AP - 038

REPORT

8/25/2004

AP 38

BNC Environmental Services, Inc.

SOIL AND GROUNDWATER ASSESSMENT REPORT

GLADIOLA STATION
SECTION 5, T-12-S, R-38-E
LEA COUNTY, NEW MEXICO

RECEIVED

AUG 25 2004

Oil Conservation Division
Environmental Bureau

August 20, 2004

Olson, William

From: Johnson, Larry
Sent: Wednesday, August 25, 2004 4:08 PM
To: Olson, William; Martin, Ed
Cc: Williams, Chris; Sheeley, Paul
Subject: Reporting Violation?

Willie,
Attached is the cover letter for a spill assessment report to you with a copy received by Hobbs OCD August 23, 2004. We cannot find any C-141 initial report of the referenced release, no contact regarding a delineation plan, workplan, or anything. Now two years later we receive the report of gross water contamination and an ending statement on page 7 stating "Additional groundwater delineation and remediation activities are currently UNDER CONSIDERATION."

Landowner Tommy Burris had contacted OCD July 22, 2004 requesting help as someone had been digging outside the facility fenced area on his land. When he attempted to make inquires, ExxonMobil would not talk with him nor return his calls. We found no reports and began to investigate. Now this report surfaces. Was Santa Fe advised of the problem prior to receipt of this report dated August 20, 2004?
Thanks,
Larry

AUSTIN ▪ DALLAS ▪ HOUSTON ▪ MIDLAND ▪ NEW MEXICO ▪ OKLAHOMA

BNC SERVICES
BNC Environmental Services, Inc.

Mr. Bill Olson
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

August 20, 2004

SUBJECT: Soil and Groundwater Assessment Report
ExxonMobil Refining & Supply - Global Remediation
Gladiola Station
Section 5, T-12-S, R-38-E
Lea County, New Mexico

Dear Mr. Olson:

Enclosed is one final copy of the Soil and Groundwater Assessment Report for the Gladiola Station located in Lea County, New Mexico, prepared by BNC Environmental Services, Inc. (BNC) on behalf ExxonMobil Refining & Supply - Global Remediation (EMGR).

If you have any questions regarding this correspondence, please contact me at (432) 686-0086.

Respectfully submitted,
BNC Environmental Services, Inc.

Aaron M. Hale
Project Geologist

Attachment: Soil and Groundwater Assessment Report
ExxonMobil Refining & Supply - Global Remediation
Gladiola Station
Section 5, T-12-S, R-38-E
Lea County, New Mexico

Cc: Jonathan Hamilton – EMGR Baytown, Texas
Bill Von Drehle – Centurion Pipeline L.P., Houston, Texas
Burt Anderson – Centurion Pipeline L.P., Midland, Texas
NMOCD – District 1, Hobbs, New Mexico
Tommy Burris – Landowner

BNC SERVICES
BNC Environmental Services, Inc.

SOIL AND GROUNDWATER ASSESSMENT REPORT

GLADIOLA STATION
SECTION 5, T-12-S, R-38-E
LEA COUNTY, NEW MEXICO

PREPARED FOR:

Mr. Jonathan Hamilton
EXXONMOBIL REFINING AND SUPPLY COMPANY
GLOBAL REMEDIATION
2800 Decker Dr., Room NW-46
Baytown, Texas 77520

PREPARED BY:

BNC Environmental Services, Inc.
2135 S. Loop 250 West
Midland, Texas 79703

Luke D. Markham
Project Manager

Aaron M. Hale
Project Geologist

Thomas C. Larson
Operations Manager

TABLE OF CONTENTS

SECTION I INTRODUCTION

This Soil and Groundwater Assessment Report presents soil and groundwater assessment data collected by BNC Environmental Services, Inc. (BNC) at the former ExxonMobil Pipeline Company (EMPCo) Gladiola Station leased property owned by the O7 Ranch. The assessment activities were conducted on behalf of ExxonMobil Refining and Supply – Global Remediation (EMGR) personnel.

The Gladiola Station crude oil pipeline release site (hereafter referred to as the "Site") is located in eastern Lea County, New Mexico (FIGURE 1). The legal description of the Site is the SE/4 of Section 5, T-12-S, R-38-E. The Site is situated to the south of Tank # 2857. The Site consists of approximately 0.54 acres and was operated as a crude oil pipeline pumping station under EMPCo until its purchase by Trojan Pipeline L.P. (Trojan) in February, 2004. Trojan changed their name to Centurion Pipeline L.P. (Centurion) in July, 2004. The Site is currently operated by Centurion.

The subject release occurred on November 18, 2002 and was the result of a sump overflow/bleeder valve leak. A *Leak, Maintenance and Exposed Pipe Report* dated November 18, 2002 indicated the crude oil release consisted of 15 barrels lost and 5 barrels recovered.

Initial excavation activities were performed at the Site by E.D. Walton followed by a soil boring investigation conducted by B&H Maintenance & Construction, Inc. (B&H) in August 2003. Upon completion of the investigation, a document entitled *Soil Coring Investigation Report* was prepared by B&H and submitted to EMPCo to demonstrate the total petroleum hydrocarbon (TPH) concentrations at the Site. The Site Details map is presented in FIGURE 2. BNC and EMGR personnel conducted a Site visit on October 8, 2003 and noted an onsite remedial excavation (40 feet in length, 30 feet in width and three feet in depth) as well as an offsite remedial excavation (20 feet in length, 20 feet in width and three feet in depth). In addition, four soil stockpiles were identified within the station property. These soil stockpiles are the result of excavation activities associated with the November 18, 2002 release. Subsequently, BNC prepared and submitted a *Gladiola Station Crude Oil Release Site 2004 Work Scope and Cost Estimate* dated October 31, 2003 to EMGR personnel and proposed further assessment of soil impacts at the Site.

On May 12, 2004, BNC and White Drilling Company mobilized to the Site and conducted the soil and groundwater assessment activities documented within this report. Soil hydrocarbon impacts were encountered in excess of NMOCD regulatory guidelines. Groundwater hydrocarbon impacts were encountered in excess of New Mexico Water Quality Control Commission (NMWQCC) regulatory guidelines.

BNC personnel conducted an onsite water well search and identified three water wells within a one-half mile radius of the Site utilized for livestock. The wells are located north, northeast and northwest of the Site at distances greater than 2,000 feet. An OIMS, System 2 – Attachment 2.3, Sensitive Receptor Survey was also conducted and consequently documented that no water well were located on the Gladiola Station property or land immediately adjacent to the Site.

The following sections summarize the soil and groundwater assessment activities. Figures and tables are utilized to support the summary of findings associated with the assessment activities.

SECTION II REGULATORY FRAMEWORK AND SITE CLASSIFICATION

The NMOCD has regulatory jurisdiction over oil and gas production operations including crude oil pipeline spills and closure activities in the State of New Mexico. This project was conducted under the regulatory jurisdiction of the NMOCD, which requires that soil impacted by a crude oil spill be remediated in such a manner that the potential for future affects to groundwater or the environment are minimized. The NMOCD hydrocarbon soil remediation levels are determined by ranking criteria on a site-by-site basis, which is outlined in the NMOCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993. The ranking criteria are based on three site characteristics: depth to groundwater, wellhead protection and distance to surface water.

The NMOCD guidelines require groundwater to be analyzed for potential contaminants contained in the waste stream as defined by the NMWQCC regulations. In addition, the NMWQCC regulations present the Human Health Standards for Groundwater. The NMWQCC board is comprised of a representative from eight New Mexico "constituent agencies" (including the NMOCD) and four members appointed by the Governor of New Mexico.

Data collected during the soil and groundwater assessment indicate that the depth-to-groundwater at the Site ranges from 30 to 40 feet bgs. Based on these Site characteristics and associated NMOCD-ranking criteria presented in the table below, the following soil hydrocarbon remediation levels apply at the Site: benzene- 10 parts-per-million (ppm), benzene, toluene, ethylbenzene and xylene (Total BTEX) - 50 ppm and TPH- 100 ppm. Analytical results for soil data are reported in milligrams per kilograms (mg/kg) which are equivalent to the ppm reporting units.

Ranking Criteria and Scoring

CHARACTERISTIC	SELECTION	SCORE
Depth to Groundwater	<50 feet	20
Wellhead Protection Area	>1,000 feet	0
Distance to Surface Water	>1,000 feet	0

Total Score= 20

Soil Remediation Levels

Contaminant of Concern	>19 Score	10-19 Score	0-9 Score
Benzene (mg/Kg)	10	10	10
Total BTEX (mg/Kg)	50	50	50
TPH (mg/Kg)	100	1,000	5,000

Groundwater samples collected as part of assessment activities were evaluated utilizing New Mexico Water Quality Control Commission (NMWQCC) Standards for the following analytical parameters (reported in milligrams per liter, mg/L):

NMWQCC Human Health Standards for Groundwater

Contaminant of Concern	TDS Concentration of less than 10,000 mg/L
Benzene (mg/L)	0.01
Toluene (mg/L)	0.75
Ethylbenzene (mg/L)	0.75
Total Xylenes (mg/L)	0.62
Benzo (a) Pyrene (mg/L)	0.0007
[1] Total Naphthalene (mg/L)	0.030
Arsenic (mg/L)	0.1
Barium (mg/L)	1.0
Cadmium (mg/L)	0.01
Chromium (mg/L)	0.05
Lead (mg/L)	0.05
Mercury (mg/L)	0.002
Selenium (mg/L)	0.05
Silver (mg/L)	0.05

[1] Total Naphthalene plus monomethylnaphthalenes.

The topography in the Site area and adjoining land gently and regionally dip to the southeast. In general, the area is relatively flat and has a dry topography. Adjacent land use surrounding the release site is rangeland. The ground surface is mostly vegetated by native range grass. A water well search (APPENDIX A) identified three water wells within a one-half mile radius of the Site. One water well is completed in the same water bearing unit as the Site, the second is completed in a deeper water bearing unit, and the third water well has no completion information available.

Five soil borings were initially proposed to a total depth of 40 feet bgs to evaluate the nature and extent of soil impacts at the Site. During the soil assessment activities, Site conditions warranted the installation of two additional soil borings and the conversion of three soil borings to groundwater monitoring wells to evaluate hydrocarbon impacts to the groundwater and assess the hydraulic gradient and direction of groundwater flow (FIGURE 3). Drilling activities were conducted on May 12 through May 14, 2004.

Field Methodology

An air-rotary drilling rig was used to advance soil borings/monitoring wells from the surface to depths ranging from 30 to 45 feet bgs. Prior to drilling, all soil boring/monitoring well locations were approved by EMGR personnel and marked appropriately. The utility notification service was also notified and provided 48 hours to mark their utilities if present. Prior to drilling, each soil boring/monitoring well location was probed and hand-cleared to an approximate depth of four feet bgs. The hand-cleared soil boring locations were greater than three inches in diameter, larger than the diameter of the largest down hole tool. The OIMS System 2-Attachment 2.2, Pre-Drilling Protocol was strictly adhered to during all operations. Soil borings were terminated once the boring was advanced approximately ten feet below the top of the water table. Monitoring wells MW-1 (SB-2), MW-2 (SB-5) and MW-3 (SB-6) were advanced into the saturation zone and completed at depths ranging from 40 to 45 feet bgs.

Discrete, undisturbed soil samples were retrieved in 5-foot intervals by removing the drilling bit and installing a steel soil-sampling coring barrel (1-foot in length) and rotating it into the soil or by pushing a split-spoon sampling device. Compressed air was not used during the sample coring. In addition, drill cutting samples were collected, logged and field screened with a photo-ionization detector (PID) on a continuous basis during the boring advancements. The drill cuttings generated during the assessment were placed on the existing impacted soil stockpiles for subsequent management. Each 1-foot soil sample retrieved from the coring tool was divided into two samples: one sample was sealed in a new plastic re-sealable bag; and the other sample was immediately placed into a laboratory-supplied, four-ounce soil jar equipped with a Teflon-lined lid and placed on ice in an insulated cooler. The bagged sample was allowed to volatize, leaving a headspace for volatile organic compounds (VOCs) to collect. After sufficient time had elapsed to allow for volatilization, the headspace was screened for the presence of VOCs using a PID. In addition, BNC's field geologist described each sample using the Unified Soil Classification System and logged visual and olfactory observations as well as PID readings for evaluation of the presence of hydrocarbons. Soil samples collected for laboratory analysis were based on physical observations, field VOC measurements and the professional judgment of the BNC field geologist. All soil samples were chilled to a temperature of approximately 4°C (40°F), submitted to SPL in Houston, Texas and analyzed for TPH concentrations by EPA Method 8015 modified for diesel range organics (DRO) and gasoline range organics (GRO) as well as, BTEX concentrations by EPA Method 8021B. The coolers were sealed for shipment and proper chain-of-custody documentation accompanied the samples to the laboratory.

Prior to advancing the first boring, between samples and between soil boring/monitoring wells, the pertinent areas of the drilling rig and sampling tools were steam-cleaned to minimize the potential for cross-contamination. After drilling and sampling activities were completed, the borings were permanently plugged with bentonite to prevent subsurface impact from surface runoff.

Monitoring wells were drilled and completed to specifications required by the New Mexico Office of the State Engineer by a New Mexico-licensed water well driller. Two-inch, flush-threaded, schedule 40 PVC casing was selected for use at the Site for all wells. Each well consisted of 20 feet of 0.020-inch screened-casing placed at the bottom of each well allowing for 10 feet of screened-casing below the static depth-to-water and 10 feet of screened-casing above the static depth-to-water. The well annulus was filled with an 8/16 sand filter pack to approximately two feet above the top of the screen interval, a bentonite seal was placed on top of the sand and the well annulus was cemented to the surface to prevent surface runoff from entering the water table through the annulus. Boring logs and monitoring well completion details including the soil boring legend and notes are presented in FIGURES 4, 5, 6, 7, and 8. In addition, New Mexico Well Records are supplied in APPENDIX B.

Monitoring wells were developed by removal of sufficient volumes of water to clear the well casing and annulus of sediment. Subsequent to well development and prior to sample collection, the monitoring wells were gauged and purged dry or until a minimum of three well volumes had been removed. The development water was stored in drums and left onsite for subsequent management. Groundwater samples collected during the assessment were placed in appropriate sample containers supplied by the laboratory, preserved on ice in insulated coolers and chilled to a temperature of approximately 4°C (40°F) for laboratory analysis. The groundwater samples were submitted to SPL located in Houston, Texas for analysis of BTEX by EPA Method 8021B, polycyclic aromatic hydrocarbon (PAH) concentrations by EPA Method 8310, arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver (RCRA Metals) concentrations by EPA Method 6010 and 7470 and general groundwater quality parameters including total alkalinity, chloride, sulfate and total dissolved solids (TDS). The coolers were sealed for shipment and proper chain-of-custody documentation accompanied the samples to the laboratory. The groundwater constituents selected for laboratory analysis were based on telephone conversations with Mr. Bill Olsen of the NMOCD.

Subsurface Lithology

Soil samples were logged by a BNC field geologist and the general subsurface lithologies observed in the samples are presented below. The interval thicknesses, depths, and occurrences for the following soil types are presented within the boring logs and details for each soil boring/monitoring well. The four subsurface soil types encountered during the assessment include the following descriptions:

- Soil Type #1 is a Silty Clay, dark red brown, sandy, clayey, some caliche pebbles to 0.5 inch, slighty moist, organic, clay has low plasticity;
- Soil Type #2 is a Silty Sand (Caliche), light gray green, poor to well indurated, iron staining, dry to wet, fractured with lag gravel up to three inches in diameter;
- Soil Type #3 is a Limestone, olive gray, dense, hard, cryptocrystalline, cherty, massive; and
- Soil Type #4 is a Silty Sand, medium red brown, slight iron staining, dry, fractured, and very poorly consolidated.

Soil and Groundwater Assessment Results

Twenty soil samples were collected from varying depths within the monitoring wells and soil borings and submitted to SPL for BTEX and TPH (DRO/GRO) analysis. The submitted samples were selected to evaluate the highest possible contaminant concentration(s) in each soil boring/monitoring well and to assess the vertical and horizontal extent of hydrocarbon impacts.

TABLE I displays the soil sample analytical results for BTEX and TPH (DRO/GRO) from the four soil borings and three soil borings/monitoring wells advanced at the Site during the assessment. The NMOCD recommended remediation action levels (RRALs) are also presented for comparison to the analytical results. Soil samples collected from various intervals within soil borings SB-2 (monitoring well MW-1), SB-4 and SB-5 (monitoring well MW-2) exhibited concentrations that exceeded the NMOCD RRAL for TPH (DRO/GRO) and ranged in concentration from 255 to 5,000 mg/Kg. Copies of the certified analytical reports and chain-of-custody documentation are attached in APPENDIX C.

Waste generated at this site is classified as non-exempt and is subject to hazardous waste characterization. A composite waste characterization sample was obtained from the soil stockpiles (FIGURE 2) on July 7, 2004 (TABLE II). The sample, identified as "Gladiola WCS" was analyzed for BTEX, TPH, TCLP RCRA Metals, and reactivity, corrosivity and ignitability (RCI). Based on the analytical results, the sample did not exhibit any hazardous characteristics. The analytical reporting results, testing methods, laboratory quality control reports and chain-of-custody documentation are provided in APPENDIX C.

Groundwater gauging data collected on May 17, 2004 (TABLE III) indicate the direction of groundwater flow at the Site is toward the east-northeast. Depth-to-groundwater in the three monitoring wells ranged from 32.74 to 37.04 feet below the top of casing. This gauging data and the depth of groundwater encountered during the drilling activities indicate that the first occurrence of groundwater beneath the Site exhibits unconfined conditions.

The groundwater sample analytical results for BTEX, PAH and RCRA Metals and groundwater quality are presented in TABLE IV, V and VI, respectively. The NMWQCC maximum allowable toxic pollutant concentrations for human health standards for groundwater are also presented for comparison to the analytical results. Monitoring wells MW-1, MW-2 and MW-3 exhibited benzene concentrations that exceeded regulatory limits (6.600, 0.019 and 0.140 mg/L, respectively). Monitoring well MW-1 also exhibited toluene, ethylbenzene and xylene concentrations that exceeded regulatory limits (1.100, 0.440 and 1.120 mg/L, respectively). In addition, PAH analyses exhibited total naphthalene concentrations in monitoring wells MW-1 and MW-2 that exceeded regulatory limits (0.087 and 0.050 mg/L, respectively). All RCRA Metals and groundwater quality analytical parameters were below regulatory limits with the exception of barium in MW-1 (2.71 mg/L). Barium concentrations may be attributed to naturally occurring conditions. Copies of the certified analytical reports and chain-of-custody documentation are attached in APPENDIX C.

SECTION IV SUMMARY OF FINDINGS

Based on record reviews and soil and groundwater assessment activities performed at the Site, BNC presents the following summary of findings:

- The Gladiola Station crude oil pipeline release site is located in eastern Lea County, New Mexico. The subject release occurred on November 18, 2002 and was the result of a sump over-flow/bleeder valve leak. A *Leak, Maintenance and Exposed Pipe Report* dated November 18, 2002 indicated the release consisted of 15 barrels lost and 5 barrels recovered;

- Based on Site characteristics and associated NMOCD-ranking criteria, the following soil hydrocarbon recommended remediation levels apply at the Site: benzene- 10 ppm, BTEX- 50 ppm and TPH- 100 ppm. In addition, groundwater samples collected as part of the assessment activities were evaluated utilizing NMWQCC standards;

- Initial excavation activities were performed at the Site by E.D. Walton followed by a soil boring investigation conducted by B&H in August 2003. A document entitled *Soil Coring Investigation Report* was prepared by B&H and submitted to EMPCo to demonstrate the TPH concentrations at the Site. BNC and EMGR personnel conducted a Site visit on October 8, 2003 and noted onsite/offsite remedial excavations, as well as corresponding soil stockpiles. Subsequently, BNC prepared and submitted a Work Scope and Cost Estimate dated October 31, 2003 to EMGR personnel and proposed further assessment of soil impacts at the Site;

- On May 12, 2004, BNC mobilized to the Site and conducted soil and groundwater assessment activities including the installation of four soil borings (SB-1, SB-3, SB-4 and SB-7) and three soil borings/monitoring wells (SB-2/MW-1, SB-5/MW-2 and SB-6/MW-3);

- Soil samples collected from soil borings SB-2 (monitoring well MW-1), SB-4 and SB-5 (monitoring well MW-2) exhibited concentrations that exceeded the NMOCD RRAL for TPH (DRO/GRO) and ranged in concentration from 255 to 5,000 mg/Kg;

- Groundwater samples collected from monitoring wells MW-1, MW-2 and MW-3 exhibited benzene concentrations that exceeded regulatory limits (6.600, 0.019 and 0.140 mg/L, respectively). Monitoring well MW-1 also exhibited toluene, ethylbenzene and xylene concentrations that exceeded regulatory limits (1.100, 0.440 and 1.120 mg/L, respectively). In addition, PAH analyses exhibited total naphthalene concentrations in monitoring wells MW-1 and MW-2 that exceeded regulatory limits (0.087 and 0.050 mg/L, respectively). All metals and groundwater quality analytical parameters were below regulatory limits with the exception of barium in MW-1 (2.71 mg/L); and,

- A composite waste characterization sample of soil stockpiles indicated that the stockpiles do not exhibit hazardous characteristics.

The results of this soil and groundwater assessment activities at Gladiola Station demonstrate that the extent of hydrocarbon-impacted groundwater has not been fully delineated. Additional groundwater delineation and remediation activities are currently under consideration.

