	K10094.D	1	08/24/12	AK	n/a	n/a	VK451
TC15158-1	K10092.D	1	08/24/12	AK	n/a	n/a	VK451

The QC reported here applies to the following samples: Method: SW846 8260B

TC15139-6

CAS No.	Compound	TC15158-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	22.1	88	21.6	86	2	76-118/16
100-41-4	Ethylbenzene	ND		25	22.4	90	22.0	88	2	75-112/12
108-88-3	Toluene	ND		25	21.9	88	21.6	86	1	77-114/12
1330-20-7	Xylene (total)	ND		75	68.2	91	66.8	89	2	75-111/12

CAS No.	Surrogate Recoveries	MS	MSD	TC15158-1	Limits
1868-53-7	Dibromofluoromethane	100%	100%	96%	79-122%
17060-07-0	1,2-Dichloroethane-D4	94%	95%	90%	75-121%
2037-26-5	Toluene-D8	100%	101%	98%	87-119%
460-00-4	4-Bromofluorobenzene	123%	121%	119%	80-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC15139-1MS	K10150.D	1	08/27/12	AK	n/a	n/a	VK452
TC15139-1MSD	K10151.D	1	08/27/12	AK	n/a	n/a	VK452
TC15139-1	K10145.D	1	08/27/12	AK	n/a	n/a	VK452

The QC reported here applies to the following samples: Method: SW846 8260B

TC15139-1, TC15139-2, TC15139-3, TC15139-4, TC15139-5

CAS No.	Compound	TC15139-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2.0		25	26.8	99	26.4	98	2	76-118/16
100-41-4	Ethylbenzene	1.0	U	25	24.7	99	24.1	96	2	75-112/12
108-88-3	Toluene	1.0	U	25	24.5	98	24.1	96	2	77-114/12
1330-20-7	Xylene (total)	3.0	U	75	74.9	100	73.2	98	2	75-111/12

CAS No.	Surrogate Recoveries	MS	MSD	TC15139-1	Limits
1868-53-7	Dibromofluoromethane	146%* [a]	147%* [a]	101%	79-122%
17060-07-0	1,2-Dichloroethane-D4	139%* [a]	140%* [a]	97%	75-121%
2037-26-5	Toluene-D8	145%* [a]	144%* [a]	100%	87-119%
460-00-4	4-Bromofluorobenzene	176%* [a]	175%* [a]	124%	80-133%

(a) Outside control limits biased high.

* = Outside of Control Limits.

Gulf Coast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24862-MB	V12326.D	1	08/27/12	GJ	08/25/12	OP24862	EV691

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

TC15139-4, TC15139-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.042	ug/l	
208-96-8	Acenaphthylene	ND	0.20	0.072	ug/l	
120-12-7	Anthracene	ND	0.20	0.054	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.041	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.064	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.060	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.068	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.056	ug/l	
218-01-9	Chrysene	ND	0.20	0.044	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.060	ug/l	
206-44-0	Fluoranthene	ND	0.20	0.046	ug/l	
86-73-7	Fluorene	ND	0.20	0.064	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.061	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.12	ug/l	
91-20-3	Naphthalene	ND	0.20	0.075	ug/l	
85-01-8	Phenanthrene	ND	0.20	0.075	ug/l	
129-00-0	Pyrene	ND	0.20	0.079	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	94%	17-131%
321-60-8	2-Fluorobiphenyl	87%	15-137%
1718-51-0	Terphenyl-d14	102%	10-160%

Method Blank Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24900-MB	V12402.D	1	08/30/12	GJ	08/28/12	OP24900	EV694

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

TC15139-1, TC15139-2, TC15139-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.042	ug/l	
208-96-8	Acenaphthylene	ND	0.20	0.072	ug/l	
120-12-7	Anthracene	ND	0.20	0.054	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.041	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.064	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.060	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.068	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.056	ug/l	
218-01-9	Chrysene	ND	0.20	0.044	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.060	ug/l	
206-44-0	Fluoranthene	ND	0.20	0.046	ug/l	
86-73-7	Fluorene	ND	0.20	0.064	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.061	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.12	ug/l	
91-20-3	Naphthalene	ND	0.20	0.075	ug/l	
85-01-8	Phenanthrene	ND	0.20	0.075	ug/l	
129-00-0	Pyrene	ND	0.20	0.079	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	83%	17-131%
321-60-8	2-Fluorobiphenyl	83%	15-137%
1718-51-0	Terphenyl-d14	100%	10-160%

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24862-BS	V12327.D	1	08/27/12	GJ	08/25/12	OP24862	EV691
OP24862-BSD [a]	V12328.D	1	08/27/12	GJ	08/25/12	OP24862	EV691

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

TC15139-4, TC15139-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	5	4.6	92	4.9	98	6	10-125/30
208-96-8	Acenaphthylene	5	4.7	94	5.0	100	6	10-141/30
120-12-7	Anthracene	5	5.0	100	5.1	102	2	13-139/30
56-55-3	Benzo(a)anthracene	5	4.9	98	5.2	104	6	24-151/30
50-32-8	Benzo(a)pyrene	5	7.3	146	7.6	152* [b]	4	36-146/30
205-99-2	Benzo(b)fluoranthene	5	8.2	164* [b]	8.3	166* [b]	1	27-159/30
191-24-2	Benzo(g,h,i)perylene	5	6.9	138	7.9	158* [b]	14	21-156/30
207-08-9	Benzo(k)fluoranthene	5	7.3	146	7.6	152	4	26-157/30
218-01-9	Chrysene	5	5.2	104	5.5	110	6	26-146/30
53-70-3	Dibenzo(a,h)anthracene	5	6.9	138	7.8	156	12	23-161/30
206-44-0	Fluoranthene	5	5.0	100	4.9	98	2	20-140/30
86-73-7	Fluorene	5	4.7	94	4.8	96	2	16-126/30
193-39-5	Indeno(1,2,3-cd)pyrene	5	6.7	134	7.5	150	11	25-153/30
91-57-6	2-Methylnaphthalene	5	4.5	90	4.5	90	0	10-115/30
91-20-3	Naphthalene	5	4.7	94	4.9	98	4	11-111/30
85-01-8	Phenanthrene	5	4.8	96	5.1	102	6	23-135/30
129-00-0	Pyrene	5	5.5	110	5.7	114	4	27-138/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	99%	103%	17-131%
321-60-8	2-Fluorobiphenyl	89%	95%	15-137%
1718-51-0	Terphenyl-d14	111%	113%	10-160%