BRONCO QUADRANGLE
TEXAS

LAT=33° 18' 12"
LONG=103° 06' 35"

PHOTOREVISED 1970

0 1/4 1/2 1

(Miles)

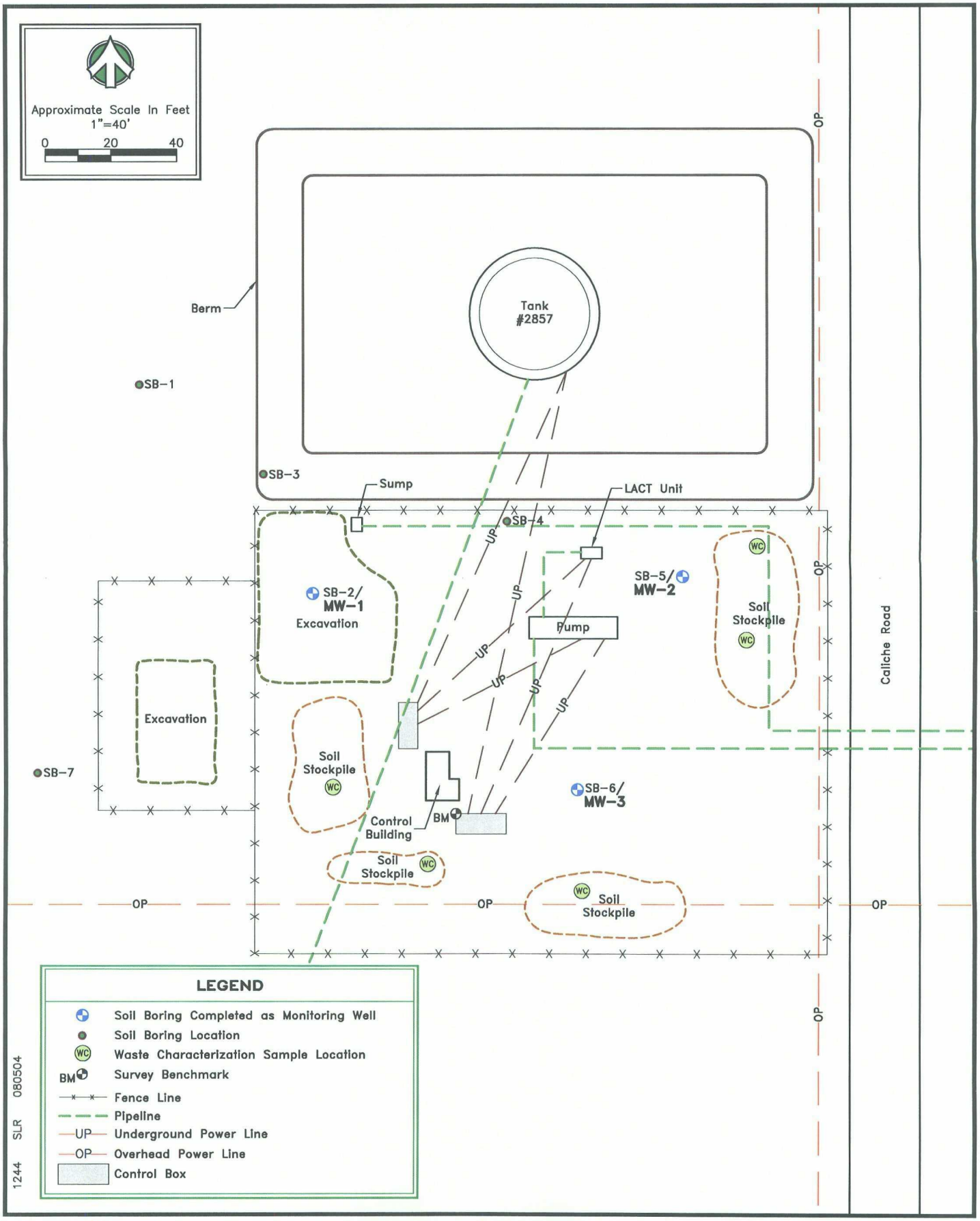
0 1600 3200 4800 6400

(Feet)

NORTH

1244 PGP 5/24/04

BNC	SITE LOCATION MAP	JOB No. 1244
	EXXONMOBIL GLOBAL REMEDIATION GLADIOLA STATION LEA COUNTY, NEW MEXICO	FIGURE 1



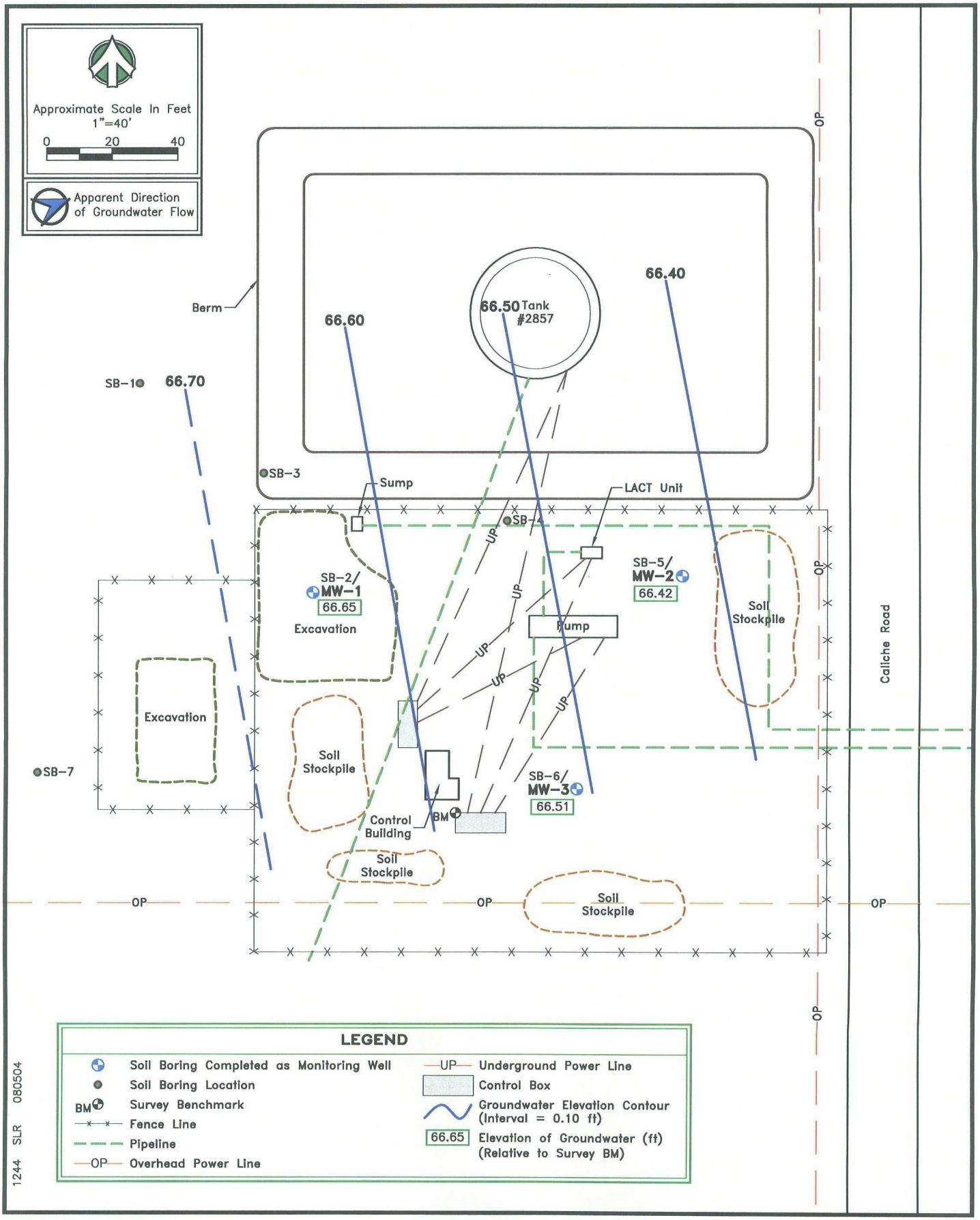
BNC

SITE DETAILS

EXXONMOBIL GLOBAL REMEDIATION
GLADIOLA STATION LEA COUNTY, NEW MEXICO

JOB No. 1244

FIGURE 2



BNC

GROUNDWATER GRADIENT MAP – MAY 17, 2004

EXXONMOBIL GLOBAL REMEDIATION
GLADIOLA STATION LEA COUNTY, NEW MEXICO

JOB No. 1244

FIGURE 3

SOIL TYPE

Silty Clay: Dark Red Brown, Sandy, Clayey, Some Caliche Pebbles to 0.5", Slightly Moist, Organics, Clay has low Plasticity

Silty Sand: (Caliche) Light Gray Green, Poor to well Indurated, Iron Staining, Dry to Wet, Fractured, Lag Gravel to 3" at Depth

Limestone: Olive Gray, Dense, Hard, Cryptocrystalline, Cherty, Massive

Silty Sand: Medium Red Brown, Slightly Iron Stained, Dry, Fractured, Very Poorly Consolidated.

Indicates sample selected for laboratory analysis.

Indicates sample interval. Sample was obtained by hand (probe samples).

Indicates sample interval. Sample was obtained by split spoon.

Indicates sample interval. Sample was obtained by core.

Indicates sample interval. Sample was obtained by drill bit cuttings..

B	Benzene Concentration (mg/Kg)
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes Concentration (mg/Kg)
TPH	Total Petroleum Hydrocarbons (DRO/GRO) Concentration (mg/Kg)
BDL	Below Detection Limits
PID	Headspace readings in ppm obtained with a photo-ionization detector.

NOTES

1. The soil borings were advanced on May 12 through 14, 2004.
2. The lines between soil types indicated on the logs represent approximate boundaries. Actual transitions may be gradual.
3. The depths indicated are referenced from the ground surface.
4. Soil borings were grouted with a cement and bentonite mixture.

1244 SB Log SLR 080604

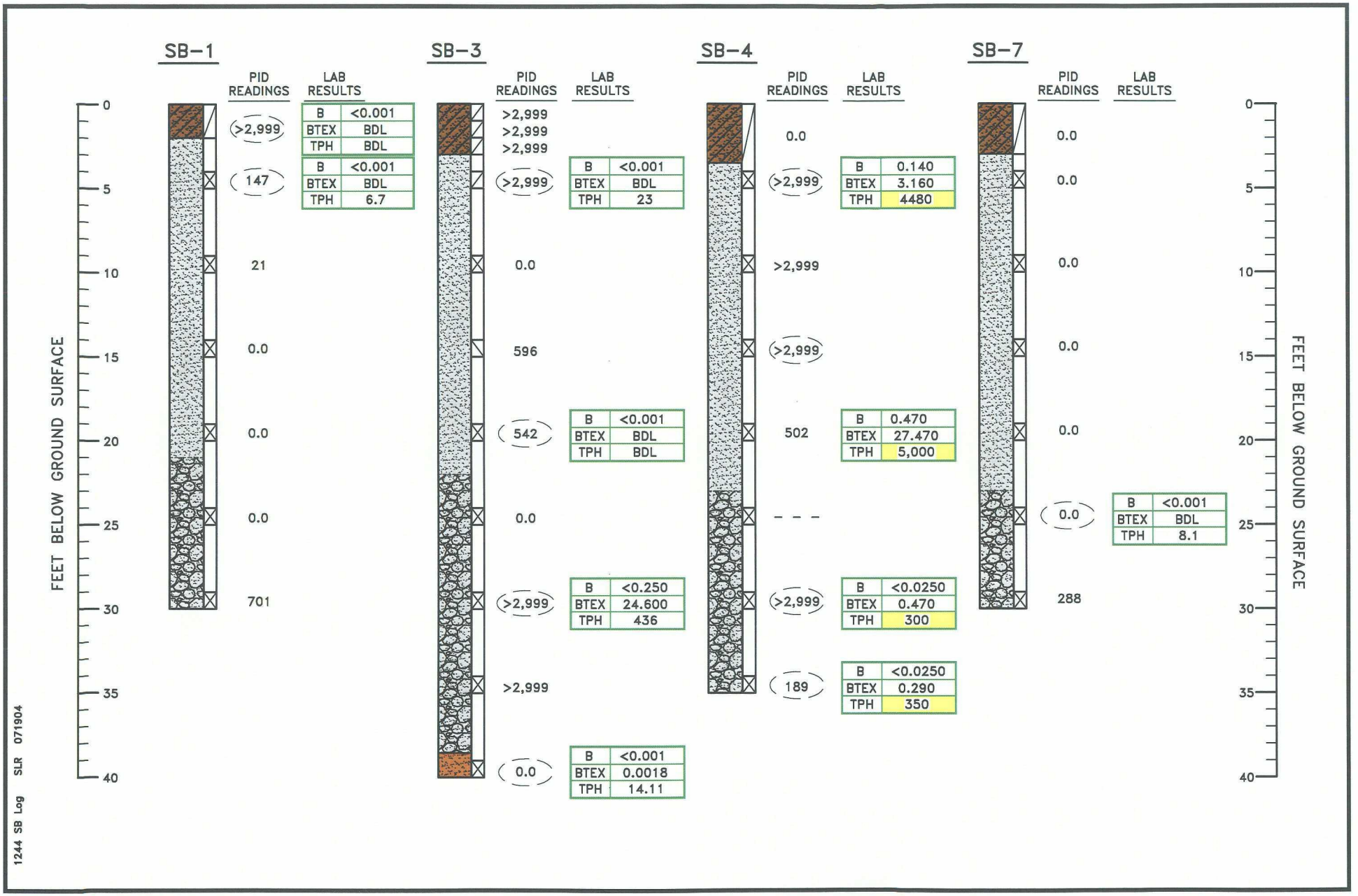
BNC

SOIL BORING LEGEND AND NOTES

EXXONMOBIL GLOBAL REMEDIATION
GLADIOLA STATION ANDREWS, TEXAS

JOB No. 1244

FIGURE 4



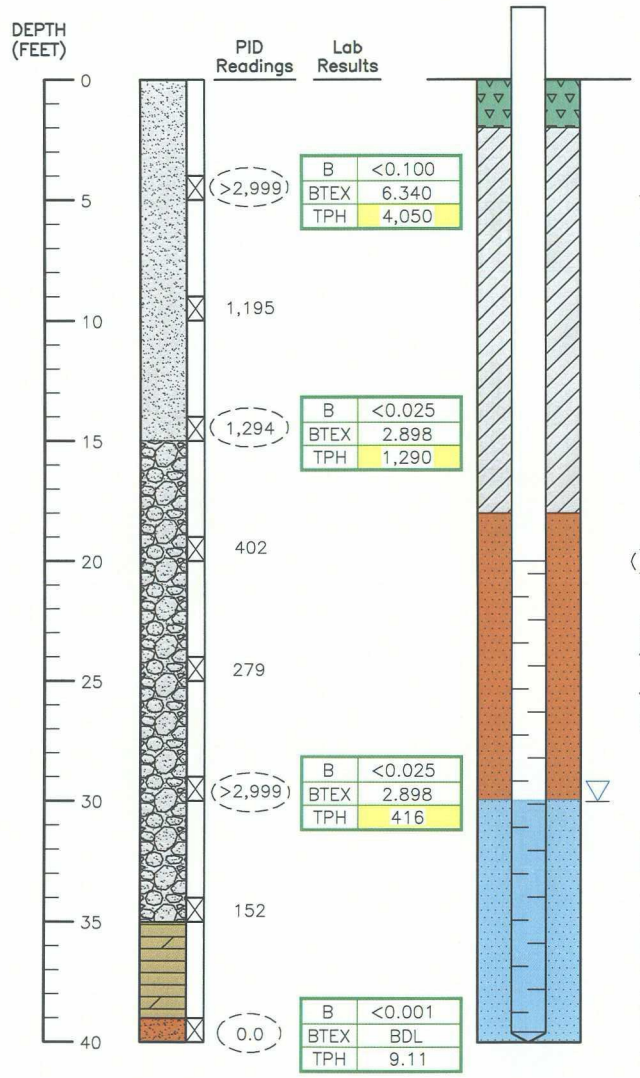
LOGS AND DETAILS FOR SOIL BORINGS SB-1, SB-3, SB-4 and SB-7

EXXONMOBIL GLOBAL REMEDIATION
GLADIOLA STATION ANDREWS, TEXAS

JOB No. 1244

FIGURE 5

MONITORING WELL MW–1 (SB–2)



Monitoring Well Details (MW–1)

Thickness of Bentonite Seal	16 ft
Length of PVC Well Screen	20 ft
Depth of PVC Well	40 ft
Depth of Exploratory Hole	40 ft
Depth to Groundwater (During drilling)	~30 ft
Depth to Groundwater	29.91 ft.
Elev of Groundwater	0

( ) Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/Kg)
BTEX = BTEX Concentration (mg/Kg)
TPH = Total Petroleum Hydrocarbon Concentration (mg/Kg)
TPH = TPH (GRO/DRO)
BDL = Below Detection Limits

Concrete Surface Seal

Bentonite Pellet Seal

Sand Pack

LEGEND

Silty Clay: Dark Red Brown, Sandy, Clayey, Some Caliche Pebbles to 0.5", Slightly Moist, Organics, Clay has low Plasticity

Silty Sand: (Caliche) Light Gray Green, Poor to well Indurated, Iron Staining, Dry to Wet, Fractured, Lag Gravel to 3" at Depth

Limestone: Olive Gray, Dense, Hard, Cryptocrystalline, Cherty, Massive

Silty Sand: Medium Red Brown, Slightly Iron Stained, Dry, Fractured, Very Poorly Consolidated.

Indicates sample interval. Sample was obtained by Drill Bit Cuttings.

Indicates sample interval. Sample was obtained by Core Barrel.

Indicates the groundwater level measured during drilling.

PID Head–space readings in ppm obtained with a photo–ionization detector.

ND Indicates the concentration was not detected.

NOTES

1. The monitoring well was installed on May 13, 2004 using 6.125–inch diameter air rotaty drill Rig.
2. The well was constructed with 2–inch ID, 0.020–inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The lines between soil types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
4. The depths indicated are referenced from the ground level.

1244 MWLog SLR 080604

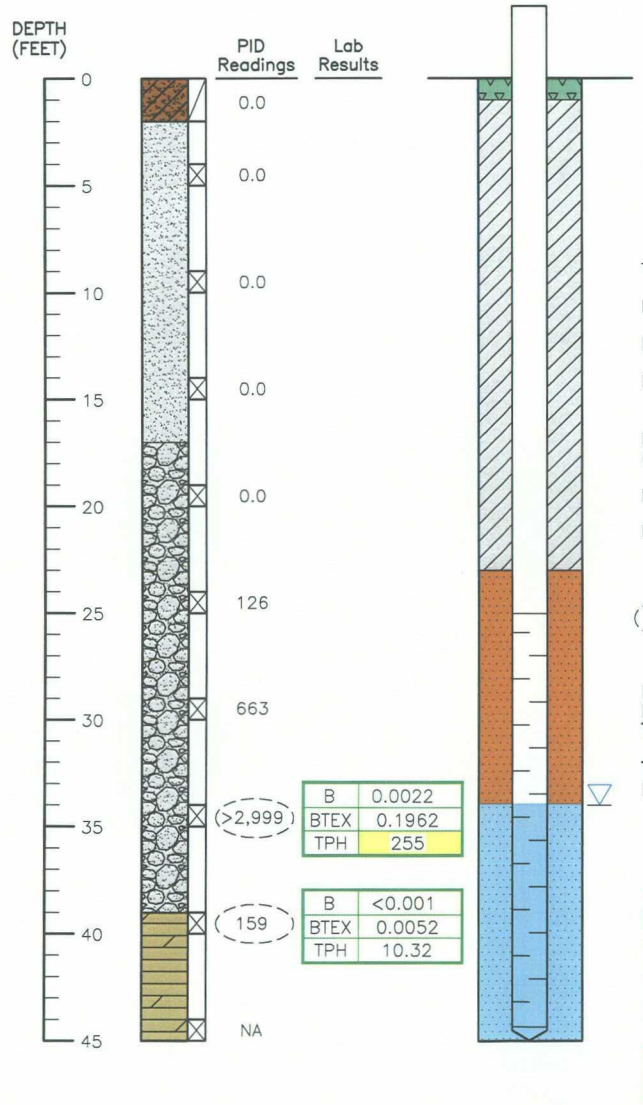
LOG AND DETAILS OF MONITORING WELL MW–1 (SB–2)

EXXONMOBIL GLOBAL REMEDIATION
GLADIOLA STATION ANDREWS, TEXAS

JOB No. 1244

FIGURE 6

MONITORING WELL MW–2 (SB–5)



Monitoring Well Details (MW–2)

Thickness of Bentonite Seal	22 ft
Length of PVC Well Screen	20 ft
Depth of PVC Well	45 ft
Depth of Exploratory Hole	45 ft
Depth to Groundwater (During drilling)	~34 ft
Depth to Groundwater	33.75 ft
Elev of Groundwater	0 ft

Indicates sample selected for laboratory analysis.

B = Benzene Concentration (mg/Kg)
BTEX = BTEX Concentration (mg/Kg)
TPH = Total Petroleum Hydrocarbon Concentration (mg/Kg)
TPH = TPH (GRO/DRO)
BDL = Below Detection Limits

Concrete Surface Seal

Bentonite Pellet Seal

Sand Pack

LEGEND

Silty Clay: Dark Red Brown, Sandy, Clayey, Some Caliche Pebbles to 0.5", Slightly Moist, Organics, Clay has low Plasticity

Silty Sand: (Caliche) Light Gray Green, Poor to well Indurated, Iron Staining, Dry to Wet, Fractured, Lag Gravel to 3" at Depth

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Silty Sand: Medium Red Brown, Slightly Iron Stained, Dry, Fractured, Very Poorly Consolidated.

Indicates sample interval. Sample was obtained by Drill Bit Cuttings.

Indicates sample interval. Sample was obtained by hand (probe samples).

Indicates sample interval. Sample was obtained by Core Barrel.

Indicates the groundwater level measured during drilling.

PID Head–space readings in ppm obtained with a photo–ionization detector.

ND Indicates the concentration was not detected.

NOTES

1. The monitoring well was installed on May 13, 2004 using 6.125–inch diameter air rotary drill rig.
2. The well was constructed with 2–inch ID, 0.020–inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The lines between soil types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
4. The depths indicated are referenced from the ground surface unless otherwise noted.

1244 MWLog SLR 080604

BNC

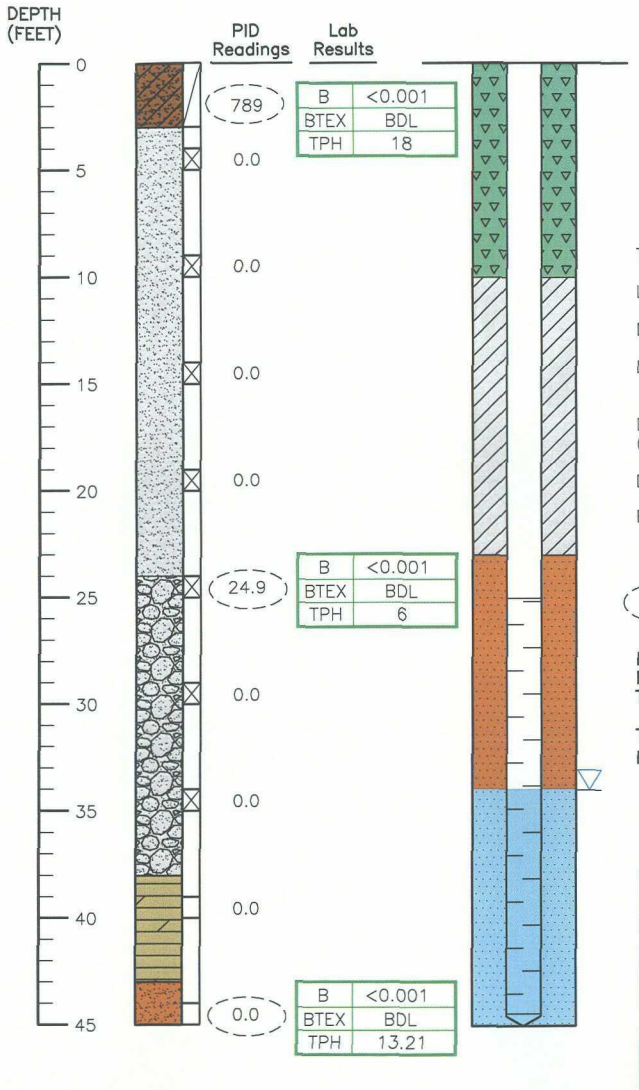
LOG AND DETAILS OF MONITORING WELL MW–2 (SB–5)

EXXONMOBIL GLOBAL REMEDIATION
GLADIOLA STATION ANDREWS, TEXAS

JOB No. 1244

FIGURE 7

MONITORING WELL MW–3 (SB–6)



Monitoring Well Details (MW–3)

Thickness of Bentonite Seal	13 ft
Length of PVC Well Screen	20 ft
Depth of PVC Well	45 ft
Depth of Exploratory Hole	45 ft
Depth to Groundwater (During drilling)	~34 ft
Depth to Groundwater	33.25 ft
Elev of Groundwater	0 ft

Indicates sample selected for laboratory analysis.

B = *Benzene Concentration (mg/Kg)*
BTEX = BTEX Concentration (mg/Kg)
TPH = Total Petroleum Hydrocarbon Concentration (mg/Kg)
TPH = TPH (GRO/DRO)
BDL = *Below Detection Limits*

Concrete Surface Seal

Bentonite Pellet Seal

Sand Pack

LEGEND

Silty Clay: Dark Red Brown, Sandy, Clayey, Some Caliche Pebbles to 0.5", Slightly Moist, Organics, Clay has low Plasticity

Silty Sand: (Caliche) Light Gray Green, Poor to well Indurated, Iron Staining, Dry to Wet, Fractured, Lag Gravel to 3" at Depth

Limestone: Olive Gray, Dense, Hard, Cryptocrystalline, Cherty, Massive

Silty Sand: Medium Red Brown, Slightly Iron Stained, Dry, Fractured, Very Poorly Consolidated.

Indicates sample interval. Sample was obtained by Drill Bit Cuttings.

Indicates sample interval. Sample was obtained by hand (probe samples).

Indicates sample interval. Sample was obtained by Core Barrel.

Indicates the groundwater level measured during drilling.

PID *Head–space readings in ppm obtained with a photo–ionization detector.*

ND Indicates the concentration was not detected.

NOTES

1. The monitoring well was installed on May 13, 2004 using 6.125–inch diameter air rotary drill rig.
2. The well was constructed with 2–inch ID, 0.020–inch factory slotted, threaded joint, Schedule 40 PVC pipe.
3. The lines between soil types shown on the profile log represent *approximate boundaries. Actual transitions may be gradual.*
4. The depths indicated are referenced from the ground surface unless otherwise noted.

1244 MWLog SLR 080604

BNC

LOG AND DETAILS OF MONITORING WELL MW–3 (SB–6)

EXXONMOBIL GLOBAL REMEDIATION
GLADIOLA STATION ANDREWS, TEXAS

JOB No. 1244

FIGURE 8

TABLE I

SUMMARY OF SOIL ANALYTICAL DATA – BTEX/TPH
GLADIOLA STATION
LEA COUNTY, NEW MEXICO

SAMPLE ID	DATE	DEPTH (feet)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	TPH (8015 Modified)		
								TPH DRO (mg/Kg)	TPH GRO (mg/Kg)	TPH (GRO/DRO) (mg/Kg)
New Mexico Oil Conservation Division Recommended Remediation Action Levels (Total Ranking Score >19)										
			10 mg/Kg	---	---	---	50.0 mg/Kg	---	---	100 mg/Kg
Excavation Confirmation Samples										
SB - 1	5/14/2004	0 - 2	<0.001	<0.001	<0.001	<0.001	BDL	<5	<0.1	BDL
	5/14/2004	4 - 5	<0.001	<0.001	<0.001	<0.001	BDL	**6.7**	<0.1	**6.7**
SB - 2	5/13/2004	4 - 5	<0.100	<0.100	**2.100**	**4.240**	**6.340**	**3,300**	**750**	**4,050**
(MW-1)	5/13/2004	14 - 15	<0.025	<0.025	**0.610**	**2.288**	**2.898**	**1,200**	**190**	**1,390**
	5/13/2004	29 - 30	<0.025	**0.063**	**0.470**	**1.380**	**1.913**	**360**	**56**	**416**
	5/13/2004	39 - 40	<0.001	<0.001	<0.001	<0.001	BDL	**9**	**0.11**	**9.11**
SB - 3	5/12/2004	4 - 5	<0.001	<0.001	<0.001	<0.001	BDL	**23**	<0.1	**23**
	5/12/2004	19 - 20	<0.001	<0.001	<0.001	<0.001	BDL	<5	<0.1	BDL
	5/12/2004	29 - 30	<0.250	**2.200**	**6.200**	**16.200**	**24.600**	**56**	**380**	**436**
	5/12/2004	39 - 40	<0.001	<0.001	<0.001	**0.0018**	**0.0018**	**14**	**0.11**	**14.11**
SB - 4	5/13/2004	4 - 5	**0.140**	**0.110**	**1.500**	**1.410**	**3.160**	**4,000**	**480**	**4,480**
	5/13/2004	14 - 15	**0.470**	<0.100	**5.800**	**21.200**	**27.470**	**3,900**	**1,100**	**5,000**
	5/13/2004	29 - 30	<0.025	<0.025	**0.180**	**0.290**	**0.470**	**270**	**30**	**300**
	5/13/2004	34 - 35	<0.025	<0.025	**0.110**	**0.180**	**0.290**	**330**	**20**	**350**
SB - 5	5/13/2004	34 - 35	**0.0022**	**0.018**	**0.073**	**0.103**	**0.1962**	**240**	**15**	**255**
(MW-2)	5/13/2004	39 - 40	<0.001	<0.001	**0.0018**	**0.0034**	**0.0052**	**9.7**	**0.62**	**10.32**
SB - 6	5/13/2004	0 - 3	<0.001	<0.001	<0.001	<0.001	BDL	**18**	<0.1	**18**
(MW-3)	5/13/2004	24 - 25	<0.001	<0.001	<0.001	<0.001	BDL	**6**	<0.1	**6**
	5/13/2004	44 - 45	<0.001	<0.001	<0.001	<0.001	BDL	**13**	**0.21**	**13.21**
SB - 7	5/14/2004	24 - 25	<0.001	<0.001	<0.001	<0.001	BDL	**8.1**	<0.1	**8.1**

Notes:

BTEX analysis by EPA Method 8021.

TPH analysis by EPA Method 8015 Modified.

BDL- Below Detection Limits.

Bold concentrations above lab reporting limits.

Highlighted Concentrations above NMOCD RRALS.

TABLE II

SUMMARY OF SOIL ANALYTICAL DATA – Waste Characterization
GLADIOLA STATION
LEA COUNTY, NEW MEXICO

	SAMPLE	Gladiola WCS
	DATE	7/7/2004
	TYPE	Soil
RCI	REACTIVE SULFIDE (mg/Kg)	<10
RCI	REACTIVE CYANDIDE (mg/Kg)	<0.5
RCI	CORROSIVITY pH Units	8.09
RCI	IGNITABILITY °F	>212
BTEX	Benzene (mg/Kg)	<0.001
BTEX	Toluene (mg/Kg)	<0.001
BTEX	Ethylbenzene (mg/Kg)	<0.001
BTEX	Total Xylenes (mg/Kg)	<0.001
BTEX	BTEX (mg/Kg)	BDL
TPH	GRO (mg/Kg)	<0.1
TPH	DRO (mg/Kg)	620
TPH	Total TPH (mg/Kg)	620
TCLP RCRA METALS	Arsenic (mg/L)	<0.2
TCLP RCRA METALS	Barium (mg/L)	1.52
TCLP RCRA METALS	Cadmium (mg/L)	<0.02
TCLP RCRA METALS	Chromium (mg/L)	<0.02
TCLP RCRA METALS	Lead (mg/L)	<0.1
TCLP RCRA METALS	Mercury (mg/L)	<0.0002
TCLP RCRA METALS	Selenium (mg/L)	<0.2
TCLP RCRA METALS	Silver (mg/L)	<0.02

NOTES:

RCI by ASTM Method D 92-01 and EPA methods SW9045C, SW7.3.3.2 and SW7.3.4.2.

BTEX by EPA Method 8021B.

TPH by EPA Method 8015B Modified.

TCLP RCRA Metals by EPA Methods 6010B and 7470A.

TABLE III

GROUNDWATER ELEVATION DATA
GLADIOLA STATION
LEA COUNTY, NEW MEXICO

WELL (*TOC Elev.*)	DATE	Depth of Well	Depth to Water	Depth to LNAPL	LNAPL Thickness	Groundwater Elevation	Screen Interval
MW-1 *99.39*	5/17/2004	43.21	32.74	---	---	66.65	22.71 - 42.71
MW-2 *103.46*	5/17/2004	48.09	37.04	---	---	66.42	27.59 - 47.59
MW-3 *99.30*	5/17/2004	44.70	32.79	---	---	66.51	24.20 - 44.20

Notes:
Top of casing survey completed on 5/17/2004 by BNC.
All depths measured from TOC.
TOC - top of casing.
bgs - below ground surface.

TABLE IV

SUMMARY OF GROUNDWATER ANALYTICAL DATA – BTEX
GLADIOLA STATION
LEA COUNTY, NEW MEXICO

SAMPLE ID	DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	XYLENES (mg/L)	Total BTEX (mg/L)
New Mexico Water Quality Control Commission Maximum Allowable Toxic Pollutant Concentration Human Health Standards for Groundwater						
		0.010 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L	---
MW-1	5/17/2004	**6.600**	**1.100**	**0.440**	**1.120**	**9.260**
MW-2	5/17/2004	**0.019**	<0.001	**0.033**	**0.0641**	**0.1161**
MW-3	5/17/2004	**0.140**	<0.001	**0.016**	**0.091**	**0.247**

Notes:

BTEX analysis by EPA Method 8021B.

Bold concentrations above lab reporting limits.

Higlighted concentrations above NMWQCC Human Health Standards fro Groundwater.

TABLE V

SUMMARY OF GROUNDWATER ANALYTICAL DATA - PAH
GLADIOLA STATION
LEA COUNTY, NEW MEXICO

Sample	Date	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)	Acenaphthene (mg/L)	Acenaphthylene (mg/L)	Anthracene (mg/L)	Benz(a) Anthracene (mg/L)	Benzo(a) Pyrene (mg/L)	Benzo(b) Fluoranthene (mg/L)	Benzo (g,h,i) Perylene (mg/L)	Benzo(k) Fluoranthene (mg/L)	Florene (mg/L)	Dibenzo (a,h) Anthracene (mg/L)	Indeno (1,2,3-cd) Pyrene (mg/L)	Chrysene (mg/L)	Phenanthrene (mg/L)	Fluoranthrene (mg/L)	Pyrene (mg/L)	Napthalene (mg/L)	Total Napthalene
New Mexico Water Quality Control Commission Maximum Allowable Toxic Pollutant Concentration Human Health Standards for Groundwater								0.0007 mg/L												0.030 mg/L
MW-1	5/17/2004	**0.025**	**0.027**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.035**	**0.087**
MW-2	5/17/2004	**0.015**	**0.016**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.0015**	<0.0005	<0.0005	<0.0005	**0.00056**	<0.0005	<0.0005	**0.019**	**0.050**
MW-3	5/17/2004	**0.00083**	**0.0008**	**0.00015**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.00057**	<0.0001	<0.0001	<0.0001	**0.00014**	<0.0001	<0.0001	**0.00043**	**0.002**

Notes:

PAH analysis by EPA Method 8310.

Bold concentrations above lab reporting limits.

Higlighted concentrations above NMWQCC Human Health Standards fro Groundwater.

TABLE VI

SUMMARY OF GROUNDWATER ANALYTICAL DATA - METALS AND GROUNDWATER QUALITY
GLADIOLA STATION
LEA COUNTY, NEW MEXICO

Sample I. D. No.	Date	RCRA Metals								Groundwater Quality			
		Arsenic (dissolved) (mg/L)	[1] Barium (dissolved) (mg/L)	Cadmium (dissolved) (mg/L)	Chromium (dissolved) (mg/L)	Lead (dissolved) (mg/L)	Mercury (dissolved) (mg/L)	Selenium (dissolved) (mg/L)	Silver (dissolved) (mg/L)	Total Alkalinity ($CaCO_3$) (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico Water Quality Control Commission Maximum Allowable Toxic Pollutant Concentration Human Health Standards for Groundwater		**0.1 mg/L**	**1.0 mg/L**	**0.01 mg/L**	**0.05 mg/L**	**0.05 mg/L**	**0.002 mg/L**	**0.05 mg/L**	**0.05 mg/L**		[2] **250 mg/L**	[2] **600 mg/L**	
MW-1	5/17/2004	**0.0168**	**2.71**	<0.005	<0.010	<0.005	<0.0002	<0.005	<0.010	1,010	24	1.7	1,130
MW-2	5/17/2004	<0.005	**0.0867**	<0.005	<0.010	<0.005	<0.0002	<0.005	<0.010	586	25	25	668
MW-3	5/17/2004	**0.00745**	**0.640**	<0.005	<0.010	<0.005	<0.0002	<0.005	<0.010	607	18	7.4	722

Notes:

Metals Analysis by EPA Methods 6010B and 7470A.

Groundwater Quality by EPA Methods 160.1, 300.0, and 310.1.

Bold concentrations above lab reporting limits.

Higlighted concentrations above NMWQCC Human Health Standards fro Groundwater.

[1] May be naturally occurring.

[2] Other Standard for Domestic Water Supply. Not a Human Health Standard for Groundwater

Corporation

TelALL Phase I Support Services

1502 West Ave Suite C, Austin, TX 78701
Tel: (800) 583-0004 Fax: (512) 472-4466

2/20/2004

Will Murley
BNC Environmental Services
2135 S. Loop 250 West
Midland TX 79703

Re: Water Well Search BNCM6617

Will Murley
Thank you for contacting TelALL Corporation for the attached water well search. We have searched for water wells within .5 miles of the subject site. The following is a description of our sources.

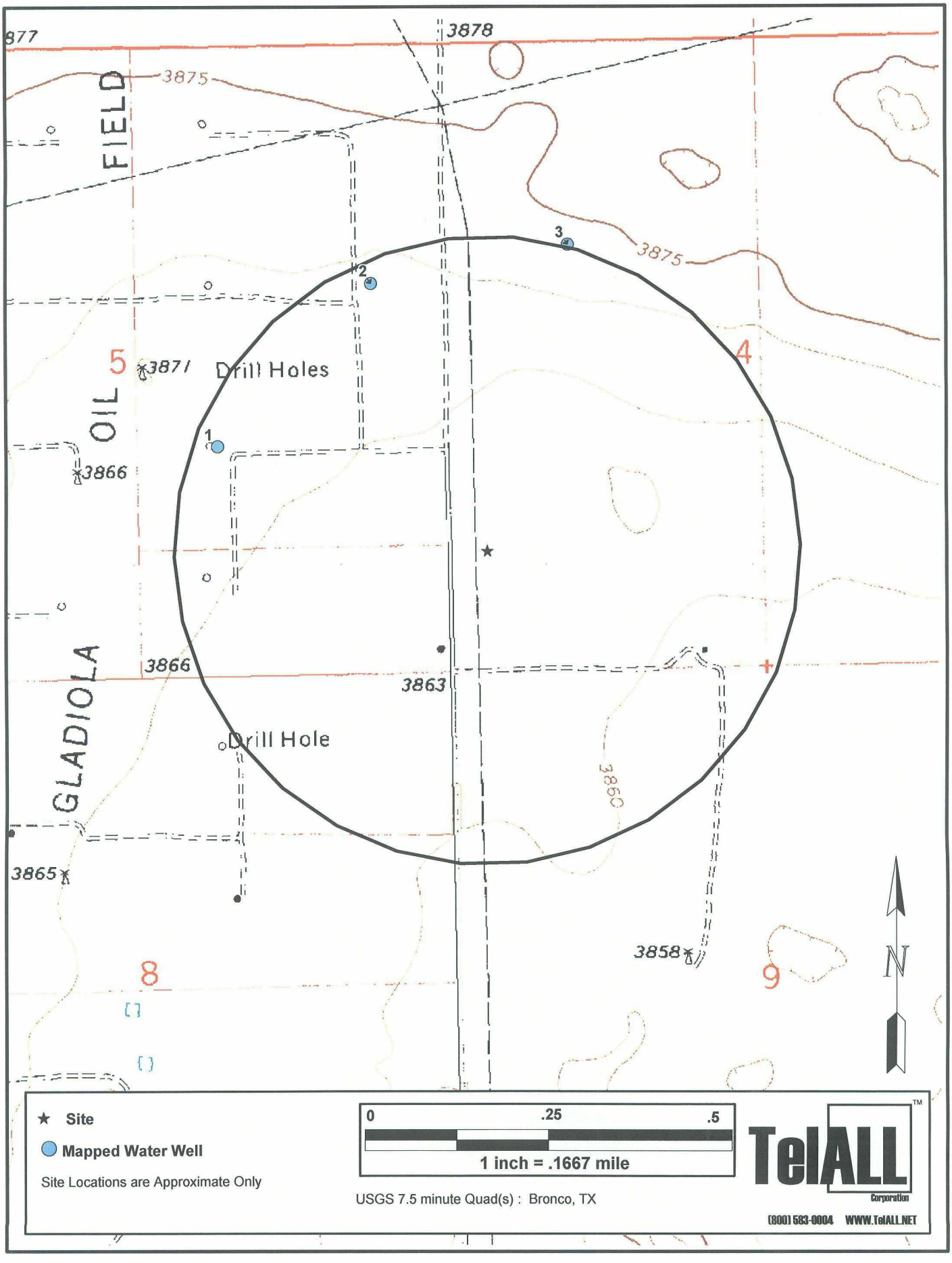
W.A.T.E.R.S. (Water Administration Technical Engineering Resource System)

The Office of the State Engineer (OSE) and the Interstate Stream Commission (ISC) maintain this database for administering the state's water resources. The agencies have power over the supervision, measurement, appropriation and distribution of almost all surface and ground water in New Mexico, including streams and rivers that cross state boundaries. The State Engineer is also secretary to the Interstate Stream Commission and oversees the staff of both agencies.

USGS

The USGS maintains information on 1.5 million wells nationwide to investigate the occurrence, quantity, quality, distribution, and movement of surface and underground waters. State and local governments, public and private utilities, and other Federal agencies are involved with managing the water resources.

If you have any questions, please contact the TelALL Corporation at 800-583-0004.


877
3878
3875
FIELD
3875
3
2
5
3871
Drill Holes
4
OIL
1
3866
GLADIOLA
3866
3863
Drill Hole
3860
3865
3858
8
9
N
★ Site
Mapped Water Well
Site Locations are Approximate Only
0
.25
.5
1 inch = .1667 mile
USGS 7.5 minute Quad(s) : Bronco, TX
TelALL
Corporation
(800) 583-0004 WWW.TelALL.NET

L 03395 APPRO

Map # 1

L 03395 APPRO

File Number	L 03395
Record Number	115820

Location Information

Township:	12S		
Range	38E		
Section	5		
Q	4		
Q2	1		
Q3			
Zone			
Lat/Long	675289	/	3686780

Well Information

Well Use	PRO
Diversion	3
Easting	675340
Northing	3686577
Start Date	10/28/1956
Finish Date	10/28/1956
Well Depth	110
Water Depth	70

L 03640 APPRO

Map # 2

L 03640 APPRO

File Number	L 03640
Record Number	114287

Location Information

Township:	12S		
Range	38E		
Section	5		
Q	2		
Q2	4		
Q3			
Zone			
Lat/Long	675683	/	3687191

Well Information

Well Use	PRO
Diversion	3
Easting	675734
Northing	3686988
Start Date	8/2/1957
Finish Date	8/2/1957
Well Depth	95
Water Depth	35

L 03977 APPRO EXP

Map # 3

L 03977 APPRO EXP

File Number L 03977

Record Number 117829

Location Information

Township:	12S		
Range	38E		
Section	4		
Q	1		
Q2	3		
Q3	2		
Zone			
Lat/Long	676184	/	3687298

Well Information

Well Use	DOM
Diversion	3
Easting	676235
Northing	3687095
Start Date	
Finish Date	
Well Depth	0
Water Depth	0

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: ExxonMobil Work Phone: _____
Contact: Jonathan Hamilton Home Phone: _____
Address: 2800 Decker Dr., Room NW-46
City: Baytown State: TX Zip: 77520

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 33 d 18' m 02.6" s Longitude: 103 d 06' m 41.0" s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: 3 miles west of TX/NM Stateline on Hwy. 380, 3 miles N. on Copeland Rd.

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): ExxonMobil

3. DRILLING CONTRACTOR

License Number: #WD 1456
Name: White Drilling Company, Inc. Work Phone: (325)893-2950
Agent: William Atkins, John White Home Phone: _____
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD SB-1

Drilling began: 5/14/04 ; Completed: 5/14/04 ; Type tools: Air Rotary ;
Size of hole: 6 1/8 in.; Total depth of well: 30.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: Dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-1

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
n/a				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
n/a								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
30.0	0.0	6 1/8		6.912	hand mix/13 sacks of cement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Co., Inc.
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Hand Mix
Date ~~Well~~ Plugged: 5/12/04
Environmental Soil Boring
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	30.0	6.912
2			
3			
4			
5			

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-1

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0.0	2.0	2.0	Dark brown clayey sand.
2.0	15.0	13.0	Tan sand & caliche.
15.0	26.0	11.0	Light brown sand w/limestone.
26.0	30.0	4.0	Tan sand & caliche w/limestone.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-1

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

Hydrocarbon present in soil.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

William B. Atkins — Driller

5/14/04 — (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: ExxonMobil Work Phone: _____
Contact: Jonathan Hamilton Home Phone: _____
Address: 2800 Decker Dr., Room NW-46
City: Baytown State: TX Zip: 77520

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 33 d 18' m 02.6" s Longitude: 103 d 06' m 41.0" s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: 3 miles west of TX/NM Stateline on Hwy. 380, 3 miles N. on Copeland Rd.

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): ExxonMobil

3. DRILLING CONTRACTOR

License Number: #WD 1456
Name: White Drilling Company, Inc. Work Phone: (325)893-2950
Agent: William Atkins, John White Home Phone: _____
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD SB-3

Drilling began: 5/12/04 ; Completed: 5/12/04 ; Type tools: Air Rotary ;
Size of hole: 6 1/8 in.; Total depth of well: 40.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: Dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-3

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
n/a				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
n/a								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
40.0	0.0	6 1/8		9.216	hand mix/17 sacks of Cement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Co., Inc.
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Hand Mix
Date ~~Well~~ Plugged: 5/12/04
Environmental Soil Boring
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	40.0	9.216
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-3

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0.0	2.0	2.0	Dark brown sandy clay.
2.0	6.5	4.5	Tan sand & caliche.
6.5	18.0	11.5	Tan sand.
18.0	28.0	10.0	Tan sand w/tan limestone gravel.
28.0	38.5	10.5	Tan sand.
38.5	40.0	1.5	Tan chert & limestone.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-3

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

Hydrocarbon present in soil.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

William B. Atkins — Driller

5-21-04 — (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: ExxonMobil Work Phone: _____
Contact: Jonathan Hamilton Home Phone: _____
Address: 2800 Decker Dr., Room NW-46
City: Baytown State: TX Zip: 77520

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 33 d 18' m 02.6" s Longitude: 103 d 06' m 41.0" s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: 3 miles west of TX/NM Stateline on Hwy. 380, 3 miles N. on Copeland Rd.

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): ExxonMobil

3. DRILLING CONTRACTOR

License Number: #WD 1456
Name: White Drilling Company, Inc. Work Phone: (325)893-2950
Agent: William Atkins, John White Home Phone: _____
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD #SB-4

Drilling began: 5/13/04 ; Completed: 5/13/04 ; Type tools: Air Rotary ;
Size of hole: 6 1/8 in.; Total depth of well: 35.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: Dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-4

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
n/a				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
n/a								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
35.0	0.0	6 1/8		8.064	hand mix/14 sacks of cement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Co., Inc.
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Hand Mix
Date ~~Well~~ Plugged: 5/12/04
Environmental Soil Boring
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	35.0	8.064
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-4

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0.0	2.0	2.0	Dark brown sand.
2.0	19.0	17.0	Tan sand & caliche.
19.0	22.0	3.0	Light brown sand caliche w/limestone.
22.0	35.0	13.0	Tan sand & limestone w/caliche.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-4

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

Hydrocarbon present in soil.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

William B. Atkins — Driller

5/21/04 — (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: ExxonMobil Work Phone: _____
Contact: Jonathan Hamilton Home Phone: _____
Address: 2800 Decker Dr., Room NW-46
City: Baytown State: TX Zip: 77520

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 33 d 18' m 02.6" s Longitude: 103 d 06' m 41.0" s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: 3 miles west of TX/NM Stateline on Hwy. 380, 3 miles N. on Copeland Rd.

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): ExxonMobil

3. DRILLING CONTRACTOR

License Number: #WD 1456
Name: White Drilling Company, Inc. Work Phone: (325)893-2950
Agent: William Atkins, John White Home Phone: _____
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD SB-7

Drilling began: 5/14/04 ; Completed: 5/14/04 ; Type tools: Air Rotary ;
Size of hole: 6 1/8 in.; Total depth of well: 30.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: Dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-7

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
n/a				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
n/a								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
40.0	0.0	6 1/8		6.912	hand mix/13 sacks of cement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Co., Inc.
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Hand Mix
Date ~~Well~~ Plugged: 5/12/04
Environmental Soil Boring
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	30.0	6.912
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-7

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0.0	2.0	2.0	Brown sand.
2.0	19.0	17.0	Tan sand & caliche.
19.0	27.0	8.0	Light brown sand w/limestone.
27.0	30.0	3.0	Tan sand limestone & caliche.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

SB-7

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

William B. Atkins — Driller

5/21/04 — (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: ExxonMobil Work Phone: _____
Contact: Jonathan Hamilton Home Phone: _____
Address: 2800 Decker Dr., Room NW-46
City: Baytown State: TX Zip: 77520

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 33 d 18' m 02.6" s Longitude: 103 d 06' m 41.0" s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: 3 miles west of TX/NM Stateline on Hwy. 380, 3 miles N. on Copeland Rd.

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): ExxonMobil

3. DRILLING CONTRACTOR

License Number: #WD 1456
Name: White Drilling Company, Inc. Work Phone: (325)893-2950
Agent: William Atkins, John White Home Phone: _____
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD TMW-1

Drilling began: 5/13/04 ; Completed: 5/13/04 ; Type tools: Air Rotary ;
Size of hole: 6 1/8 in.; Total depth of well: 40.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 29.9 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-1

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
29.9	29.9	1	Tan sand & limestone & caliche	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0	sch. 40	4	0.0	20.0	20.0	PVC Riser		
2.0	sch. 40	4	20.0	40.0	20.0	PVC Screen (.020)	20.0	40.0

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
40.0	18.0	6 1/8	9		8/16 sand/pour
18.0	0.0	6 1/8	6		Bentonite Pellets/pour

8. PLUGGING RECORD

Plugging Contractor: _____

Address: _____

Plugging Method: _____

Date Well Plugged: _____

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1			
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-1

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0.0	1.0	1.0	Tan sand & caliche.
1.0	12.0	11.0	Tan sand.
12.0	22.0	10.0	Light brown sand.
22.0	34.0	12.0	Tan sand & limestone & caliche.
34.0	34.5	0.5	Chert & limestone.
34.5	35.0	0.5	Tan sand & limestone.
35.0	36.5	1.5	Chert & limestone.
36.5	40.0	3.5	Brown sandy caliche w/limestone layers.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-1

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

Hydrocarbon present in soil & water.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

William B. Atkins — Driller

5/12/04 — (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: ExxonMobil Work Phone: _____
Contact: Jonathan Hamilton Home Phone: _____
Address: 2800 Decker Dr., Room NW-46
City: Baytown State: TX Zip: 77520

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 33 d 18' m 02.6" s Longitude: 103 d 06' m 41.0" s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: 3 miles west of TX/NM Stateline on Hwy. 380, 3 miles N. on Copeland Rd.

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): ExxonMobil

3. DRILLING CONTRACTOR

License Number: #WD 1456
Name: White Drilling Company, Inc. Work Phone: (325)893-2950
Agent: William Atkins, John White Home Phone: _____
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD TMW-2

Drilling began: 5/13/04 ; Completed: 5/13/04 ; Type tools: Air Rotary ;
Size of hole: 6 1/8 in.; Total depth of well: 45.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 33.75 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-2

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
33.75	33.75	1	Tan sand & limestone gravel	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0	sch.40	4	0.0	25.0	25.0	PVC Riser		
2.0	sch.40	4	25.0	45.0	20.0	PVC Screen (.020)	25.0	45.0

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
45.0	23.0	6 1/8	9		8/16 sand/pour
23.0	0.0	6 1/8	7	5.2992	cement - hand mix

8. PLUGGING RECORD

Plugging Contractor: _____

Address: _____

Plugging Method: _____

Date Well Plugged: _____

Plugging approved by: _____

State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1			
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-2

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0.0	2.0	2.0	Brown sand.
2.0	17.0	15.0	Tan sand & caliche.
17.0	27.0	10.0	Light brown sand, limestone gravel & caliche.
27.0	38.0	11.0	Tan sand limestone gravel & caliche.
38.0	41.0	3.0	Chert & tan limestone.
41.0	45.0	4.0	Tan sand & caliche w/limestone layers.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-2

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

Hydrocarbon present in soil & water.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

William B. Atkins — Driller

5/21/09 — (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad _____; FWL _____; FSL _____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: ExxonMobil Work Phone: _____
Contact: Jonathan Hamilton Home Phone: _____
Address: 2800 Decker Dr., Room NW-46
City: Baytown State: TX Zip: 77520

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 33 d 18' m 02.6" s Longitude: 103 d 06' m 41.0" s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: 3 miles west of TX/NM Stateline on Hwy. 380, 3 miles N. on Copeland Rd.

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): ExxonMobil

3. DRILLING CONTRACTOR

License Number: #WD 1456
Name: White Drilling Company, Inc. Work Phone: (325)893-2950
Agent: William Atkins, John White Home Phone: _____
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD TMW-3

Drilling began: 5/13/04 ; Completed: 5/13/04 ; Type tools: Air Rotary ;
Size of hole: 6 1/8 in.; Total depth of well: 45.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 33.25 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-3

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
33.25	33.25	1	Tan sand, limestone gravel & caliche.	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0	sch.40	4	0.0	25.0	25.0	PVC Riser		
2.0	sch.40	4	25.0	45.0	20.0	PVC Screen.020	25.0	45.0

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
45.0	23.0	6 1/8	9		8/16 sand
23.0	10.0	6 1/8	5		bentonite pellets/pour
10.0	0.0	6 1/8	4	2.304	cement/hand mix

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1			
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-3

9. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in feet	Color and Type of Material Encountered
0.0	2.0	2.0	Brown sand.
2.0	17.0	15.0	Tan sand & caliche.
17.0	27.0	10.0	Light brown sand, limestone gravel & caliche.
27.0	38.0	11.0	Tan sand limestone gravel & caliche.
38.0	41.0	3.0	Chert & tan limestone.
41.0	45.0	4.0	Tan sand & caliche w/limestone layers.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

TMW-3

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

William B. Atkins — Driller

5/20/09 — (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

ExxonMobil Global Remediation

Certificate of Analysis Number:

04050596

Report To:		Project Name:	Gladiola Station
BNC Environmental Services		Site:	Lea County, NM
Aaron Hale		Site Address:	
2135 S. Loop 250 West			
Midland		PO Number:	4504690348 Line 80
TX		State:	New Mexico
79703-		State Cert. No.:	
ph: (432) 686-0086	fax:	Date Reported:	6/2/04

This Report Contains A Total Of Pages

Excluding This Page

6/2/04

Date

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

ExxonMobil Global Remediation

Certificate of Analysis Number:

04050596

Report To:		Project Name:	Gladiola Station
BNC Environmental Services		Site:	Lea County, NM
Aaron Hale		Site Address:	
2135 S. Loop 250 West			
Midland		PO Number:	4504690348 Line 80
TX		State:	New Mexico
79703-		State Cert. No.:	
ph: (432) 686-0086	fax:	Date Reported:	6/2/04

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Sonia West

6/2/04

Sonia West
Senior Project Manager

Date

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

ExxonMobil Global Remediation

Certificate of Analysis Number:

04050596

Report To: BNC Environmental Services
Aaron Hale
2135 S. Loop 250 West

Midland
TX
79703-
ph: (432) 686-0086 fax:

Fax To:

Project Name: Gladiola Station
Site: Lea County, NM
Site Address:

PO Number: 4504690348 Line 80
State: New Mexico
State Cert. No.:
Date Reported: 6/2/04

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
SB-3 4-5	04050596-02	Soil	5/12/04 3:51:00 PM	5/15/04 10:00:00 AM	2895	☐
SB-3 19-20	04050596-03	Soil	5/12/04 4:02:00 PM	5/15/04 10:00:00 AM	2895	☐
SB-3 29-30	04050596-04	Soil	5/12/04 4:20:00 PM	5/15/04 10:00:00 AM	2895	☐
SB-3 39-40	04050596-06	Soil	5/12/04 4:38:00 PM	5/15/04 10:00:00 AM	2895	☐
SB-2 4-5	04050596-07	Soil	5/13/04 9:13:00 AM	5/15/04 10:00:00 AM	2895	☐
SB-2 14-15	04050596-09	Soil	5/13/04 9:21:00 AM	5/15/04 10:00:00 AM	2895	☐
SB-2 29-30	04050596-10	Soil	5/13/04 10:00:00 AM	5/15/04 10:00:00 AM	2895	☐
SB-2 39-40	04050596-11	Soil	5/13/04 12:00:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-4 4-5	04050596-12	Soil	5/13/04 1:25:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-4 14-15	04050596-14	Soil	5/13/04 1:31:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-4 29-30	04050596-15	Soil	5/13/04 1:57:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-4 34-35	04050596-16	Soil	5/13/04 2:09:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-5 34-35	04050596-17	Soil	5/13/04 3:17:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-5 39-40	04050596-18	Soil	5/13/04 3:28:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-6 0-3	04050596-19	Soil	5/13/04 4:30:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-6 24-25	04050596-20	Soil	5/13/04 4:55:00 PM	5/15/04 10:00:00 AM	2897	☐
SB-6 44-45	04050596-21	Soil	5/13/04 5:23:00 PM	5/15/04 10:00:00 AM	2402	☐
SB-7 24-25	04050596-22	Soil	5/14/04 9:50:00 AM	5/15/04 10:00:00 AM	2402	☐
SB-1 0-2	04050596-23	Soil	5/14/04 10:21:00 AM	5/15/04 10:00:00 AM	2402	☐
SB-1 4-5	04050596-24	Soil	5/14/04 10:28:00 AM	5/15/04 10:00:00 AM	2402	☐

Sonia West
Senior Project Manager

6/2/04
Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

6/2/04 3:21:28 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-3 4-5 **Collected:** 05/12/2004 15:51 **SPL Sample ID:** 04050596-02

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	23		5		1		05/22/04 17:08	AM	2233067
Surr: n-Pentacosane	90.6	%	20-154		1		05/22/04 17:08	AM	2233067

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	ND		0.1		1		05/17/04 22:20	JWW	2226361
Surr: 1,4-Difluorobenzene	111	%	63-122		1		05/17/04 22:20	JWW	2226361
Surr: 4-Bromofluorobenzene	90.3	%	39-150		1		05/17/04 22:20	JWW	2226361
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/17/04 22:20	JWW	2226097
Toluene	ND		1		1		05/17/04 22:20	JWW	2226097
Ethylbenzene	ND		1		1		05/17/04 22:20	JWW	2226097
m,p-Xylene	ND		1		1		05/17/04 22:20	JWW	2226097
o-Xylene	ND		1		1		05/17/04 22:20	JWW	2226097
Xylenes,Total	ND		1		1		05/17/04 22:20	JWW	2226097
Surr: 1,4-Difluorobenzene	102	%	77-126		1		05/17/04 22:20	JWW	2226097
Surr: 4-Bromofluorobenzene	105	%	66-145		1		05/17/04 22:20	JWW	2226097

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-3 19-20 **Collected:** 05/12/2004 16:02 **SPL Sample ID:** 04050596-03

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	ND		5		1		05/24/04 12:22	AM	2233441
Surr: n-Pentacosane	120	%	20-154		1		05/24/04 12:22	AM	2233441

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	ND		0.1		1		05/17/04 22:52	JWW	2226362
Surr: 1,4-Difluorobenzene	109	%	63-122		1		05/17/04 22:52	JWW	2226362
Surr: 4-Bromofluorobenzene	93.0	%	39-150		1		05/17/04 22:52	JWW	2226362
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/17/04 22:52	JWW	2226099
Toluene	ND		1		1		05/17/04 22:52	JWW	2226099
Ethylbenzene	ND		1		1		05/17/04 22:52	JWW	2226099
m,p-Xylene	ND		1		1		05/17/04 22:52	JWW	2226099
o-Xylene	ND		1		1		05/17/04 22:52	JWW	2226099
Xylenes,Total	ND		1		1		05/17/04 22:52	JWW	2226099
Surr: 1,4-Difluorobenzene	102	%	77-126		1		05/17/04 22:52	JWW	2226099
Surr: 4-Bromofluorobenzene	106	%	66-145		1		05/17/04 22:52	JWW	2226099

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-3 29-30 **Collected:** 05/12/2004 16:20 **SPL Sample ID:** 04050596-04

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	56		5		1		05/22/04 17:47	AM	2233068
Surr: n-Pentacosane	86.2	%	20-154		1		05/22/04 17:47	AM	2233068

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				MCL	SW8015B		Units: mg/Kg		
Gasoline Range Organics	380		25		250		05/20/04 15:09	JWW	2228862
Surr: 1,4-Difluorobenzene	120	%	63-142		250		05/20/04 15:09	JWW	2228862
Surr: 4-Bromofluorobenzene	431 MI	%	50-159		250	*	05/20/04 15:09	JWW	2228862
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		250		250		05/20/04 15:09	JWW	2228867
Toluene	2200		250		250		05/20/04 15:09	JWW	2228867
Ethylbenzene	6200		250		250		05/20/04 15:09	JWW	2228867
m,p-Xylene	12000		250		250		05/20/04 15:09	JWW	2228867
o-Xylene	4200		250		250		05/20/04 15:09	JWW	2228867
Xylenes,Total	16200		250		250		05/20/04 15:09	JWW	2228867
Surr: 1,4-Difluorobenzene	103	%	77-126		250		05/20/04 15:09	JWW	2228867
Surr: 4-Bromofluorobenzene	205 MI	%	66-145		250	*	05/20/04 15:09	JWW	2228867

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-3 39-40 **Collected:** 05/12/2004 16:38 **SPL Sample ID:** 04050596-06

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	14		5		1		05/22/04 15:50	AM	2233063
Surr: n-Pentacosane	67.6	%	20-154		1		05/22/04 15:50	AM	2233063

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	0.11		0.1		1		05/17/04 23:24	JWW	2226363
Surr: 1,4-Difluorobenzene	109	%	63-122		1		05/17/04 23:24	JWW	2226363
Surr: 4-Bromofluorobenzene	118	%	39-150		1		05/17/04 23:24	JWW	2226363
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/17/04 23:24	JWW	2226101
Toluene	ND		1		1		05/17/04 23:24	JWW	2226101
Ethylbenzene	ND		1		1		05/17/04 23:24	JWW	2226101
m,p-Xylene	1.8		1		1		05/17/04 23:24	JWW	2226101
o-Xylene	ND		1		1		05/17/04 23:24	JWW	2226101
Xylenes,Total	1.8		1		1		05/17/04 23:24	JWW	2226101
Surr: 1,4-Difluorobenzene	101	%	77-126		1		05/17/04 23:24	JWW	2226101
Surr: 4-Bromofluorobenzene	110	%	66-145		1		05/17/04 23:24	JWW	2226101

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-2 4-5 **Collected:** 05/13/2004 9:13 **SPL Sample ID:** 04050596-07

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	3300		250		50		05/22/04 8:03	AM	2233027
Surr: n-Pentacosane	D	%	20-154		50	*	05/22/04 8:03	AM	2233027

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	750		50		500		05/19/04 10:36	JWW	2228709
Surr: 1,4-Difluorobenzene	123	%	63-142		500		05/19/04 10:36	JWW	2228709
Surr: 4-Bromofluorobenzene	545 MI	%	50-159		500	*	05/19/04 10:36	JWW	2228709
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		100		100		05/18/04 2:04	JWW	2226103
Toluene	ND		100		100		05/18/04 2:04	JWW	2226103
Ethylbenzene	2100		100		100		05/18/04 2:04	JWW	2226103
m,p-Xylene	3900		100		100		05/18/04 2:04	JWW	2226103
o-Xylene	340		100		100		05/18/04 2:04	JWW	2226103
Xylenes,Total	4240		100		100		05/18/04 2:04	JWW	2226103
Surr: 1,4-Difluorobenzene	107	%	77-126		100		05/18/04 2:04	JWW	2226103
Surr: 4-Bromofluorobenzene	410 MI	%	66-145		100	*	05/18/04 2:04	JWW	2226103

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

6/2/04 3:21:57 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-2 14-15 **Collected:** 05/13/2004 9:21 **SPL Sample ID:** 04050596-09

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	1200		100		20		05/22/04 8:42	AM	2233032
Surr: n-Pentacosane	D	%	20-154		20	*	05/22/04 8:42	AM	2233032

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	190		10		100		05/19/04 11:08	JWW	2228710
Surr: 1,4-Difluorobenzene	119	%	63-142		100		05/19/04 11:08	JWW	2228710
Surr: 4-Bromofluorobenzene	615 MI	%	50-159		100	*	05/19/04 11:08	JWW	2228710
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		25		25		05/18/04 2:36	JWW	2226105
Toluene	ND		25		25		05/18/04 2:36	JWW	2226105
Ethylbenzene	610		25		25		05/18/04 2:36	JWW	2226105
m,p-Xylene	2200		25		25		05/18/04 2:36	JWW	2226105
o-Xylene	88		25		25		05/18/04 2:36	JWW	2226105
Xylenes,Total	2288		25		25		05/18/04 2:36	JWW	2226105
Surr: 1,4-Difluorobenzene	105	%	77-126		25		05/18/04 2:36	JWW	2226105
Surr: 4-Bromofluorobenzene	403 MI	%	66-145		25	*	05/18/04 2:36	JWW	2226105

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-2 29-30 **Collected:** 05/13/2004 10:00 **SPL Sample ID:** 04050596-10

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	360		25	5		05/22/04 9:20	AM	2233037
Surr: n-Pentacosane	163	%	20-154	5	*	05/22/04 9:20	AM	2233037

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	56		2.5	25		05/18/04 3:08	JWW	2226365
Surr: 1,4-Difluorobenzene	116	%	63-122	25		05/18/04 3:08	JWW	2226365
Surr: 4-Bromofluorobenzene	741 MI	%	39-150	25	*	05/18/04 3:08	JWW	2226365
PURGEABLE AROMATICS			**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		25	25		05/18/04 3:08	JWW	2226108
Toluene	63		25	25		05/18/04 3:08	JWW	2226108
Ethylbenzene	470		25	25		05/18/04 3:08	JWW	2226108
m,p-Xylene	1000		25	25		05/18/04 3:08	JWW	2226108
o-Xylene	380		25	25		05/18/04 3:08	JWW	2226108
Xylenes,Total	1380		25	25		05/18/04 3:08	JWW	2226108
Surr: 1,4-Difluorobenzene	100	%	77-126	25		05/18/04 3:08	JWW	2226108
Surr: 4-Bromofluorobenzene	229 MI	%	66-145	25	*	05/18/04 3:08	JWW	2226108

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-2 39-40 **Collected:** 05/13/2004 12:00 **SPL Sample ID:** 04050596-11

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	9		5		1		05/22/04 2:52	AM	2233016
Surr: n-Pentacosane	74.9	%	20-154		1		05/22/04 2:52	AM	2233016

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	0.11		0.1		1		05/18/04 4:12	JWW	2226366
Surr: 1,4-Difluorobenzene	107	%	63-122		1		05/18/04 4:12	JWW	2226366
Surr: 4-Bromofluorobenzene	93.7	%	39-150		1		05/18/04 4:12	JWW	2226366
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/18/04 4:12	JWW	2226110
Toluene	ND		1		1		05/18/04 4:12	JWW	2226110
Ethylbenzene	ND		1		1		05/18/04 4:12	JWW	2226110
m,p-Xylene	ND		1		1		05/18/04 4:12	JWW	2226110
o-Xylene	ND		1		1		05/18/04 4:12	JWW	2226110
Xylenes,Total	ND		1		1		05/18/04 4:12	JWW	2226110
Surr: 1,4-Difluorobenzene	99.7	%	77-126		1		05/18/04 4:12	JWW	2226110
Surr: 4-Bromofluorobenzene	105	%	66-145		1		05/18/04 4:12	JWW	2226110

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-4 4-5 **Collected:** 05/13/2004 13:25 **SPL Sample ID:** 04050596-12

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	4000		250		50		05/22/04 9:59	AM	2233042
Surr: n-Pentacosane	D	%	20-154		50	*	05/22/04 9:59	AM	2233042

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	480		25		250		05/19/04 11:40	JWW	2228711
Surr: 1,4-Difluorobenzene	144 MI	%	63-142		250	*	05/19/04 11:40	JWW	2228711
Surr: 4-Bromofluorobenzene	841 MI	%	50-159		250	*	05/19/04 11:40	JWW	2228711
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	140		100		100		05/18/04 4:45	JWW	2226111
Toluene	110		100		100		05/18/04 4:45	JWW	2226111
Ethylbenzene	1500		100		100		05/18/04 4:45	JWW	2226111
m,p-Xylene	1300		100		100		05/18/04 4:45	JWW	2226111
o-Xylene	110		100		100		05/18/04 4:45	JWW	2226111
Xylenes,Total	1410		100		100		05/18/04 4:45	JWW	2226111
Surr: 1,4-Difluorobenzene	106	%	77-126		100		05/18/04 4:45	JWW	2226111
Surr: 4-Bromofluorobenzene	406 MI	%	66-145		100	*	05/18/04 4:45	JWW	2226111

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-4 14-15 **Collected:** 05/13/2004 13:31 **SPL Sample ID:** 04050596-14

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	3900		250		50		05/22/04 10:38	AM	2233046
Surr: n-Pentacosane	D	%	20-154		50	*	05/22/04 10:38	AM	2233046

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	1100		50		500		05/20/04 14:41	JWW	2228861
Surr: 1,4-Difluorobenzene	120	%	63-142		500		05/20/04 14:41	JWW	2228861
Surr: 4-Bromofluorobenzene	588 MI	%	50-159		500	*	05/20/04 14:41	JWW	2228861
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	470		100		100		05/18/04 5:16	JWW	2226113
Toluene	ND		100		100		05/18/04 5:16	JWW	2226113
Ethylbenzene	5800		100		100		05/18/04 5:16	JWW	2226113
m,p-Xylene	19000		100		100		05/18/04 5:16	JWW	2226113
o-Xylene	2200		100		100		05/18/04 5:16	JWW	2226113
Xylenes,Total	21200		100		100		05/18/04 5:16	JWW	2226113
Surr: 1,4-Difluorobenzene	116	%	77-126		100		05/18/04 5:16	JWW	2226113
Surr: 4-Bromofluorobenzene	513 MI	%	66-145		100	*	05/18/04 5:16	JWW	2226113

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-4 29-30 **Collected:** 05/13/2004 13:57 **SPL Sample ID:** 04050596-15

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	270		25		5		05/22/04 11:18	AM	2233052
Surr: n-Pentacosane	152	%	20-154		5		05/22/04 11:18	AM	2233052

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	30		2.5		25		05/18/04 5:48	JWW	2226367
Surr: 1,4-Difluorobenzene	111	%	63-122		25		05/18/04 5:48	JWW	2226367
Surr: 4-Bromofluorobenzene	474 MI	%	39-150		25	*	05/18/04 5:48	JWW	2226367
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		25		25		05/18/04 5:48	JWW	2226114
Toluene	ND		25		25		05/18/04 5:48	JWW	2226114
Ethylbenzene	180		25		25		05/18/04 5:48	JWW	2226114
m,p-Xylene	290		25		25		05/18/04 5:48	JWW	2226114
o-Xylene	ND		25		25		05/18/04 5:48	JWW	2226114
Xylenes,Total	290		25		25		05/18/04 5:48	JWW	2226114
Surr: 1,4-Difluorobenzene	99.5	%	77-126		25		05/18/04 5:48	JWW	2226114
Surr: 4-Bromofluorobenzene	177 MI	%	66-145		25	*	05/18/04 5:48	JWW	2226114

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-4 34-35 **Collected:** 05/13/2004 14:09 **SPL Sample ID:** 04050596-16

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	330		25		5		05/22/04 11:56	AM	2233056
Surr: n-Pentacosane	164	%	20-154		5	*	05/22/04 11:56	AM	2233056

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	20		2.5		25		05/18/04 6:21	JWW	2226368
Surr: 1,4-Difluorobenzene	107	%	63-122		25		05/18/04 6:21	JWW	2226368
Surr: 4-Bromofluorobenzene	345 MI	%	39-150		25	*	05/18/04 6:21	JWW	2226368
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		25		25		05/18/04 6:21	JWW	2226115
Toluene	ND		25		25		05/18/04 6:21	JWW	2226115
Ethylbenzene	110		25		25		05/18/04 6:21	JWW	2226115
m,p-Xylene	180		25		25		05/18/04 6:21	JWW	2226115
o-Xylene	ND		25		25		05/18/04 6:21	JWW	2226115
Xylenes,Total	180		25		25		05/18/04 6:21	JWW	2226115
Surr: 1,4-Difluorobenzene	98.7	%	77-126		25		05/18/04 6:21	JWW	2226115
Surr: 4-Bromofluorobenzene	153 MI	%	66-145		25	*	05/18/04 6:21	JWW	2226115

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-5 34-35 **Collected:** 05/13/2004 15:17 **SPL Sample ID:** 04050596-17

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	240		50	10		05/22/04 6:45	AM	2233024
Surr: n-Pentacosane	148	%	20-154	10		05/22/04 6:45	AM	2233024

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	15		2.5	25		05/19/04 17:11	JWW	2228770
Surr: 1,4-Difluorobenzene	91.9	%	63-142	25		05/19/04 17:11	JWW	2228770
Surr: 4-Bromofluorobenzene	255 MI	%	50-159	25	*	05/19/04 17:11	JWW	2228770
PURGEABLE AROMATICS			**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	2.2		1	1		05/19/04 11:44	JWW	2227159
Toluene	18		1	1		05/19/04 11:44	JWW	2227159
Ethylbenzene	73		1	1		05/19/04 11:44	JWW	2227159
m,p-Xylene	90		1	1		05/19/04 11:44	JWW	2227159
o-Xylene	13		1	1		05/19/04 11:44	JWW	2227159
Xylenes,Total	103		1	1		05/19/04 11:44	JWW	2227159
Surr: 1,4-Difluorobenzene	105	%	77-126	1		05/19/04 11:44	JWW	2227159
Surr: 4-Bromofluorobenzene	395 MI	%	66-145	1	*	05/19/04 11:44	JWW	2227159

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-5 39-40 **Collected:** 05/13/2004 15:28 **SPL Sample ID:** 04050596-18

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	9.7		5	1		05/22/04 3:31	AM	2233017
Surr: n-Pentacosane	84.3	%	20-154	1		05/22/04 3:31	AM	2233017

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				MCL	SW8015B		Units: mg/Kg		
Gasoline Range Organics	0.62		0.1		1		05/18/04 7:57	JWW	2226497
Surr: 1,4-Difluorobenzene	106	%	63-122		1		05/18/04 7:57	JWW	2226497
Surr: 4-Bromofluorobenzene	240 MI	%	39-150		1	*	05/18/04 7:57	JWW	2226497
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/18/04 7:57	JWW	2226118
Toluene	ND		1		1		05/18/04 7:57	JWW	2226118
Ethylbenzene	1.8		1		1		05/18/04 7:57	JWW	2226118
m,p-Xylene	3.4		1		1		05/18/04 7:57	JWW	2226118
o-Xylene	ND		1		1		05/18/04 7:57	JWW	2226118
Xylenes,Total	3.4		1		1		05/18/04 7:57	JWW	2226118
Surr: 1,4-Difluorobenzene	100	%	77-126		1		05/18/04 7:57	JWW	2226118
Surr: 4-Bromofluorobenzene	133	%	66-145		1		05/18/04 7:57	JWW	2226118

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-6 0-3 **Collected:** 05/13/2004 16:30 **SPL Sample ID:** 04050596-19

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	18		5		1		05/22/04 16:29	AM	2233065
Surr: n-Pentacosane	88.9	%	20-154		1		05/22/04 16:29	AM	2233065

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	ND		0.1		1		05/19/04 4:07	JWW	2228752
Surr: 1,4-Difluorobenzene	92.7	%	63-142		1		05/19/04 4:07	JWW	2228752
Surr: 4-Bromofluorobenzene	94.3	%	50-159		1		05/19/04 4:07	JWW	2228752
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/19/04 4:07	JWW	2227148
Toluene	ND		1		1		05/19/04 4:07	JWW	2227148
Ethylbenzene	ND		1		1		05/19/04 4:07	JWW	2227148
m,p-Xylene	ND		1		1		05/19/04 4:07	JWW	2227148
o-Xylene	ND		1		1		05/19/04 4:07	JWW	2227148
Xylenes,Total	ND		1		1		05/19/04 4:07	JWW	2227148
Surr: 1,4-Difluorobenzene	101	%	77-126		1		05/19/04 4:07	JWW	2227148
Surr: 4-Bromofluorobenzene	106	%	66-145		1		05/19/04 4:07	JWW	2227148

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Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

6/2/04 3:22:09 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-6 24-25 **Collected:** 05/13/2004 16:55 **SPL Sample ID:** 04050596-20

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	6		5		1		05/22/04 4:09	AM	2233019
Surr: n-Pentacosane	76.7	%	20-154		1		05/22/04 4:09	AM	2233019

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	ND		0.1		1		05/19/04 4:35	JWW	2228754
Surr: 1,4-Difluorobenzene	91.7	%	63-142		1		05/19/04 4:35	JWW	2228754
Surr: 4-Bromofluorobenzene	93.3	%	50-159		1		05/19/04 4:35	JWW	2228754
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/19/04 4:35	JWW	2227149
Toluene	ND		1		1		05/19/04 4:35	JWW	2227149
Ethylbenzene	ND		1		1		05/19/04 4:35	JWW	2227149
m,p-Xylene	ND		1		1		05/19/04 4:35	JWW	2227149
o-Xylene	ND		1		1		05/19/04 4:35	JWW	2227149
Xylenes,Total	ND		1		1		05/19/04 4:35	JWW	2227149
Surr: 1,4-Difluorobenzene	99.4	%	77-126		1		05/19/04 4:35	JWW	2227149
Surr: 4-Bromofluorobenzene	106	%	66-145		1		05/19/04 4:35	JWW	2227149

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-6 44-45 **Collected:** 05/13/2004 17:23 **SPL Sample ID:** 04050596-21

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	13		5		1		05/22/04 15:11	AM	2233062
Surr: n-Pentacosane	86.7	%	20-154		1		05/22/04 15:11	AM	2233062

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	0.21		0.1		1		05/19/04 5:03	JWW	2228756
Surr: 1,4-Difluorobenzene	92.0	%	63-142		1		05/19/04 5:03	JWW	2228756
Surr: 4-Bromofluorobenzene	91.3	%	50-159		1		05/19/04 5:03	JWW	2228756
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/19/04 5:03	JWW	2227150
Toluene	ND		1		1		05/19/04 5:03	JWW	2227150
Ethylbenzene	ND		1		1		05/19/04 5:03	JWW	2227150
m,p-Xylene	ND		1		1		05/19/04 5:03	JWW	2227150
o-Xylene	ND		1		1		05/19/04 5:03	JWW	2227150
Xylenes,Total	ND		1		1		05/19/04 5:03	JWW	2227150
Surr: 1,4-Difluorobenzene	100	%	77-126		1		05/19/04 5:03	JWW	2227150
Surr: 4-Bromofluorobenzene	107	%	66-145		1		05/19/04 5:03	JWW	2227150

Sonia West

Sonia West
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
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J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-7 24-25 **Collected:** 05/14/2004 9:50 **SPL Sample ID:** 04050596-22

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	8.1		5	1		05/22/04 4:48	AM	2233020
Surr: n-Pentacosane	82.2	%	20-154	1		05/22/04 4:48	AM	2233020

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	ND		0.1	1		05/19/04 5:32	JWW	2228758
Surr: 1,4-Difluorobenzene	92.0	%	63-142	1		05/19/04 5:32	JWW	2228758
Surr: 4-Bromofluorobenzene	89.0	%	50-159	1		05/19/04 5:32	JWW	2228758
PURGEABLE AROMATICS			**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1	1		05/19/04 5:32	JWW	2227151
Toluene	ND		1	1		05/19/04 5:32	JWW	2227151
Ethylbenzene	ND		1	1		05/19/04 5:32	JWW	2227151
m,p-Xylene	ND		1	1		05/19/04 5:32	JWW	2227151
o-Xylene	ND		1	1		05/19/04 5:32	JWW	2227151
Xylenes,Total	ND		1	1		05/19/04 5:32	JWW	2227151
Surr: 1,4-Difluorobenzene	100	%	77-126	1		05/19/04 5:32	JWW	2227151
Surr: 4-Bromofluorobenzene	106	%	66-145	1		05/19/04 5:32	JWW	2227151

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-1 0-2 **Collected:** 05/14/2004 10:21 **SPL Sample ID:** 04050596-23

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	ND		5		1		05/22/04 5:27	AM	2233022
Surr: n-Pentacosane	68.2	%	20-154		1		05/22/04 5:27	AM	2233022

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	ND		0.1		1		05/19/04 6:00	JWW	2228759
Surr: 1,4-Difluorobenzene	93.0	%	63-142		1		05/19/04 6:00	JWW	2228759
Surr: 4-Bromofluorobenzene	91.0	%	50-159		1		05/19/04 6:00	JWW	2228759
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/19/04 6:00	JWW	2227152
Toluene	ND		1		1		05/19/04 6:00	JWW	2227152
Ethylbenzene	ND		1		1		05/19/04 6:00	JWW	2227152
m,p-Xylene	ND		1		1		05/19/04 6:00	JWW	2227152
o-Xylene	ND		1		1		05/19/04 6:00	JWW	2227152
Xylenes,Total	ND		1		1		05/19/04 6:00	JWW	2227152
Surr: 1,4-Difluorobenzene	101	%	77-126		1		05/19/04 6:00	JWW	2227152
Surr: 4-Bromofluorobenzene	106	%	66-145		1		05/19/04 6:00	JWW	2227152

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

6/2/04 3:22:13 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: SB-1 4-5 **Collected:** 05/14/2004 10:28 **SPL Sample ID:** 04050596-24

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	6.7		5		1		05/22/04 6:06	AM	2233023
Surr: n-Pentacosane	76.6	%	20-154		1		05/22/04 6:06	AM	2233023

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	05/18/2004 11:47	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	ND		0.1		1		05/19/04 0:49	JWW	2228579
Surr: 1,4-Difluorobenzene	92.3	%	63-122		1		05/19/04 0:49	JWW	2228579
Surr: 4-Bromofluorobenzene	97.0	%	39-150		1		05/19/04 0:49	JWW	2228579
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		05/19/04 0:49	JWW	2227210
Toluene	ND		1		1		05/19/04 0:49	JWW	2227210
Ethylbenzene	ND		1		1		05/19/04 0:49	JWW	2227210
m,p-Xylene	ND		1		1		05/19/04 0:49	JWW	2227210
o-Xylene	ND		1		1		05/19/04 0:49	JWW	2227210
Xylenes,Total	ND		1		1		05/19/04 0:49	JWW	2227210
Surr: 1,4-Difluorobenzene	98.1	%	77-126		1		05/19/04 0:49	JWW	2227210
Surr: 4-Bromofluorobenzene	109	%	66-145		1		05/19/04 0:49	JWW	2227210

Sonia West

Sonia West
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

6/2/04 3:22:21 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Diesel Range Organics
Method: SW8015B
WorkOrder: 04050596
Lab Batch ID: 38039

Method Blank

RunID: HP_V_040522A-2233013 Units: mg/Kg
Analysis Date: 05/22/2004 0:56 Analyst: AM
Preparation Date: 05/18/2004 11:47 Prep By: DMN Method SW3550B

Analyte	Result	Rep Limit
Diesel Range Organics	ND	5.0
Surr: n-Pentacosane	90.3	20-154

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-02A	SB-3 4-5
04050596-03A	SB-3 19-20
04050596-04A	SB-3 29-30
04050596-06A	SB-3 39-40
04050596-07A	SB-2 4-5
04050596-09A	SB-2 14-15
04050596-10A	SB-2 29-30
04050596-11A	SB-2 39-40
04050596-12A	SB-4 4-5
04050596-14A	SB-4 14-15
04050596-15A	SB-4 29-30
04050596-16A	SB-4 34-35
04050596-17A	SB-5 34-35
04050596-18A	SB-5 39-40
04050596-19A	SB-6 0-3
04050596-20A	SB-6 24-25
04050596-21A	SB-6 44-45
04050596-22A	SB-7 24-25
04050596-23A	SB-1 0-2
04050596-24A	SB-1 4-5

Laboratory Control Sample (LCS)

RunID: HP_V_040522A-2233014 Units: mg/Kg
Analysis Date: 05/22/2004 1:35 Analyst: AM
Preparation Date: 05/18/2004 11:47 Prep By: DMN Method SW3550B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics	83	54.0	65.2	65	150

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050596-02
RunID: HP_V_040522A-2233058 Units: mg/Kg
Analysis Date: 05/22/2004 12:35 Analyst: AM
Preparation Date: 05/18/2004 11:47 Prep By: DMN Method SW3550B

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Diesel Range Organics
Method: SW8015B

WorkOrder: 04050596
Lab Batch ID: 38039

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics	ND	83	D	D	83	D	D	D	50	21	175

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value betw een MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 04050596
Lab Batch ID: R111647

Method Blank

RunID: HP_O_040517A-2226085 Units: ug/Kg
Analysis Date: 05/17/2004 15:19 Analyst: JWW

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	100.3	77-126
Surr: 4-Bromofluorobenzene	100.7	66-145

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-02A	SB-3 4-5
04050596-03A	SB-3 19-20
04050596-06A	SB-3 39-40
04050596-07A	SB-2 4-5
04050596-09A	SB-2 14-15
04050596-10A	SB-2 29-30
04050596-11A	SB-2 39-40
04050596-12A	SB-4 4-5
04050596-14A	SB-4 14-15
04050596-15A	SB-4 29-30
04050596-16A	SB-4 34-35
04050596-18A	SB-5 39-40

Laboratory Control Sample (LCS)

RunID: HP_O_040517A-2226083 Units: ug/Kg
Analysis Date: 05/17/2004 14:16 Analyst: JWW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	51.7	103	70	130
Ethylbenzene	50	52.9	106	70	130
Toluene	50	52.0	104	70	130
m,p-Xylene	100	105	105	70	130
o-Xylene	50	53.4	107	70	130
Xylenes,Total	150	158.4	105.6	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050557-01
RunID: HP_O_040517A-2226086 Units: ug/Kg
Analysis Date: 05/17/2004 16:29 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	18.2	89.4	20	19.6	96.6	7.62	32	38	136

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 04050596
Lab Batch ID: R111647

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050557-01
RunID: HP_O_040517A-2226086 Units: ug/Kg
Analysis Date: 05/17/2004 16:29 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Ethylbenzene	ND	20	18.4	91.1	20	19.4	96.0	5.20	32	21	138
Toluene	ND	20	18.3	91.3	20	19.6	98.0	7.11	34	29	137
m,p-Xylene	ND	40	36.8	89.8	40	38.2	93.3	3.69	34	10	143
o-Xylene	ND	20	18.3	91.3	20	19.3	96.6	5.70	32	21	139
Xylenes,Total	ND	60	55.1	90.3	60	57.5	94.4	4.36	34	10	143

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Gasoline Range Organics
Method: SW8015B
WorkOrder: 04050596
Lab Batch ID: R111660

Method Blank

RunID: HP_O_040517B-2226356 Units: mg/Kg
Analysis Date: 05/17/2004 15:19 Analyst: JWW

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	105.7	63-122
Surr: 4-Bromofluorobenzene	90.7	39-150

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-02A	SB-3 4-5
04050596-03A	SB-3 19-20
04050596-06A	SB-3 39-40
04050596-10A	SB-2 29-30
04050596-11A	SB-2 39-40
04050596-15A	SB-4 29-30
04050596-16A	SB-4 34-35
04050596-18A	SB-5 39-40

Laboratory Control Sample (LCS)

RunID: HP_O_040517B-2226355 Units: mg/Kg
Analysis Date: 05/17/2004 14:48 Analyst: JWW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.940	94.0	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050557-01
RunID: HP_O_040517B-2226357 Units: mg/Kg
Analysis Date: 05/17/2004 17:33 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	0.150	0.9	0.944	88.2	0.9	1.00	94.8	6.13	50	26	147

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value betw een MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 04050596
Lab Batch ID: R111699

Method Blank

RunID: HP_R_040519A-2227147 Units: ug/Kg
Analysis Date: 05/19/2004 3:39 Analyst: JWW

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	96.3	77-126
Surr: 4-Bromofluorobenzene	95.8	66-145

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-17A	SB-5 34-35
04050596-19A	SB-6 0-3
04050596-20A	SB-6 24-25
04050596-21A	SB-6 44-45
04050596-22A	SB-7 24-25
04050596-23A	SB-1 0-2

Laboratory Control Sample (LCS)

RunID: HP_R_040519A-2227146 Units: ug/Kg
Analysis Date: 05/19/2004 2:42 Analyst: JWW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	46.3	92.7	70	130
Ethylbenzene	50	46.9	93.9	70	130
Toluene	50	46.9	93.8	70	130
m,p-Xylene	100	94.4	94.4	70	130
o-Xylene	50	47.2	94.5	70	130
Xylenes,Total	150	141.6	94.39	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050596-20
RunID: HP_R_040519A-2228610 Units: ug/Kg
Analysis Date: 05/19/2004 18:08 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	15.5	77.5	20	16.1	80.4	3.79	32	38	136
Ethylbenzene	ND	20	15.9	79.5	20	16.3	81.4	2.42	32	21	138
Toluene	ND	20	16.0	79.8	20	16.4	81.9	2.70	34	29	137

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 04050596
Lab Batch ID: R111699

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050596-20
RunID: HP_R_040519A-2228610 Units: ug/Kg
Analysis Date: 05/19/2004 18:08 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
m,p-Xylene	ND	40	32.4	80.9	40	32.9	82.3	1.66	34	10	143
o-Xylene	ND	20	16.5	82.4	20	17.3	86.6	5.01	32	21	139
Xylenes,Total	ND	60	48.9	81.4	60	50.2	83.7	2.80	34	10	143

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value betw een MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 04050596
Lab Batch ID: R111703

Method Blank

RunID: HP_R_040518A-2227187 Units: ug/Kg
Analysis Date: 05/18/2004 11:35 Analyst: JWW

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-24A	SB-1 4-5

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	98.1	77-126
Surr: 4-Bromofluorobenzene	98.3	66-145

Laboratory Control Sample (LCS)

RunID: HP_R_040518A-2227186 Units: ug/Kg
Analysis Date: 05/18/2004 10:38 Analyst: JWW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	48.2	96.4	70	130
Ethylbenzene	50	49.1	98.1	70	130
Toluene	50	48.9	97.9	70	130
m,p-Xylene	100	98.6	98.6	70	130
o-Xylene	50	50.2	100	70	130
Xylenes,Total	150	148.8	99.19	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050499-02
RunID: HP_R_040518A-2227188 Units: ug/Kg
Analysis Date: 05/18/2004 12:03 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	14.3	71.6	20	14.9	74.5	4.08	32	38	136
Ethylbenzene	ND	20	14.2	70.8	20	14.3	71.7	1.27	32	21	138
Toluene	ND	20	14.4	72.2	20	14.7	73.6	1.91	34	29	137

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 04050596
Lab Batch ID: R111703

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050499-02
RunID: HP_R_040518A-2227188 Units: ug/Kg
Analysis Date: 05/18/2004 12:03 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
m,p-Xylene	ND	40	28.3	70.8	40	28.3	70.8	0.00318	34	10	143
o-Xylene	ND	20	13.6	68.2	20	13.6	68.1	0.135	32	21	139
Xylenes,Total	ND	60	41.9	69.9	60	41.9	69.9	0.0460	34	10	143

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value betw een MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Gasoline Range Organics
Method: SW8015B
WorkOrder: 04050596
Lab Batch ID: R111706

Method Blank

RunID: HP_R_040518B-2227293 Units: mg/Kg
Analysis Date: 05/18/2004 11:35 Analyst: JWW

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-24A	SB-1 4-5

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	89.7	63-122
Surr: 4-Bromofluorobenzene	78.3	39-150

Laboratory Control Sample (LCS)

RunID: HP_R_040518B-2227288 Units: mg/Kg
Analysis Date: 05/18/2004 11:07 Analyst: JWW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.904	90.4	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050499-02
RunID: HP_R_040518B-2227300 Units: mg/Kg
Analysis Date: 05/18/2004 13:00 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	0.9	0.874	97.1	0.9	0.858	95.3	1.85	50	26	147

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 04050596
Lab Batch ID: R111790

Method Blank

RunID: HP_O_040519A-2228705 Units: mg/Kg
Analysis Date: 05/19/2004 7:34 Analyst: JWW

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	106.0	63-142
Surr: 4-Bromofluorobenzene	87.3	50-159

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-07A	SB-2 4-5
04050596-09A	SB-2 14-15
04050596-12A	SB-4 4-5

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: HP_O_040519A-2228704 Units: mg/Kg
Analysis Date: 05/19/2004 7:02 Analyst: JWW

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Gasoline Range Organics	1	1.00	100	1.00	0.892	89.2	11.7	50	70	130

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 04050596
Lab Batch ID: R111793

Method Blank

RunID: HP_R_040519B-2228750 Units: mg/Kg
Analysis Date: 05/19/2004 3:39 Analyst: JWW

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	89.0	63-142
Surr: 4-Bromofluorobenzene	79.7	50-159

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-17A	SB-5 34-35
04050596-19A	SB-6 0-3
04050596-20A	SB-6 24-25
04050596-21A	SB-6 44-45
04050596-22A	SB-7 24-25
04050596-23A	SB-1 0-2

Laboratory Control Sample (LCS)

RunID: HP_R_040519B-2228749 Units: mg/Kg
Analysis Date: 05/19/2004 3:11 Analyst: JWW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.874	87.4	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050596-20
RunID: HP_R_040519B-2228772 Units: mg/Kg
Analysis Date: 05/19/2004 19:04 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	0.9	0.811	84.6	0.9	0.862	90.3	6.13	50	26	147

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Gasoline Range Organics
Method: SW8015B
WorkOrder: 04050596
Lab Batch ID: R111800

Method Blank

RunID: HP_R_040520A-2228852 Units: mg/Kg
Analysis Date: 05/20/2004 10:55 Analyst: JWW

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-04A	SB-3 29-30
04050596-14A	SB-4 14-15

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	89.0	63-142
Surr: 4-Bromofluorobenzene	83.0	50-159

Laboratory Control Sample (LCS)

RunID: HP_R_040520A-2228851 Units: mg/Kg
Analysis Date: 05/20/2004 9:59 Analyst: JWW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.902	90.2	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050656-01
RunID: HP_R_040520A-2229495 Units: mg/Kg
Analysis Date: 05/20/2004 21:34 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	0.9	0.682	75.8	0.9	0.685	76.1	0.410	50	26	147

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

6/2/04 3:22:41 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 04050596
Lab Batch ID: R111801

Method Blank

RunID: HP_R_040520B-2228866 Units: ug/Kg
Analysis Date: 05/20/2004 10:55 Analyst: JWW

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050596-04A	SB-3 29-30

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	96.4	77-126
Surr: 4-Bromofluorobenzene	98.4	66-145

Laboratory Control Sample (LCS)

RunID: HP_R_040520B-2228865 Units: ug/Kg
Analysis Date: *05/20/2004 10:27* Analyst: JWW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	47.6	95.2	70	130
Ethylbenzene	50	48.2	96.3	70	130
Toluene	50	48.1	96.1	70	130
m,p-Xylene	100	96.8	96.8	70	130
o-Xylene	50	48.3	96.6	70	130
Xylenes,Total	150	145.1	96.73	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050656-01
RunID: HP_R_040520B-2229525 Units: ug/Kg
Analysis Date: 05/20/2004 20:38 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	14.1	70.5	20	16.1	80.4	13.1	32	38	136
Ethylbenzene	ND	20	11.6	57.8	20	13.5	67.3	15.3	32	21	138
Toluene	ND	20	13.5	67.7	20	15.2	76.2	11.8	34	29	137

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - *Estimated value between MDL and PQL*
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 04050596
Lab Batch ID: R111801

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050656-01
RunID: HP_R_040520B-2229525 Units: ug/Kg
Analysis Date: 05/20/2004 20:38 Analyst: JWW

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
m,p-Xylene	6.18	40	22.3	40.4	40	26.8	51.5	18.2	34	10	143
o-Xylene	ND	20	11.3	56.5	20	12.7	63.7	12.0	32	21	139
Xylenes,Total	6.18	60	33.6	45.7	60	39.5	55.6	16.2	34	10	143

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

Sample Receipt Checklist

And

Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	**04050596**	Received By:	**R_R**
Date and Time Received:	**5/15/04 10:00:00 AM**	Carrier name:	**FedEx**
Temperature:	**3.0°C**	Chilled by:	**Water Ice**

1.	**Shipping container/cooler in good condition?**	Yes ☑	No ☐	Not Present ☐
2.	**Custody seals intact on shippping container/cooler?**	Yes ☑	No ☐	Not Present ☐
3.	**Custody seals intact on sample bottles?**	Yes ☐	No ☐	Not Present ☑
4.	**Chain of custody present?**	Yes ☑	No ☐	
5.	**Chain of custody signed when relinquished and receiv**	Yes ☑	No ☐	
6.	**Chain of custody agrees with sample labels?**	Yes ☑	No ☐	
7.	**Samples in proper container/bottle?**	Yes ☑	No ☐	
8.	**Sample containers intact?**	Yes ☑	No ☐	
9.	**Sufficient sample volume for indicated test?**	Yes ☑	No ☐	
10.	**All samples received within holding time?**	Yes ☑	No ☐	
11.	**Container/Temp Blank temperature in compliance?**	Yes ☑	No ☐	
12.	**Water - VOA vials have zero headspace**	Yes ☐	No ☐	Not Applicable ☑
13.	**Water - pH acceptable upon receipt?**	Yes ☐	No ☐	Not Applicable ☑

SPL Representative: _____ **Contact Date & Time:** _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

04050596

EXXONMOBIL

SPL WORKORDER NO. 2895 Page 1 of 3

ExxonMobil Engineer: J. HAMILTON Phone: 432-686-0086

Consultant Co. Name: BNC ENV. Contact: A. HALE

Address: 2135 N. LOOP 250 WEST Fax: 432-686-0186

MIDLAND, TX 79703

RAS #: _____ Facility/State ID#(TN Only): _____

AFE#(Terminal Only): _____ Consultant Project #: 1244

Location: GLADIOLA STATION (City) _____ (State) _____

☐ EE ☐ C&M ☐ SDT

0160 ExxonMobil Oil Corp ☐ 0944 ExxonMobil Marketing & Ref. Co. ☐

0614 ExxonMobil Pipeline Co. ☐ 0231 Mobil Oil Pipeline Co. ☒

Purchase Order No.: _____

ANALYSIS REQUEST: (CHECK APPROPRIATE BOX)

OTHER

SAMPLE I.D.	DATE	TIME	COMP.	GRAB	MATRIX H_2O	MATRIX SOIL	MATRIX AIR	OTHER	PRESERVATIVE	NO. OF CONTAINERS	CONTAINER SIZE	TPH/GC 8015 GRO ☒ 8015 DRO ☒	BTEX 8021 ☒ 602 ☐	MTBE 8021 ☐ 8260 ☐	OXYGENATES (7) 8260 ☐	O&G IR 413.1 ☐ GRAV. 413.2 ☐ 1664 ☐	VOL. 8260 ☐ 624 ☐	SEMI-VOL. 8270 ☐ 625 ☐	PNA/PAH 8100 ☐ 8310 ☐ 8270 ☐	PCB/PEST 8081/8082 ☐ PCB ONLY ☐	TCLP FULL ☐ VOA ☐ SEMI-VOA ☐ PEST ☐ HERB ☐	METALS, TOTAL RCRA ☐ METALS TCLP ☐	PB, TOTAL 200.7 ☐ 6010 ☐ PB, TCLP ☐	PB, DISSOLVED ☐ PB, TOTAL ☐ (200.7/6010	REACTIVITY ☐ CORROSIVITY ☐ FLASHPOINT ☐	PURGEABLE HYDROCARBON 8021 ☐ 601 ☐	TPHH/IR 418.1 ☐	TOX/TOH ☐			HOLD
SB 3 1-2	5/12/04	1535		✓		✓			ICE	1	402	✓	✓																	✓
SB 3 4-5		1551		✓		✓				1		✓	✓																	
SB 3 19-20		1602		✓		✓				1		✓	✓																	
SB 3 29-30		1620		✓		✓				1		✓	✓																	
SB 3 34-35		1629		✓		✓				1		✓	✓																	✓
SB 3 39-40		1638		✓		✓				1		✓	✓																	
SB 2 4-5	5/12/04	0963		✓		✓				1		✓	✓																	
SB 2 9-10		0917		✓		✓				1		✓	✓																	✓
SB 2 14-15		0921		✓		✓				4		✓	✓																	
SB 2 29-30		1000		✓		✓				1		✓	✓																	

TAT (* - Contact us Prior to Sending Samples)

24 HR. _____ * 48 HR. _____ *

72 HR. _____ * 5 BUS. _____ *

8 BUS. _____ 10 BUS. ✓

15 BUS. _____ 30 BUS. _____

QA/QC Level

STANDARD "A" _____

ENHANCED "B" _____

FULL DATA "C" _____

TRRP DATA "C" _____

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

PDF ☐ ☐ EDD

REMARKS: HOLD SB 2 9-10, SB 3 34-35 SB 3 1-2

EXXONMOBIL CONTRACT NO. C57160

Way Bill #: _____ Cooler Temp: 3.0°C

CUSTODY RECORD

	Date	Time	
Relinquished By Sampler: Will Mundy	5/14/04	1500	Received By:
Relinquished:	5/15/04	1000	Received By:
Relinquished	Date	Time	Received By:

Triplicate: Original * White Lab's Copy * Green Client Copy * Yellow

0405059B

EXXONMOBIL

SPL WORKORDER NO. 2891 Page 2 of 3

ExxonMobil Engineer: _____ Phone: _____

Consultant Co. Name: _____ Contact: _____

Address: _____ Fax: _____

RAS #: _____ Facility/State ID#(TN Only): _____

AFE#(Terminal Only): _____ Consultant Project #: _____

Location: _____ (City) _____ (State) _____

☐ EE ☐ C&M ☐ SDT

0160 ExxonMobil Oil Corp ☐ 0944 ExxonMobil Marketing & Ref. Co. ☐

0614 ExxonMobil Pipeline Co. ☐ 0231 Mobil Oil Pipeline Co. ☒

Purchase Order No.: _____

ANALYSIS REQUEST: (CHECK APPROPRIATE BOX)

SAMPLE I.D.	DATE	TIME	COMP.	GRAB	MATRIX H_2O	MATRIX SOIL	MATRIX AIR	OTHER	PRESERVATIVE	NO. OF CONTAINERS	CONTAINER SIZE	TPH/GC 8015 GRO ☐ 8015 DRO ☐	BTEX 8021 ☐ 602 ☐	MTBE 8021 ☐ 8260 ☐	OXYGENATES (7) 8260 ☐	O&G IR 413.1 ☐ GRAV. 413.2 ☐ 1664 ☐	VOL. 8260 ☐ 624 ☐	SEMI-VOL. 8270 ☐ 625 ☐	PNA/PAH 8100 ☐ 8310 ☐ 8270 ☐	PCB/PEST 8081/8082 ☐ PCB ONLY ☐	TCLP FULL ☐ VOA ☐ SEMI-VOA ☐ PEST ☐ HERB ☐	METALS, TOTAL RCRA ☐ METALS TCLP ☐	PB, TOTAL 200.7 ☐ 6010 ☐ PB, TCLP ☐	PB, DISSOLVED ☐ PB, TOTAL ☐ (200.7/6010	REACTIVITY ☐ CORROSIVITY ☐ FLASHPOINT ☐	PURGEABLE HYDROCARBON 8021 ☐ 601 ☐	TPHH/IR 418.1 ☐	TOX/TOH ☐	OTHER			
SB 2 39-40	5/13/04	1200		✓		✓			ICE	1	4oz	✓	✓																			
SB 4 4-5		1325		✓		✓				1		✓	✓																			
SB 4 9-10		1328		✓		✓				1		✓	✓																		HOLD	
SB 4 14-15		1331		✓		✓				1		✓	✓																			
SB 4 29-30		1357		✓		✓				1		✓	✓																			
SB 4 34-35		1409		✓		✓				1		✓	✓																			
SB 5 34-35		1517		✓		✓				1		✓	✓																			
SB 5 39-40		1528		✓		✓				1		✓	✓																			
SB 6 0-3		1630	✓			✓				1		✓	✓																			
SB 6 24-25	↓	1655		✓		✓			↓	1	↓	✓	✓																			

TAT (* - Contact us Prior to Sending Samples)

24 HR. _____* 48 HR. _____*

72 HR. _____* 5 BUS. _____*

8 BUS. _____ 10 BUS. ✓

15 BUS. _____ 30 BUS. _____

QA/QC Level

STANDARD "A" _____

ENHANCED "B" _____

FULL DATA "C" _____

TRRP DATA "C" _____

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

PDF ☐ ☐ EDD

REMARKS: HOLD SB 4 9-10

EXXONMOBIL CONTRACT NO. C57160

Way Bill #: _____ Cooler Temp: 3.8°

CUSTODY RECORD

	Date	Time	
Relinquished By Sampler: Will Munday	5/14/04	1500	Received By:
Relinquished:	5/15/04	1000	Received By:
Relinquished	Date	Time	Received By:

Triplicate: Original * White Lab's Copy * Green Client Copy * Yellow

D4050546

EXXONMOBIL

SPL WORKORDER NO. 2402 Page 3 of 3

ExxonMobil Engineer: _____ Phone: _____

Consultant Co. Name: _____ Contact: _____

Address: _____ Fax: _____

RAS #: _____ Facility/State ID#(TN Only): _____

AFE#(Terminal Only): _____ Consultant Project #: _____

Location: _____ (City) _____ (State) _____

☐ EE ☐ C&M ☐ SDT

0160 ExxonMobil Oil Corp ☐ 0944 ExxonMobil Marketing & Ref. Co. ☐

0614 ExxonMobil Pipeline Co. ☐ 0231 Mobil Oil Pipeline Co. ☒

Purchase Order No.: _____

SAMPLE I.D.	DATE	TIME	COMP.	GRAB	MATRIX H_2O	MATRIX SOIL	MATRIX AIR	OTHER	PRESERVATIVE	NO. OF CONTAINERS	CONTAINER SIZE	TPH/GC 8015 GRO ☒ 8015 DRO ☒	BTEX 8021 ☒ 602 ☐	MTBE 8021 ☐ 8260 ☐	OXYGENATES (7) 8260 ☐	O&G IR 413.1 ☐ GRAV. 413.2 ☐ 1664 ☐	VOL. 8260 ☐ 624 ☐	SEMI-VOL. 8270 ☐ 625 ☐	PNA/PAH 8100 ☐ 8310 ☐ 8270 ☐	PCB/PEST 8081/8082 ☐ PCB ONLY ☐	TCLP FULL ☐ VOA ☐ SEMI-VOA ☐ PEST ☐ HERB ☐	METALS, TOTAL RCRA ☐ METALS TCLP ☐	PB, TOTAL 200.7 ☐ 6010 ☐ PB, TCLP ☐	PB, DISSOLVED ☐ PB, TOTAL ☐ (200.7/6010	REACTIVITY ☐ CORROSIVITY ☐ FLASHPOINT ☐	PURGEABLE HYDROCARBON 8021 ☐ 601 ☐	TPHH/IR 418.1 ☐	TOX/TOH ☐	OTHER			
SB 6 44-45	5/13/04	1723		✓		✓			ICE	1	4oz	✓	✓																			
SB 7 24-25	5/14/04	0950		✓		✓				1		✓	✓																			
SB 1 0-2	"	1021	✓			✓				1		✓	✓																			
SB 1 4-5	"	1028		✓		✓				1		✓	✓																			

TAT (* - Contact us Prior to Sending Samples)

24 HR. ____ * 48 HR. ____ *

72 HR. ____ * 5 BUS. ____ *

8 BUS. ____ 10 BUS. ✓

15 BUS. ____ 30 BUS. ____

QA/QC Level

STANDARD "A" ____

ENHANCED "B" ____

FULL DATA "C" ____

TRRP DATA "C" ____

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

PDF ☐ ☐ EDD

REMARKS:

EXXONMOBIL CONTRACT NO. C57160

Way Bill #: _____ Cooler Temp: 3.0°

CUSTODY RECORD

	Date	Time	Received By:
Relinquished By Sampler: Will Thurlow			
Relinquished:	5/15/04	1000	Received By:
Relinquished	Date	Time	Received By:

Triplicate: Original * White Lab's Copy * Green Client Copy * Yellow

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

ExxonMobil Global Remediation

Certificate of Analysis Number:

04050741

Report To:		Project Name:	Gladiola Station
BNC Environmental Services		Site:	Lea County, NM
Aaron Hale		Site Address:	
2135 S. Loop 250 West			
Midland		PO Number:	4504690348 Line 80
TX		State:	New Mexico
79703-		State Cert. No.:	
ph: (432) 686-0086	fax:	Date Reported:	5/28/04

This Report Contains A Total Of Pages

Excluding This Page

6/1/04

Date

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

ExxonMobil Global Remediation

Certificate of Analysis Number:

04050741

Report To:		Project Name:	Gladiola Station
BNC Environmental Services		Site:	Lea County, NM
Aaron Hale		Site Address:	
2135 S. Loop 250 West			
Midland		PO Number:	4504690348 Line 80
TX		State:	New Mexico
79703-		State Cert. No.:	
ph: (432) 686-0086	fax:	Date Reported:	5/28/04

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Due to limited sample volume, no Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was extracted with Batch ID: 38187 for the Polynuclear Aromatic Hydrocarbons analysis by SW846 Method 8310. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). Spike recoveries for the LCS and LCSD were within QC limits.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Sonia West

6/1/04

Sonia West
Senior Project Manager

Date

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

ExxonMobil Global Remediation

Certificate of Analysis Number:

04050741

Report To: BNC Environmental Services
Aaron Hale
2135 S. Loop 250 West

Midland
TX
79703-
ph: (432) 686-0086 fax:

Fax To:

Project Name: Gladiola Station
Site: Lea County, NM
Site Address:

PO Number: 4504690348 Line 80
State: New Mexico
State Cert. No.:
Date Reported: 5/28/04

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	04050741-01	Water	5/17/04 2:50:00 PM	5/19/04 9:30:00 AM	2403	☐
MW-2	04050741-02	Water	5/17/04 3:30:00 PM	5/19/04 9:30:00 AM	2403	☐
MW-3	04050741-03	Water	5/17/04 3:20:00 PM	5/19/04 9:30:00 AM	2403	☐
Trip Blank	04050741-04	Water	5/17/04	5/19/04 9:30:00 AM	2403	☐

Sonia West

6/1/04

Sonia West
Senior Project Manager

Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

6/1/04 3:43:12 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-1 **Collected:** 05/17/2004 14:50 **SPL Sample ID:** 04050741-01

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
ALKALINITY (AS CACO3), TOTAL			**MCL**	**E310.1**		**Units: mg/L**		
Alkalinity, Total (As CaCO3)	1010	2		1		05/25/04 18:00	ESK	2236807
ION CHROMATOGRAPHY			**MCL**	**E300.0**		**Units: mg/L**		
Chloride	24	1		5		05/26/04 14:12	CV	2239204
Sulfate	1.7	0.2		1		05/26/04 17:46	CV	2239221
MERCURY, DISSOLVED			**MCL**	**SW7470A**		**Units: mg/L**		
Mercury	ND	0.0002		1		05/26/04 15:49	JAB	2238952

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	05/25/2004 8:30	JAB	1.00

METALS BY METHOD 6010B, DISSOLVED			**MCL**	**SW6010B**		**Units: mg/L**		
Arsenic	0.0168	0.005		1		05/25/04 16:59	NS	2238496
Lead	ND	0.005		1		05/25/04 16:59	NS	2238496
Selenium	ND	0.005		1		05/25/04 16:59	NS	2238496
Barium	2.71	0.005		1		05/25/04 16:19	MW	2237045
Cadmium	ND	0.005		1		05/25/04 16:19	MW	2237045
Chromium	ND	0.01		1		05/25/04 16:19	MW	2237045
Silver	ND	0.01		1		05/25/04 16:19	MW	2237045

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	05/20/2004 8:00	SE	1.00

Sonia West

Sonia West
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-1 **Collected:** 05/17/2004 14:50 **SPL Sample ID:** 04050741-01

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
POLYNUCLEAR AROMATIC HYDROCARBONS			**MCL**	**SW8310**		**Units: ug/L**		
1-Methylnaphthalene	25		8	40		05/27/04 12:12	DL	2239891
2-Methylnaphthalene	27		8	40		05/27/04 12:12	DL	2239891
Acenaphthene	ND		0.5	5		05/27/04 4:05	DL	2239885
Acenaphthylene	ND		0.5	5		05/27/04 4:05	DL	2239885
Anthracene	ND		0.5	5		05/27/04 4:05	DL	2239885
Benz(a)anthracene	ND		0.5	5		05/27/04 4:05	DL	2239885
Benzo(a)pyrene	ND		0.5	5		05/27/04 4:05	DL	2239885
Benzo(b)fluoranthene	ND		0.5	5		05/27/04 4:05	DL	2239885
Benzo(g,h,i)perylene	ND		0.5	5		05/27/04 4:05	DL	2239885
Benzo(k)fluoranthene	ND		0.5	5		05/27/04 4:05	DL	2239885
Chrysene	ND		0.5	5		05/27/04 4:05	DL	2239885
Dibenzo(a,h)anthracene	ND		0.5	5		05/27/04 4:05	DL	2239885
Fluoranthene	ND		0.5	5		05/27/04 4:05	DL	2239885
Fluorene	ND		0.5	5		05/27/04 4:05	DL	2239885
Indeno(1,2,3-cd)pyrene	ND		0.5	5		05/27/04 4:05	DL	2239885
Naphthalene	35		4	40		05/27/04 12:12	DL	2239891
Phenanthrene	ND		0.5	5		05/27/04 4:05	DL	2239885
Pyrene	ND		0.5	5		05/27/04 4:05	DL	2239885
Surr: 1-Fluoronaphthalene	46.1	%	18-130	5		05/27/04 4:05	DL	2239885
Surr: 1-Fluoronaphthalene	D	%	18-130	40		05/27/04 12:12	DL	2239891
Surr: Phenanthrene-d10	D	%	21-111	40		05/27/04 12:12	DL	2239891
Surr: Phenanthrene-d10	70.9	%	21-111	5		05/27/04 4:05	DL	2239885

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	05/22/2004 8:09	K_L	1.00

PURGEABLE AROMATICS			**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	6600		25	25		05/27/04 17:13	RLS	2241534
Toluene	1100		25	25		05/27/04 17:13	RLS	2241534
Ethylbenzene	440		25	25		05/27/04 17:13	RLS	2241534
m,p-Xylene	800		25	25		05/27/04 17:13	RLS	2241534
o-Xylene	320		25	25		05/27/04 17:13	RLS	2241534
Xylenes,Total	1120		25	25		05/27/04 17:13	RLS	2241534
Surr: 1,4-Difluorobenzene	102	%	39-163	25		05/27/04 17:13	RLS	2241534
Surr: 4-Bromofluorobenzene	107	%	57-157	25		05/27/04 17:13	RLS	2241534
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**		**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	1130		40	4		05/22/04 14:00	ESK	2231841

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-2 **Collected:** 05/17/2004 15:30 **SPL Sample ID:** 04050741-02

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
ALKALINITY (AS CACO3), TOTAL			**MCL**	**E310.1**		**Units: mg/L**		
Alkalinity, Total (As CaCO3)	586	2		1		05/25/04 18:00	ESK	2236808
ION CHROMATOGRAPHY			**MCL**	**E300.0**		**Units: mg/L**		
Chloride	25	1		5		05/26/04 14:25	CV	2239205
Sulfate	25	1		5		05/26/04 14:25	CV	2239205
MERCURY, DISSOLVED			**MCL**	**SW7470A**		**Units: mg/L**		
Mercury	ND	0.0002		1		05/26/04 15:52	JAB	2238953

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	05/25/2004 8:30	JAB	1.00

METALS BY METHOD 6010B, DISSOLVED			**MCL**	**SW6010B**		**Units: mg/L**		
Arsenic	ND	0.005		1		05/25/04 17:04	NS	2238497
Lead	ND	0.005		1		05/25/04 17:04	NS	2238497
Selenium	ND	0.005		1		05/25/04 17:04	NS	2238497
Barium	0.0867	0.005		1		05/25/04 16:23	MW	2237046
Cadmium	ND	0.005		1		05/25/04 16:23	MW	2237046
Chromium	ND	0.01		1		05/25/04 16:23	MW	2237046
Silver	ND	0.01		1		05/25/04 16:23	MW	2237046

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	05/20/2004 8:00	SE	1.00

Sonia West

Sonia West
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
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J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-2 **Collected:** 05/17/2004 15:30 **SPL Sample ID:** 04050741-02

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
POLYNUCLEAR AROMATIC HYDROCARBONS			**MCL**	**SW8310**		**Units: ug/L**		
1-Methylnaphthalene	15		4	20		05/27/04 12:49	DL	2239892
2-Methylnaphthalene	16		4	20		05/27/04 12:49	DL	2239892
Acenaphthene	ND		0.5	5		05/27/04 4:43	DL	2239886
Acenaphthylene	ND		0.5	5		05/27/04 4:43	DL	2239886
Anthracene	ND		0.5	5		05/27/04 4:43	DL	2239886
Benz(a)anthracene	ND		0.5	5		05/27/04 4:43	DL	2239886
Benzo(a)pyrene	ND		0.5	5		05/27/04 4:43	DL	2239886
Benzo(b)fluoranthene	ND		0.5	5		05/27/04 4:43	DL	2239886
Benzo(g,h,i)perylene	ND		0.5	5		05/27/04 4:43	DL	2239886
Benzo(k)fluoranthene	ND		0.5	5		05/27/04 4:43	DL	2239886
Chrysene	ND		0.5	5		05/27/04 4:43	DL	2239886
Dibenzo(a,h)anthracene	ND		0.5	5		05/27/04 4:43	DL	2239886
Fluoranthene	ND		0.5	5		05/27/04 4:43	DL	2239886
Fluorene	1.5		0.5	5		05/27/04 4:43	DL	2239886
Indeno(1,2,3-cd)pyrene	ND		0.5	5		05/27/04 4:43	DL	2239886
Naphthalene	19		2	20		05/27/04 12:49	DL	2239892
Phenanthrene	0.56		0.5	5		05/27/04 4:43	DL	2239886
Pyrene	ND		0.5	5		05/27/04 4:43	DL	2239886
Surr: 1-Fluoronaphthalene	28.8	%	18-130	5		05/27/04 4:43	DL	2239886
Surr: 1-Fluoronaphthalene	D	%	18-130	20		05/27/04 12:49	DL	2239892
Surr: Phenanthrene-d10	D	%	21-111	20		05/27/04 12:49	DL	2239892
Surr: Phenanthrene-d10	20.4MI	%	21-111	5	*	05/27/04 4:43	DL	2239886

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	05/22/2004 8:09	K_L	1.00

PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/L		
Benzene	19	1		1	05/26/04 20:40	RLS	2240995
Toluene	ND	1		1	05/26/04 20:40	RLS	2240995
Ethylbenzene	33	1		1	05/26/04 20:40	RLS	2240995
m,p-Xylene	55	1		1	05/26/04 20:40	RLS	2240995
o-Xylene	9.1	1		1	05/26/04 20:40	RLS	2240995
Xylenes,Total	64.1	1		1	05/26/04 20:40	RLS	2240995
Surr: 1,4-Difluorobenzene	103 %	39-163		1	05/26/04 20:40	RLS	2240995
Surr: 4-Bromofluorobenzene	126 %	57-157		1	05/26/04 20:40	RLS	2240995

TOTAL DISSOLVED SOLIDS			MCL	E160.1	Units: mg/L		
Total Dissolved Solids (Residue,Filterable)	668	40		4	05/22/04 14:00	ESK	2231842

Sonia West

Sonia West
Project Manager

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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>MCL - Result Over Maximum Contamination Limit(MCL)
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MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-3 **Collected:** 05/17/2004 15:20 **SPL Sample ID:** 04050741-03

Site: Lea County, NM

Analyses/Method	Result	Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
ALKALINITY (AS CACO3), TOTAL			**MCL**	**E310.1**		**Units: mg/L**		
Alkalinity, Total (As CaCO3)	607	2		1		05/25/04 18:00	ESK	2236809
ION CHROMATOGRAPHY			**MCL**	**E300.0**		**Units: mg/L**		
Chloride	18	0.2		1		05/26/04 18:24	CV	2239224
Sulfate	7.4	0.2		1		05/26/04 18:24	CV	2239224
MERCURY, DISSOLVED			**MCL**	**SW7470A**		**Units: mg/L**		
Mercury	ND	0.0002		1		05/26/04 15:54	JAB	2238954

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	05/25/2004 8:30	JAB	1.00

METALS BY METHOD 6010B, DISSOLVED			**MCL**	**SW6010B**		**Units: mg/L**		
Arsenic	0.00745	0.005		1		05/26/04 13:53	NS	2239140
Lead	ND	0.005		1		05/25/04 17:20	NS	2238500
Selenium	ND	0.005		1		05/25/04 17:20	NS	2238500
Barium	0.64	0.005		1		05/25/04 16:35	MW	2237049
Cadmium	ND	0.005		1		05/25/04 16:35	MW	2237049
Chromium	ND	0.01		1		05/25/04 16:35	MW	2237049
Silver	ND	0.01		1		05/25/04 16:35	MW	2237049

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	05/20/2004 8:00	SE	1.00

Sonia West

Sonia West
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
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J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-3 **Collected:** 05/17/2004 15:20 **SPL Sample ID:** 04050741-03

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
POLYNUCLEAR AROMATIC HYDROCARBONS				**MCL**	**SW8310**		**Units: ug/L**		
1-Methylnaphthalene	0.83		0.2		1		05/27/04 11:34	DL	2239890
2-Methylnaphthalene	0.8		0.2		1		05/27/04 11:34	DL	2239890
Acenaphthene	0.15		0.1		1		05/27/04 11:34	DL	2239890
Acenaphthylene	ND		0.1		1		05/27/04 11:34	DL	2239890
Anthracene	ND		0.1		1		05/27/04 11:34	DL	2239890
Benz(a)anthracene	ND		0.1		1		05/27/04 11:34	DL	2239890
Benzo(a)pyrene	ND		0.1		1		05/27/04 11:34	DL	2239890
Benzo(b)fluoranthene	ND		0.1		1		05/27/04 11:34	DL	2239890
Benzo(g,h,i)perylene	ND		0.1		1		05/27/04 11:34	DL	2239890
Benzo(k)fluoranthene	ND		0.1		1		05/27/04 11:34	DL	2239890
Chrysene	ND		0.1		1		05/27/04 11:34	DL	2239890
Dibenzo(a,h)anthracene	ND		0.1		1		05/27/04 11:34	DL	2239890
Fluoranthene	ND		0.1		1		05/27/04 11:34	DL	2239890
Fluorene	0.57		0.1		1		05/27/04 11:34	DL	2239890
Indeno(1,2,3-cd)pyrene	ND		0.1		1		05/27/04 11:34	DL	2239890
Naphthalene	0.43		0.1		1		05/27/04 11:34	DL	2239890
Phenanthrene	0.14		0.1		1		05/27/04 11:34	DL	2239890
Pyrene	ND		0.1		1		05/27/04 11:34	DL	2239890
Surr: 1-Fluoronaphthalene	60.0	%	18-130		1		05/27/04 11:34	DL	2239890
Surr: Phenanthrene-d10	87.2	%	21-111		1		05/27/04 11:34	DL	2239890

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	05/22/2004 8:09	K_L	1.00

PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	140		1		1		05/26/04 21:08	RLS	2240996
Toluene	ND		1		1		05/26/04 21:08	RLS	2240996
Ethylbenzene	16		1		1		05/26/04 21:08	RLS	2240996
m,p-Xylene	72		1		1		05/26/04 21:08	RLS	2240996
o-Xylene	19		1		1		05/26/04 21:08	RLS	2240996
Xylenes,Total	91		1		1		05/26/04 21:08	RLS	2240996
Surr: 1,4-Difluorobenzene	100	%	39-163		1		05/26/04 21:08	RLS	2240996
Surr: 4-Bromofluorobenzene	109	%	57-157		1		05/26/04 21:08	RLS	2240996
TOTAL DISSOLVED SOLIDS				**MCL**	**E160.1**		**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	722		20		2		05/22/04 14:00	ESK	2231843

Sonia West
Project Manager

Qualifiers:
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>MCL - Result Over Maximum Contamination Limit(MCL)
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MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: Trip Blank **Collected:** 05/17/2004 0:00 **SPL Sample ID:** 04050741-04

Site: Lea County, NM

Analyses/Method	Result		Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/L**		
Benzene	ND		1		1		05/26/04 21:35	RLS	2240997
Toluene	ND		1		1		05/26/04 21:35	RLS	2240997
Ethylbenzene	ND		1		1		05/26/04 21:35	RLS	2240997
m,p-Xylene	ND		1		1		05/26/04 21:35	RLS	2240997
o-Xylene	ND		1		1		05/26/04 21:35	RLS	2240997
Xylenes,Total	ND		1		1		05/26/04 21:35	RLS	2240997
Surr: 1,4-Difluorobenzene	101	%	39-163		1		05/26/04 21:35	RLS	2240997
Surr: 4-Bromofluorobenzene	101	%	57-157		1		05/26/04 21:35	RLS	2240997

Sonia West

Sonia West
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
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>MCL - Result Over Maximum Contamination Limit(MCL)
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MI - Matrix Interference

Quality Control Documentation

6/1/04 3:43:46 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 04050741
Lab Batch ID: R112421

Method Blank

RunID: VARE_040526D-2240991 Units: ug/L
Analysis Date: 05/26/2004 18:22 Analyst: RLS

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-02A	MW-2
04050741-03A	MW-3
04050741-04A	Trip Blank

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	101.1	39-163
Surr: 4-Bromofluorobenzene	100.7	57-157

Laboratory Control Sample (LCS)

RunID: VARE_040526D-2240988 Units: ug/L
Analysis Date: 05/26/2004 17:00 Analyst: RLS

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	52.7	105	81	125
Ethylbenzene	50	51.9	104	85	119
Toluene	50	51.9	104	87	120
m,p-Xylene	100	103	103	86	118
o-Xylene	50	51.7	103	83	122
Xylenes,Total	150	154.7	103.1	83	122

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050741-02
RunID: VARE_040526D-2240989 Units: ug/L
Analysis Date: 05/26/2004 17:27 Analyst: RLS

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	18.9	20	32.3	66.9	20	34.9	80.2	7.90	26	43	155
Ethylbenzene	32.9	20	43.2	51.2	20	43.5	52.9	0.774	34	51	142
Toluene	ND	20	20.1	95.7	20	19.4	92.2	3.63	25	57	142

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 04050741
Lab Batch ID: R112421

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050741-02
RunID: VARE_040526D-2240989 Units: ug/L
Analysis Date: 05/26/2004 17:27 Analyst: RLS

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
m,p-Xylene	54.7	40	78.4	59.2	40	81.0	65.7	3.27	27	47	154
o-Xylene	9.15	20	26.3	85.7	20	27.0	89.2	2.65	25	61	138
Xylenes,Total	63.87	60	104.7	68.04	60	108.0	73.56	3.115	27	47	154

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value betw een MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 04050741
Lab Batch ID: R112451

Method Blank

RunID: VARE_040527A-2241522 Units: ug/L
Analysis Date: 05/27/2004 7:13 Analyst: RLS

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-01A	MW-1

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	103.9	39-163
Surr: 4-Bromofluorobenzene	101.8	57-157

Laboratory Control Sample (LCS)

RunID: VARE_040527A-2241519 Units: ug/L
Analysis Date: 05/27/2004 5:50 Analyst: RLS

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	53.5	107	81	125
Ethylbenzene	50	52.3	105	85	119
Toluene	50	52.3	105	87	120
m,p-Xylene	100	103	103	86	118
o-Xylene	50	52.4	105	83	122
Xylenes,Total	150	155.4	103.6	83	122

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050737-01
RunID: VARE_040527A-2241520 Units: ug/L
Analysis Date: 05/27/2004 6:18 Analyst: RLS

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	189	20	188	N/C	20	195	N/C	N/C	26	43	155
Ethylbenzene	36.4	20	51.6	76.1	20	53.9	87.6	4.37	34	51	142
Toluene	122	20	127	N/C	20	132	N/C	N/C	25	57	142

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

6/1/04 3:43:59 PM

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 04050741
Lab Batch ID: R112451

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050737-01
RunID: VARE_040527A-2241520 Units: ug/L
Analysis Date: 05/27/2004 6:18 Analyst: RLS

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
m,p-Xylene	139	40	158	46.7 *	40	166	65.9	4.74	27	47	154
o-Xylene	74.2	20	85.4	56.3 *	20	88.9	73.7	4.00	25	61	138
Xylenes,Total	213.6	60	243.4	49.91	60	254.9	68.51	4.480	27	47	154

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value betw een MDL and PQL
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Polynuclear Aromatic Hydrocarbons
Method: SW8310

WorkOrder: 04050741
Lab Batch ID: 38187

Method Blank

RunID: 2_040526B-2239879 Units: ug/L
Analysis Date: 05/27/2004 0:19 Analyst: DL
Preparation Date: 05/22/2004 8:09 Prep By: K_L Method SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-01B	MW-1
04050741-02B	MW-2
04050741-03B	MW-3

Analyte	Result	Rep Limit
1-Methylnaphthalene	ND	0.20
2-Methylnaphthalene	ND	0.20
Acenaphthene	ND	0.10
Acenaphthylene	ND	0.10
Anthracene	ND	0.10
Benz(a)anthracene	ND	0.10
Benzo(a)pyrene	ND	0.10
Benzo(b)fluoranthene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Benzo(k)fluoranthene	ND	0.10
Chrysene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Fluoranthene	ND	0.10
Fluorene	ND	0.10
Indeno(1,2,3-cd)pyrene	ND	0.10
Naphthalene	ND	0.10
Phenanthrene	ND	0.10
Pyrene	ND	0.10
Surr: 1-Fluoronaphthalene	66.1	18-130
Surr: Phenanthrene-d10	74.3	21-111

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: 2_040526B-2239880 Units: ug/L
Analysis Date: 05/27/2004 0:57 Analyst: DL
Preparation Date: 05/22/2004 8:09 Prep By: K_L Method SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1-Methylnaphthalene	0.5	0.326	65.3	0.500	0.349	69.9	6.8	30	35	125
2-Methylnaphthalene	0.5	0.326	65.2	0.500	0.337	67.5	3.5	30	35	125
Acenaphthene	0.5	0.344	68.9	0.500	0.353	70.5	2.4	30	35	125
Acenaphthylene	0.5	0.304	60.9	0.500	0.315	62.9	3.3	30	35	122
Anthracene	0.5	0.266	53.3	0.500	0.274	54.8	2.7	30	29	126
Benz(a)anthracene	0.5	0.376	75.2	0.500	0.379	75.9	0.9	30	39	119
Benzo(a)pyrene	0.5	0.374	74.7	0.500	0.378	75.5	1.0	30	34	125
Benzo(b)fluoranthene	0.5	0.389	77.9	0.500	0.390	78.0	0.1	30	42	127
Benzo(g,h,i)perylene	0.5	0.382	76.4	0.500	0.380	75.9	0.6	30	37	125
Benzo(k)fluoranthene	0.5	0.390	78.1	0.500	0.390	77.9	0.2	30	42	125
Chrysene	0.5	0.374	74.9	0.500	0.378	75.6	0.9	30	40	144

Qualifiers:

ND/U - Not Detected at the Reporting Limit
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J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Polynuclear Aromatic Hydrocarbons **WorkOrder:** 04050741
Method: SW8310 **Lab Batch ID:** 38187

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: 2_040526B-2239880 Units: ug/L
Analysis Date: 05/27/2004 0:57 Analyst: DL
Preparation Date: 05/22/2004 8:09 Prep By: K_L Method SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Dibenzo(a,h)anthracene	0.5	0.397	79.4	0.500	0.394	78.7	0.9	30	42	130
Fluoranthene	0.5	0.363	72.6	0.500	0.373	74.5	2.6	30	38	126
Fluorene	0.5	0.346	69.1	0.500	0.358	71.5	3.4	30	37	130
Indeno(1,2,3-cd)pyrene	0.5	0.357	71.3	0.500	0.356	71.1	0.3	30	39	130
Naphthalene	0.5	0.365	73.0	0.500	0.367	73.5	0.7	30	36	130
Phenanthrene	0.5	0.359	71.9	0.500	0.370	73.9	2.8	30	38	128
Pyrene	0.5	0.373	74.6	0.500	0.382	76.4	2.3	30	39	137

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Metals by Method 6010B, Dissolved
Method: SW6010B
WorkOrder: 04050741
Lab Batch ID: 38139

Method Blank

RunID: TJA_040525D-2237037 Units: mg/L
Analysis Date: 05/25/2004 15:47 Analyst: MW
Preparation Date: 05/20/2004 8:00 Prep By: SE Method SW3005A

Analyte	Result	Rep Limit
Barium	ND	0.005
Cadmium	ND	0.005
Chromium	ND	0.01
Silver	ND	0.01

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-01C	MW-1
04050741-02C	MW-2
04050741-03C	MW-3

Laboratory Control Sample (LCS)

RunID: TJA_040525D-2237038 Units: mg/L
Analysis Date: 05/25/2004 15:51 Analyst: MW
Preparation Date: 05/20/2004 8:00 Prep By: SE Method SW3005A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Barium	1	0.9680	96.80	80	120
Cadmium	1	1.092	109.2	80	120
Chromium	1	1.058	105.8	80	120
Silver	1	0.8715	87.15	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050677-12
RunID: TJA_040525D-2237040 Units: mg/L
Analysis Date: 05/25/2004 15:59 Analyst: MW
Preparation Date: 05/20/2004 8:00 Prep By: SE Method SW3005A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Barium	ND	1	0.9699	96.99	1	0.9645	96.45	0.5573	20	75	125
Cadmium	ND	1	1.074	107.4	1	1.065	106.5	0.8559	20	75	125
Chromium	ND	1	1.042	104.2	1	1.037	103.7	0.5666	20	75	125
Silver	ND	1	1.071	107.1	1	0.8254	82.54	25.94 *	20	75	125

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

6/1/04 3:44:02 PM

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Metals by Method 6010B, Dissolved
Method: SW6010B
WorkOrder: 04050741
Lab Batch ID: 38139-T

Method Blank

RunID: TJAT_040525B-2238487 Units: mg/L
Analysis Date: 05/25/2004 16:15 Analyst: NS
Preparation Date: 05/20/2004 8:00 Prep By: SE Method SW3005A

Analyte	Result	Rep Limit
Arsenic	ND	0.005
Lead	ND	0.005
Selenium	ND	0.005

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-01C	MW-1
04050741-02C	MW-2
04050741-03C	MW-3

Laboratory Control Sample (LCS)

RunID: TJAT_040525B-2238488 Units: mg/L
Analysis Date: 05/25/2004 16:20 Analyst: NS
Preparation Date: 05/20/2004 8:00 Prep By: SE Method SW3005A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Arsenic	0.1	0.1035	103.5	80	120
Lead	0.1	0.1027	102.7	80	120
Selenium	0.1	0.1065	106.4	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050677-12
RunID: TJAT_040525B-2238490 Units: mg/L
Analysis Date: 05/25/2004 16:31 Analyst: NS
Preparation Date: 05/20/2004 8:00 Prep By: SE Method SW3005A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Arsenic	ND	0.1	0.1037	103.7	0.1	0.1041	104.1	0.4331	20	75	125
Lead	ND	0.1	0.1038	103.8	0.1	0.1042	104.2	0.4136	20	75	125
Selenium	ND	0.1	0.1060	106.0	0.1	0.1059	105.9	0.02831	20	75	125

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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6/1/04 3:44:03 PM

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Mercury, Dissolved
Method: SW7470A
WorkOrder: 04050741
Lab Batch ID: 38244

Method Blank

RunID: HGLC_040526A-2238947 Units: mg/L
Analysis Date: 05/26/2004 15:37 Analyst: JAB
Preparation Date: 05/25/2004 8:30 Prep By: JAB Method SW7470A

Analyte	Result	Rep Limit
Mercury	ND	0.0002

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-01C	MW-1
04050741-02C	MW-2
04050741-03C	MW-3

Laboratory Control Sample (LCS)

RunID: HGLC_040526A-2238948 Units: mg/L
Analysis Date: 05/26/2004 15:39 Analyst: JAB
Preparation Date: 05/25/2004 8:30 Prep By: JAB Method SW7470A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Mercury	0.002	0.002024	101.2	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050800-01
RunID: HGLC_040526A-2238950 Units: mg/L
Analysis Date: 05/26/2004 15:44 Analyst: JAB
Preparation Date: 05/25/2004 8:30 Prep By: JAB Method SW7470A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Mercury	ND	0.002	0.002047	102.3	0.002	0.002066	103.3	0.9426	20	75	125

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

6/1/04 3:44:04 PM

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Total Dissolved Solids
Method: E160.1
WorkOrder: 04050741
Lab Batch ID: R111955

Method Blank

RunID: WET_040522H-2231827 Units: mg/L
Analysis Date: 05/22/2004 14:00 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-01D	MW-1
04050741-02D	MW-2
04050741-03D	MW-3

Analyte	Result	Rep Limit
Total Dissolved Solids (Residue,Filterable)	ND	10

Laboratory Control Sample (LCS)

RunID: WET_040522H-2231829 Units: mg/L
Analysis Date: 05/22/2004 14:00 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,Filtera	200	198.0	99.00	95	107

Sample Duplicate

Original Sample: 04050754-01
RunID: WET_040522H-2231844 Units: mg/L
Analysis Date: 05/22/2004 14:00 Analyst: ESK

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Total Dissolved Solids (Residue,Filtera	1010	1012	0.495	20

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Alkalinity (as CaCO3), Total
Method: E310.1
WorkOrder: 04050741
Lab Batch ID: R112212

Method Blank

RunID: WET_040525U-2236804 Units: mg/L
Analysis Date: 05/25/2004 18:00 Analyst: ESK

Analyte	Result	Rep Limit
Alkalinity, Total (As CaCO3)	ND	2.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-01D	MW-1
04050741-02D	MW-2
04050741-03D	MW-3

Laboratory Control Sample (LCS)

RunID: WET_040525U-2236806 Units: mg/L
Analysis Date: 05/25/2004 18:00 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Low er Limit	Upper Limit
Alkalinity, Total (As CaCO3)	101	99.99	99.00	90	110

Sample Duplicate

Original Sample: 04050722-01
RunID: WET_040525U-2236823 Units: mg/L
Analysis Date: 05/25/2004 18:00 Analyst: ESK

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Alkalinity, Total (As CaCO3)	475	467.6	1.50	20

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value betw een MDL and PQL
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station

Analysis: Ion Chromatography
Method: E300.0

WorkOrder: 04050741
Lab Batch ID: R112332

Method Blank

RunID: IC1_040526A-2239261 Units: mg/L
Analysis Date: 05/26/2004 13:22 Analyst: CV

Analyte	Result	Rep Limit
Chloride	ND	0.20
Sulfate	ND	0.20

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04050741-01D	MW-1
04050741-02D	MW-2
04050741-03D	MW-3

Laboratory Control Sample (LCS)

RunID: IC1_040526A-2239201 Units: mg/L
Analysis Date: 05/26/2004 13:35 Analyst: CV

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	10	9.42	94.2	80	120
Sulfate	10	9.81	98.1	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04050741-02
RunID: IC1_040526A-2239222 Units: mg/L
Analysis Date: 05/26/2004 17:59 Analyst: CV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	25.4	50	77.4	104	50	78.8	107	1.83	20	80	120
Sulfate	25.3	50	77.4	104	50	78.0	106	0.826	20	80	120

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

6/1/04 3:44:06 PM

Sample Receipt Checklist

And

Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	**04050741**	Received By:	**R_R**
Date and Time Received:	**5/19/04 9:30:00 AM**	Carrier name:	**FedEx**
Temperature:	**4.5°C**	Chilled by:	**Water Ice**

1. **Shipping container/cooler in good condition?**	Yes ☑	No ☐	Not Present ☐	
2. **Custody seals intact on shippping container/cooler?**	Yes ☑	No ☐	Not Present ☐	
3. **Custody seals intact on sample bottles?**	Yes ☐	No ☐	Not Present ☑	
4. **Chain of custody present?**	Yes ☑	No ☐		
5. **Chain of custody signed when relinquished and receiv**	Yes ☑	No ☐		
6. **Chain of custody agrees with sample labels?**	Yes ☑	No ☐		
7. **Samples in proper container/bottle?**	Yes ☑	No ☐		
8. **Sample containers intact?**	Yes ☑	No ☐		
9. **Sufficient sample volume for indicated test?**	Yes ☑	No ☐		
10. **All samples received within holding time?**	Yes ☑	No ☐		
11. **Container/Temp Blank temperature in compliance?**	Yes ☑	No ☐		
12. **Water - VOA vials have zero headspace**	Yes ☑	No ☐	Not Applicable ☐	
13. **Water - pH acceptable upon receipt?**	Yes ☑	No ☐	Not Applicable ☐	

SPL Representative: _____ **Contact Date & Time:** _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

0405074/

EXXONMOBIL

SPL WORKORDER NO. 2103 Page 1 of 1

ExxonMobil Engineer: Jonathan Hamilton Phone: 432-686-0086

Consultant Co. Name: BNC Environmental Contact: Aaron Hale

Address: 2135 S. Loop 250 West Fax: 432-686-0186
Midland, Texas 79703

RAS #: _____ Facility/State ID#(TN Only): _____

AFE#(Terminal Only): _____ Consultant Project #: 1244

Location: Gladiola Station (City) Lea County (State) N.M.
☐ EE ☐ C&M ☐ SDT

0160 ExxonMobil Oil Corp ☐ 0944 ExxonMobil Marketing & Ref. Co. ☐
0614 ExxonMobil Pipeline Co. ☐ 0231 Mobil Oil Pipeline Co. ☒

Purchase Order No.: 4504690348

SAMPLE I.D.	DATE	TIME	COMP.	GRAB	MATRIX H_2O	MATRIX SOIL	MATRIX AIR	OTHER	PRESERVATIVE	NO. OF CONTAINERS	CONTAINER SIZE	TPH/GC 8015 GRO ☐ 8015 DRO ☐	BTEX 8021 ☒ 602 ☐	MTBE 8021 ☐ 8260 ☐	OXYGENATES (7) 8260 ☐	O&G IR 413.1 ☐ GRAV. 413.2 ☐ 1664 ☐	VOL. 8260 ☐ 624 ☐	SEMI-VOL. 8270 ☐ 625 ☐	PNA/PAH 8100 ☐ 8310 ☒ 8270 ☐	PCB/PEST 8081/8082 ☐ PCB ONLY ☐	TCLP FULL ☐ VOA ☐ SEMI-VOA ☐ PEST ☐ HERB ☐	METALS, TOTAL RCRA ☐ METALS TCLP ☐	PB, TOTAL 200.7 ☐ 6010 ☐ PB, TCLP ☐	PB, DISSOLVED ☐ PB, TOTAL ☐ (200.7/6010	REACTIVITY ☐ CORROSIVITY ☐ FLASHPOINT ☐	PURGEABLE HYDROCARBON 8021 ☐ 601 ☐	TPHH/IR 418.1 ☐	TOX/TOH ☐	OTHER: Total Dissolved Solids	OTHER: Total Alkalinity	OTHER: Chlorides	OTHER: Sulfate
MW-1	5-17-04	1450		X	X				See Container	7			X						X			X						X	X	X	X
MW-2	5-17-04	1530		X	X				See Container	7			X						X			X						X	X	X	X
MW-3	5-17-04	1520		X	X				See Container	6			X						X			X						X	X	X	X
Trip Blank													X																		
Temperature Blank																															

TAT (* - Contact us Prior to Sending Samples)
24 HR. ____ * 48 HR. ____ *
72 HR. ____ * 5 BUS. ____ *
8 BUS. ____ 10 BUS. ____
15 BUS. ____ 30 BUS. ____

QA/QC Level
STANDARD "A" ____
ENHANCED "B" ____
FULL DATA "C" ____
TRRP DATA "C" ____

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)
PDF ☐ ☐ EDD

REMARKS:

EXXONMOBIL CONTRACT NO. C57160

Way Bill #: _____ Cooler Temp: 4-5°C

CUSTODY RECORD

	Date	Time	Received By:	Date	Time
Relinquished By Sampler:	5-18-04	1525			
Relinquished:					
Relinquished					

Received By: 5/14/04 9:30

Triplicate: Original * White Lab's Copy * Green Client Copy * Yellow

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

ExxonMobil Global Remediation

Certificate of Analysis Number:

04070223

Report To:		Project Name:	Gladiola Station-1244
BNC Environmental Services		Site:	Tatum,N.M.
Aaron Hale		Site Address:	
2135 S. Loop 250 West			
Midland		PO Number:	4504690348 Line 80
TX		State:	New Mexico
79703-		State Cert. No.:	
ph (432) 686-0086	fax:	Date Reported:	7/27/04

This Report Contains A Total Of 19 Pages

Excluding This Page

7/27/04

Date

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

ExxonMobil Global Remediation

Certificate of Analysis Number:

04070223

Report To:		Project Name:	Gladiola Station-1244
BNC Environmental Services		Site:	Tatum,N.M.
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TX		State:	New Mexico
79703-		State Cert. No.:	
ph (432) 686-0086	fax:	Date Reported:	7/27/04

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Sonia West

7/27/04

Sonia West
Senior Project Manager

Date

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

ExxonMobil Global Remediation

Certificate of Analysis Number:

04070223

Report To: BNC Environmental Services
Aaron Hale
2135 S. Loop 250 West

Midland
TX
79703-
ph (432) 686-0086 fax:

Fax To:

Project Name: Gladiola Station-1244
Site: Tatum,N.M.
Site Address:

PO Number: 4504690348 Line 80
State: New Mexico
State Cert. No.:
Date Reported: 7/27/04

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
Gladiola WCS	04070223-01	Soil	7/7/04	7/8/04 9:30:00 AM	218063	☐

Sonia West
Senior Project Manager

7/27/04
Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

7/27/04 9:17:49 AM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: Gladiola WCS **Collected:** 07/07/2004 0:00 **SPL Sample ID:** 04070223-01

Site: Tatum,N.M.

Analyses/Method	Result		Rep.Limit	MCL	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
CORROSIVITY				**MCL**	**SW9045C**		**Units: pH Units**		
Corrosivity	8.09		0		1		07/08/04 16:00	ESK	2305784
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Diesel Range Organics	620		100		20		07/25/04 21:21	AE	2330827
Surr: n-Pentacosane	D	%	20-154		20	*	07/25/04 21:21	AE	2330827

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	07/13/2004 9:41	DMN	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**		**Units: mg/Kg**		
Gasoline Range Organics	ND		0.1		1		07/09/04 21:07	RLH	2309067
Surr: 1,4-Difluorobenzene	132	%	63-142		1		07/09/04 21:07	RLH	2309067
Surr: 4-Bromofluorobenzene	64.0	%	50-159		1		07/09/04 21:07	RLH	2309067
IGNITABILITY MODIFIED OPEN CUP				**MCL**	**ASTM D92-01**		**Units: °F**		
Ignitability	>212		20		1		07/16/04 13:00	E_S	2319386
PURGEABLE AROMATICS				**MCL**	**SW8021B**		**Units: ug/Kg**		
Benzene	ND		1		1		07/09/04 21:07	RLH	2308749
Toluene	ND		1		1		07/09/04 21:07	RLH	2308749
Ethylbenzene	ND		1		1		07/09/04 21:07	RLH	2308749
m,p-Xylene	ND		1		1		07/09/04 21:07	RLH	2308749
o-Xylene	ND		1		1		07/09/04 21:07	RLH	2308749
Xylenes,Total	ND		1		1		07/09/04 21:07	RLH	2308749
Surr: 1,4-Difluorobenzene	124	%	77-126		1		07/09/04 21:07	RLH	2308749
Surr: 4-Bromofluorobenzene	62 MI	%	66-145		1	*	07/09/04 21:07	RLH	2308749
REACTIVE CYANIDE-SOLID				**MCL**	**SW7.3.3.2**		**Units: mg/Kg**		
Reactive Cyanide	ND		0.5		1		07/15/04 8:00	ESK	2316417
REACTIVE SULFIDE - SOLID				**MCL**	**SW7.3.4.2**		**Units: mg/Kg**		
Reactive Sulfide	ND		10		1		07/15/04 9:00	ESK	2316382
TCLP MERCURY				**MCL**	**SW7470A**		**Units: mg/L**		
Mercury	ND		0.0002		1		07/22/04 8:39	JAB	2326422

Prep Method	Prep Date	Prep Initials	Prep Factor	Leach Method	Leachate Date	Leach Initials
SW7470A	07/21/2004 14:30	JAB	1.00	SW1311	07/20/2004 17:47	E_S

Sonia West

Sonia West
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: Gladiola WCS **Collected:** 07/07/2004 0:00 **SPL Sample ID:** 04070223-01

Site: Tatum,N.M.

Analyses/Method	Result	Rep.Limit	MCL	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
TCLP METALS BY METHOD 6010B			**MCL**	**SW6010B**		**Units: mg/L**		
Arsenic	ND	0.2	5	2		07/22/04 10:17	MW	2326572
Barium	1.52	1	100	2		07/22/04 10:17	MW	2326572
Cadmium	ND	0.01	1	2		07/22/04 10:17	MW	2326572
Chromium	ND	0.02	5	2		07/22/04 10:17	MW	2326572
Lead	ND	0.1	5	2		07/22/04 10:17	MW	2326572
Selenium	ND	0.2	1	2		07/22/04 10:17	MW	2326572
Silver	ND	0.02	5	2		07/22/04 10:17	MW	2326572

Prep Method	Prep Date	Prep Initials	Prep Factor	Leach Method	Leachate Date	Leach Initials
SW3010A	07/21/2004 16:30	MW	1.00	SW1311	07/20/2004 17:47	E_S

Sonia West

Sonia West
Project Manager

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>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

7/27/04 9:18:27 AM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: Diesel Range Organics
Method: SW8015B

WorkOrder: 04070223
Lab Batch ID: 39405

Method Blank

RunID: HP_T_040723A-2328135 Units: mg/Kg
Analysis Date: 07/23/2004 0:37 Analyst: AE
Preparation Date: 07/13/2004 9:41 Prep By: DMN Method SW3550B

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01B	Gladiola WCS

Analyte	Result	Rep Limit
Diesel Range Organics	ND	5.0
Surr: n-Pentacosane	108.6	20-154

Laboratory Control Sample (LCS)

RunID: HP_T_040723A-2328136 Units: mg/Kg
Analysis Date: 07/23/2004 1:14 Analyst: AE
Preparation Date: 07/13/2004 9:41 Prep By: DMN Method SW3550B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics	83	81.8	98.6	65	150

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04070223-01
RunID: HP_T_040723A-2330828 Units: mg/Kg
Analysis Date: 07/25/2004 21:58 Analyst: AE
Preparation Date: 07/13/2004 9:41 Prep By: DMN Method SW3550B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics	622	83	1020	N/C	82.9	638	N/C	N/C	50	21	175

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 04070223
Lab Batch ID: R116029

Method Blank

RunID: HP_R_040709A-2308734 Units: ug/Kg
Analysis Date: 07/09/2004 11:40 Analyst: RLH

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01A	Gladiola WCS

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	98.4	77-126
Surr: 4-Bromofluorobenzene	99.7	66-145

Laboratory Control Sample (LCS)

RunID: HP_R_040709A-2308733 Units: ug/Kg
Analysis Date: 07/09/2004 10:43 Analyst: RLH

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	51.2	102	70	130
Ethylbenzene	50	50.8	102	70	130
Toluene	50	50.9	102	70	130
m,p-Xylene	100	100	100	70	130
o-Xylene	50	50.0	100	70	130
Xylenes,Total	150	150	100	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04070193-01
RunID: HP_R_040709A-2308737 Units: ug/kg-dry
Analysis Date: 07/09/2004 12:37 Analyst: RLH

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	23.3	21.1	90.7	23.3	20.8	89.2	1.65	32	38	136
Ethylbenzene	ND	23.3	20.8	88.5	23.3	20.6	87.5	1.12	32	21	138
Toluene	ND	23.3	21.1	89.4	23.3	20.7	87.7	1.89	34	29	137

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 04070223
Lab Batch ID: R116029

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04070193-01
RunID: HP_R_040709A-2308737 Units: ug/kg-dry
Analysis Date: 07/09/2004 12:37 Analyst: RLH

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
m,p-Xylene	ND	46.6	40.9	85.8	46.6	40.5	85.0	0.918	34	10	143
o-Xylene	ND	23.3	20.4	87.5	23.3	20.3	87.1	0.379	32	21	139
Xylenes,Total	ND	69.8	61.3	86.4	69.8	60.8	85.7	0.739	34	10	143

Qualifiers:
ND/U - Not Detected at the Reporting Limit
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* - Recovery Outside Advisable QC Limits
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: Gasoline Range Organics
Method: SW8015B
WorkOrder: 04070223
Lab Batch ID: R116036

Method Blank

RunID: HP_R_040709B-2309060 Units: mg/Kg
Analysis Date: 07/09/2004 11:40 Analyst: RLH

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01A	Gladiola WCS

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	97.3	63-142
Surr: 4-Bromofluorobenzene	100.3	50-159

Laboratory Control Sample (LCS)

RunID: HP_R_040709B-2309059 Units: mg/Kg
Analysis Date: 07/09/2004 11:11 Analyst: RLH

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.842	84.2	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04070193-01
RunID: HP_R_040709B-2309063 Units: mg/kg-dry
Analysis Date: 07/09/2004 13:33 Analyst: RLH

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	1.05	1.07	100	1.05	1.03	96.2	3.73	50	26	147

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
** - Recovery Outside Advisable QC Limits*
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: TCLP Mercury
Method: SW7470A
WorkOrder: 04070223
Lab Batch ID: 39692

Method Blank

RunID: HGLC_040722A-2326416 Units: mg/L
Analysis Date: 07/22/2004 8:24 Analyst: JAB
Preparation Date: 07/21/2004 14:30 Prep By: JAB Method SW7470A

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01B	Gladiola WCS

Analyte	Result	Rep Limit
Mercury	ND	0.0002

Leachate Blank

RunID: HGLC_040722A-2326417 Units: mg/L
Analysis Date: 07/22/2004 8:27 Analyst: JAB
Preparation Date: 07/21/2004 14:30 Prep By: JAB Method SW7470A
Leach Date: 07/20/2004 17:47 Leach By: E_S Method SW1311

Analyte	Result	Rep Limit
Mercury	ND	0.0002

Laboratory Control Sample (LCS)

RunID: HGLC_040722A-2326418 Units: mg/L
Analysis Date: 07/22/2004 8:29 Analyst: JAB
Preparation Date: 07/21/2004 14:30 Prep By: JAB Method SW7470A
Leach Date: 07/20/2004 17:47 Leach By: E_S Method SW1311

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Mercury	0.002	0.002004	100.2	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 04070685-01
RunID: HGLC_040722A-2326420 Units: mg/L
Analysis Date: 07/22/2004 8:34 Analyst: JAB
Preparation Date: 07/21/2004 14:30 Prep By: JAB Method SW7470A
Leach Date: 07/20/2004 17:47 Leach By: E_S Method SW1311

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Mercury	ND	0.002	0.002026	99.33	0.002	0.001995	97.78	1.544	20	75	125

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: TCLP Metals by Method 6010B
Method: SW6010B
WorkOrder: 04070223
Lab Batch ID: 39711

Method Blank

RunID: TJA_040722A-2326561 Units: mg/L
Analysis Date: 07/22/2004 9:33 Analyst: MW
Preparation Date: 07/21/2004 16:30 Prep By: MW Method SW3010A

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01B	Gladiola WCS

Analyte	Result	Rep Limit
Arsenic	ND	0.1
Barium	ND	0.5
Cadmium	ND	0.005
Chromium	ND	0.01
Lead	ND	0.05
Selenium	ND	0.1
Silver	ND	0.01

Leachate Blank

RunID: TJA_040722A-2326562 Units: mg/L
Analysis Date: 07/22/2004 9:37 Analyst: MW
Preparation Date: 07/21/2004 16:30 Prep By: Method
Leach Date: 07/20/2004 17:47 Leach By: E_S Method SW1311

Analyte	Result	Rep Limit
Arsenic	ND	0.2
Barium	ND	1
Cadmium	ND	0.01
Chromium	ND	0.02
Lead	ND	0.1
Selenium	ND	0.2
Silver	ND	0.02

Laboratory Control Sample (LCS)

RunID: TJA_040722A-2326563 Units: mg/L
Analysis Date: 07/22/2004 9:41 Analyst: MW
Preparation Date: 07/21/2004 16:30 Prep By: MW Method SW3010A
Leach Date: 07/20/2004 17:47 Leach By: E_S Method SW1311

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Arsenic	2	2.097	104.9	80	120
Barium	2	1.801	90.04	80	120
Cadmium	2	2.021	101.0	80	120
Chromium	2	1.926	96.31	80	120
Lead	2	1.970	98.50	80	120
Selenium	2	2.195	109.8	80	120
Silver	2	1.956	97.78	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

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ND/U - Not Detected at the Reporting Limit
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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: TCLP Metals by Method 6010B
Method: SW6010B
WorkOrder: 04070223
Lab Batch ID: 39711

Sample Spiked: 04070685-01
RunID: TJA_040722A-2326565 Units: mg/L
Analysis Date: 07/22/2004 9:49 Analyst: MW
Preparation Date: 07/21/2004 16:30 Prep By: MW Method SW3010A
Leach Date: 07/20/2004 17:47 Leach By: E_S Method SW1311

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Arsenic	ND	2	2.098	104.9	2	2.001	100.0	4.758	20	75	125
Barium	ND	2	2.732	97.08	2	2.544	87.69	7.122	20	75	125
Cadmium	0.03664	2	2.166	106.5	2	1.986	97.49	8.670	20	75	125
Chromium	ND	2	1.976	98.78	2	1.821	91.07	8.126	20	75	125
Lead	0.2166	2	2.210	99.67	2	2.045	91.41	7.767	20	75	125
Selenium	ND	2	2.345	117.2	2	2.181	109.0	7.238	20	75	125
Silver	ND	2	2.110	105.5	2	1.943	97.15	8.247	20	75	125

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: Corrosivity
Method: SW9045C

WorkOrder: 04070223
Lab Batch ID: R115771

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01B	Gladiola WCS

Laboratory Control Sample (LCS)

RunID: WET_040708I-2305780 Units: pH Units
Analysis Date: 07/08/2004 16:00 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Corrosivity	7	6.990	99.86	99	101

Sample Duplicate

Original Sample: 04070266-01
RunID: WET_040708I-2305782 Units: pH Units
Analysis Date: 07/08/2004 16:00 Analyst: ESK

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Corrosivity	8.29	8.3	0.121	20

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: Reactive Sulfide - Solid
Method: SW7.3.4.2
WorkOrder: 04070223
Lab Batch ID: R116361

Method Blank

RunID: WET_040715D-2316376 Units: mg/Kg
Analysis Date: 07/15/2004 9:00 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01B	Gladiola WCS

Analyte	Result	Rep Limit
Reactive Sulfide	ND	10

Laboratory Control Sample (LCS)

RunID: WET_040715D-2316378 Units: mg/Kg
Analysis Date: 07/15/2004 9:00 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Reactive Sulfide	100	102.0	102.0	85	115

Sample Duplicate

Original Sample: 04070332-01
RunID: WET_040715D-2316379 Units: mg/Kg
Analysis Date: 07/15/2004 9:00 Analyst: ESK

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Reactive Sulfide	ND	ND	0	20

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: Reactive Cyanide-Solid
Method: SW7.3.3.2
WorkOrder: 04070223
Lab Batch ID: R116363

Method Blank

RunID: WET_040715E-2316411 Units: mg/Kg
Analysis Date: 07/15/2004 8:00 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01B	Gladiola WCS

Analyte	Result	Rep Limit
Reactive Cyanide	ND	0.50

Laboratory Control Sample (LCS)

RunID: WET_040715E-2316412 Units: mg/Kg
Analysis Date: 07/15/2004 8:00 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Reactive Cyanide	4	0.9249	23.12	5	50

Sample Duplicate

Original Sample: 04070332-01
RunID: WET_040715E-2316414 Units: mg/Kg
Analysis Date: 07/15/2004 8:00 Analyst: ESK

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Reactive Cyanide	ND	ND	0	20

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

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Quality Control Report

ExxonMobil Global Remediation

Gladiola Station-1244

Analysis: Ignitability Modified Open Cup
Method: ASTM D92-01
WorkOrder: 04070223
Lab Batch ID: R116521

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
04070223-01B	Gladiola WCS

Laboratory Control Sample (LCS)

RunID: WET_040716S-2319383 Units: °F
Analysis Date: 07/16/2004 13:00 Analyst: E_S

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Ignitability	80	81.1	101	90	110

Sample Duplicate

Original Sample: 04070332-01
RunID: WET_040716S-2319384 Units: °F
Analysis Date: 07/16/2004 13:00 Analyst: E_S

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Ignitability	212	212	0	20

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

Sample Receipt Checklist

And

Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	04070223	Received By:	NB
Date and Time Received:	7/8/04 9:30:00 AM	Carrier name:	FedEx
Temperature:	3.0°C	Chilled by:	Water Ice

		Ye	No	Not Present / Not Applicable
1.	Shipping container/cooler in good condition?	☑	☐	Not Present ☐
2.	Custody seals intact on shippping container/cooler?	☐	☐	Not Present ☑
3.	Custody seals intact on sample bottles?	☐	☐	Not Present ☑
4.	Chain of custody present?	☑	☐	
5.	Chain of custody signed when relinquished and receiv	☑	☐	
6.	Chain of custody agrees with sample labels?	☑	☐	
7.	Samples in proper container/bottle?	☑	☐	
8.	Sample containers intact?	☑	☐	
9.	Sufficient sample volume for indicated test?	☑	☐	
10.	All samples received within holding time?	☑	☐	
11.	Container/Temp Blank temperature in compliance?	☑	☐	
12.	Water - VOA vials have zero headspace	☐	☐	Not Applicable ☑
13.	Water - pH acceptable upon receipt?	☐	☐	Not Applicable ☑

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 218063

04070223

page 1 of 1

Client Name: EMRS / BNC

Address: 2135 S LOOP 250 WEST, MIDLAND, TX 79703

Phone/Fax: 432 686-0086 / 686-0186

Client Contact: A. HALE Email: ahale@bnenv.com

Project Name/No.: GLADIOLA STATION - 1244 / N ANDREWS - 1319

Site Name: GLADIOLA STATION / NORTH ANDREWS

Site Location: TATUM NM. / ANDREWS, TX

Invoice To: Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil O=oil SL=sludge X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis: TCLP Metals	BTEX	TPH (GRO/DRO)	TCLP Benzene	RCI	Total Metals			
GLADIOLA WCS	7/7/04		✓		S	G	4	X	2	✓	✓	✓		✓				
N ANDREWS WCS	7/7/04			✓	S	G	4	X	2				✓	✓	✓			

Client/Consultant Remarks:
PO FOR GLADIOLA WCS - 4504690348
PO FOR N ANDREWS WCS - 4504690345

Laboratory remarks:

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 30°C

Requested TAT

Contract ☐ 72hr ☐
24hr ☐ Standard ☒
48hr ☐
Other ☐ _____

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial): B

	date	time		
1. Relinquished by Sampler: Will Dudley	7/7/04	1400	2. Received by:	
3. Relinquished by:	date	time	4. Received by:	
5. Relinquished by:	date 7/8/04	time 0930	6. Received by Laboratory:	

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

8454 2158 0802 50 30665 HA

Included inadvertently

TABLE II

SUMMARY OF ANALYTICAL RESULTS
CONFIRMATION SOIL SAMPLES
KASTON PIPELINE
NORTH REEVES 8" GATHERING LINE RELEASE SITE
REEVES COUNTY, TEXAS

SAMPLE IDENTIFICATION	DATE	TPH		
		C6-C-12 (mg/Kg)	>C12-C35 (mg/Kg)	C6-C35 (mg/Kg)
RailRoad Commision of Texas, Oil and Gas Division TPH Clean Up Levels - Statewide Rule 91				
		---	---	10,000 mg/Kg
North Half Excavation				
NW Wall	5/17/2004	157	1,880	2,040
NE wall	5/17/2004	82.9	1,950	2,030
W Wall #1	5/17/2004	<25.0	16.2 J	<25.0
W Wall #2	5/17/2004	157	1610	1770
E Wall #1	5/17/2004	<25.0	84.5	84.5
E Wall #2	5/17/2004	10.1 J	308	308
NW Floor @ 30'	5/17/2004	46.6	700	747
NE Floor @ 30'	5/17/2004	169	1,920	2,090
Soil Mixing South (SMS)				
SMS A	5/17/2004	575	1,490	2,070
SMS B	5/17/2004	1,200	2,850	4,050
SMS C	5/17/2004	1,890	3,990	5,880
SMS D	5/17/2004	86.0	493	579
SMS E	5/17/2004	996	3,190	4,190
SMS F	5/17/2004	827	2,920	3,750
SMS G	5/17/2004	1,130	4,070	5,200
SMS H	5/17/2004	162	843	1,010
SMS I	5/17/2004	364	1,870	2,230
SMS J	5/17/2004	282	4,340	4,620
SMS K	5/17/2004	<25.0	59.3	59.3
SMS L	5/17/2004	<25.0	74.9	74.9
South Half Excavation				
SW Floor - 30'	5/19/2004	3,798	2,030	2,410
SE Floor - 30'	5/19/2004	274	1,850	2,120
C Floor East - 30'	5/19/2004	223	2,250	2,470
C Floor West - 30'	5/19/2004	294	1,870	2,160
SE Wall 25'	5/19/2004	7.89 J	135	135
SW Wall 25'	5/19/2004	8.29 J	19.4 J	<25.0
West Wall #3-25'	5/19/2004	5.86 J	50	50
West Wall #4-25'	5/19/2004	185	3,150	3,340
East Wall #3-25'	5/19/2004	675	4,550	5,230
East Wall #4-25'	5/19/2004	2,350	11,400	13,800
Over-excavation Soil Sample				
E Wall #4b	5/23/2004	<25.0	10.9 J	<25.0
Soil Mixing North (SMN)				
SMN A	5/19/2004	438	2,580	3,020
SMN B	5/19/2004	161	1,480	1,640
SMN C	5/19/2004	208	1,410	1,620
SMN D	5/19/2004	12.1 J	170	170
SMN E	5/19/2004	43.5	472	516
SMN F	5/19/2004	45.2	582	627
SMN G	5/19/2004	153	1,310	1,460
SMN H	5/19/2004	58.1	1,050	1,110
SMN I	5/19/2004	411	3,320	2,730
SMN J	5/19/2004	795	4,620	5,420
SMN K	5/19/2004	277	2,770	3,050
SMN L	5/19/2004	127	661	788
Mixed Stockpiles North (MSPN)				
MSPN - A	5/19/2004	624	8,060	8,680
MSPN - B	5/19/2004	622	7,870	8,490