(a) Insufficient sample for MS/MSD.
(b) Outside control limits biased high. Analyte not detected in associated samples.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TC15139
Account: GMSTXFU Geo Monitoring Services
Project: WP Byrd Tank Battery

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24900-BS	V12403.D	1	08/30/12	GJ	08/28/12	OP24900	EV694
OP24900-BSD [a]	V12404.D	1	08/30/12	GJ	08/28/12	OP24900	EV694

The QC reported here applies to the following samples: Method: SW846 8270C BY SIM

TC15139-1, TC15139-2, TC15139-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	5	4.1	82	4.6	92	11	10-125/30
208-96-8	Acenaphthylene	5	4.4	88	4.8	96	9	10-141/30
120-12-7	Anthracene	5	4.5	90	4.9	98	9	13-139/30
56-55-3	Benzo(a)anthracene	5	4.6	92	5.0	100	8	24-151/30
50-32-8	Benzo(a)pyrene	5	4.6	92	5.0	100	8	36-146/30
205-99-2	Benzo(b)fluoranthene	5	4.8	96	5.3	106	10	27-159/30
191-24-2	Benzo(g,h,i)perylene	5	4.7	94	4.4	88	7	21-156/30
207-08-9	Benzo(k)fluoranthene	5	4.3	86	4.9	98	13	26-157/30
218-01-9	Chrysene	5	4.7	94	5.2	104	10	26-146/30
53-70-3	Dibenzo(a,h)anthracene	5	4.8	96	4.5	90	6	23-161/30
206-44-0	Fluoranthene	5	4.5	90	5.1	102	13	20-140/30
86-73-7	Fluorene	5	4.3	86	5.0	100	15	16-126/30
193-39-5	Indeno(1,2,3-cd)pyrene	5	5.1	102	4.9	98	4	25-153/30
91-57-6	2-Methylnaphthalene	5	4.0	80	4.4	88	10	10-115/30
91-20-3	Naphthalene	5	4.2	84	4.5	90	7	11-111/30
85-01-8	Phenanthrene	5	4.2	84	4.7	94	11	23-135/30
129-00-0	Pyrene	5	4.9	98	5.5	110	12	27-138/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	80%	92%	17-131%
321-60-8	2-Fluorobiphenyl	82%	93%	15-137%
1718-51-0	Terphenyl-d14	100%	115%	10-160%

(a) Insufficient sample for MS/MSD.

* = Outside of Control Limits.

Gulf Coast ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC15139
Account: GMSTXFU - Geo Monitoring Services
Project: WP Byrd Tank Battery

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP20580/GN44634	0.50	0.0	mg/l	10	10.6	106.0	90-110%
Chloride	GP20578/GN44629	0.50	0.0	mg/l	10	10.2	102.0	90-110%
Chloride	GP20580/GN44634	0.50	0.0	mg/l	10	10.3	103.0	90-110%
Sulfate	GP20578/GN44629	0.50	0.0	mg/l	10	10.4	104.0	90-110%
Sulfate	GP20580/GN44634	0.50	0.0	mg/l	10	10.5	105.0	90-110%

Associated Samples:
Batch GP20578: TC15139-5
Batch GP20580: TC15139-1, TC15139-2, TC15139-3, TC15139-4
(*) Outside of QC limits

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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC15139
Account: GMSTXFU - Geo Monitoring Services
Project: WP Byrd Tank Battery

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Bromide	GP20580/GN44634	TC15034-4	mg/l	0.28 U	0.0	0.0	0-20%
Chloride	GP20578/GN44629	TC15397-1	mg/l	158	158	0.0	0-20%
Chloride	GP20580/GN44634	TC15034-4	mg/l	27.5	27.3	13.3	0-20%
Sulfate	GP20578/GN44629	TC15397-1	mg/l	217	214	1.4	0-20%
Sulfate	GP20580/GN44634	TC15034-4	mg/l	19.6	19.3	3.1	0-20%

Associated Samples:
Batch GP20578: TC15139-5
Batch GP20580: TC15139-1, TC15139-2, TC15139-3, TC15139-4
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC15139
Account: GMSTXFU - Geo Monitoring Services
Project: WP Byrd Tank Battery

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP20580/GN44634	TC15034-4	mg/l	0.28 U	10	10.8	108.0	80-120%
Bromide	GP20580/GN44634	TC15034-4	mg/l	0.28 U	50	52.9	105.8	80-120%
Chloride	GP20578/GN44629	TC15397-1	mg/l	158	500	685	105.4	80-120%
Chloride	GP20580/GN44634	TC15034-4	mg/l	27.5	50	82.0	109.0	80-120%
Sulfate	GP20578/GN44629	TC15397-1	mg/l	217	500	743	105.2	80-120%
Sulfate	GP20580/GN44634	TC15034-4	mg/l	19.6	50	72.6	106.0	80-120%

Associated Samples:
Batch GP20578: TC15139-5
Batch GP20580: TC15139-1, TC15139-2, TC15139-3, TC15139-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits