GW-049-0 / BLANCO STORAGE / 2006
PENV000GW00051

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ENTERPRISE FIELD SERVICES, LLC

January 22, 2008

VIA CERTIFIED MAIL No.:
7007 0220 0000 4311 9923
RETURN RECEIPT REQUESTED

Mr. Glenn Von Gonten
Senior Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Supplemental Environmental Site Investigation
Enterprise Field Services, LLC
Blanco Products Storage Facility
Bloomfield, San Juan County, New Mexico

Dear Mr. Von Gonten:

Enterprise Field Services, LLC (Enterprise) is submitting the enclosed *Supplemental Environmental Site Investigation Report* for the Blanco Products Storage facility located near Bloomfield, New Mexico. This supplemental investigation was performed in response to the identification of hydrocarbon impacted soils within a secondary containment area during maintenance operations at the station on October 31, 2006. This discovery was reported to the New Mexico Oil Conservation Division (NMOCD) on a C-141 Report dated October 31, 2006.

The site investigation described in this report was performed to complete the delineation of affected groundwater at the station following an initial investigation performed and reported to the OCD during May 2007. The initial investigation established that groundwater at the station exceeded applicable *NMWQ Ground Water Standards*.

During the supplemental investigation described in the attached report, (5) five permanent monitor wells were installed to evaluate the extent of impacted groundwater at the site. Groundwater samples collected from (2) two monitor wells exceed NMWQ *Groundwater Standards*. Therefore, Enterprise recommends, and is developing, a Remediation Abatement Plan to reduce the concentrations of COCs in soil and groundwater to below *OCD Remediation Action Levels or NMWQC Ground Water Standards*.

P.O. Box 4324 * Houston, Texas 77210-4324 * 713-880-6500
2727 North Loop West * Houston, Texas 77008

Please do not hesitate to contact me at (713) 803-2286 if you have any questions.

Sincerely,

David R. Smith, P.G.
Sr. Environmental Scientist

Enclosure

cc: (w/ Enclosure)
David O'Leary – EPCO, Inc

(w/o Enclosure)
Chris Mitchell – Southwest Geoscience, Dallas, TX

SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION

Property:

Blanco Products Storage
Off County Road 4900
Bloomfield, San Juan County, New Mexico

January 3, 2008
Project No. 0107039

Prepared for:

Enterprise Products Operating L.P.
P.O. Box 4324
Houston, TX 77210
Attention: Mr. David Smith, P.G.

Prepared by:

Kelley R. Hoffman
Project Scientist

B. Chris Mitchell, P.G.
Senior Technical Review

Southwest GEOSCIENCE
2351 W. Northwest Hwy., Suite 3321
Dallas, Texas 75220
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Southwest GEOSCIENCE

SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION

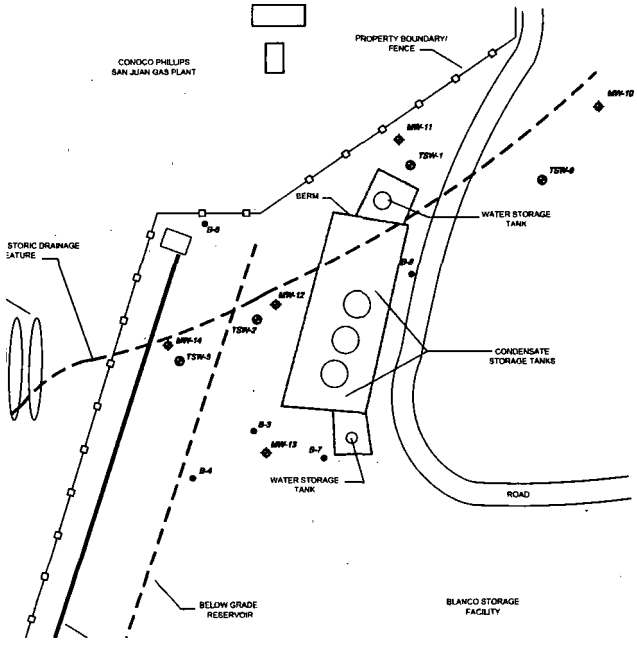
BLANCO PRODUCTS STORAGE
Off County Road 4900
Bloomfield, San Juan County, Texas

SWG Project No. 0107039

1.0 EXECUTIVE SUMMARY

Southwest Geoscience (SWG) has completed a Supplemental Environmental Site Investigation (SESI) at the Blanco Products Storage facility located off County Road (CR) 4900, north-northeast of Bloomfield in San Juan County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is utilized for storage of condensate and water generated at the adjacent Enterprise Blanco Gas Plant, located to the east of the Site.

To the right is a site map depicting the pertinent site features and the locations of the soil borings/monitoring wells installed at the Site. Soil and groundwater samples collected from the soil borings and monitoring wells were submitted for analysis of total petroleum hydrocarbons (TPH) gasoline range organics (GRO)/diesel range organics (DRO) and benzene, toluene, ethylbenzene and xylenes (BTEX). Specific details regarding the investigation are further explained in the following sections and should be read to fully comprehend the extent of the investigation and results. In addition, findings and recommendations are included in this executive summary for your convenience; however, the remaining text of the report and associated appendices should also be reviewed for a complete understanding of the limited investigation report.



The objective of SWG's scope of services was to further evaluate the presence, magnitude and extent of petroleum hydrocarbons in the on-Site soil and groundwater as a result of the release of condensate.

Five (5) soil borings were advanced at the Site during the completion of site investigation activities and each soil boring was converted to a permanent groundwater monitoring well. Soil boring MW-10 was advanced within the historic drainage, hydrogeologically up-gradient of the condensate storage tanks. Soil boring MW-11 was advanced along the property boundary to the north of the northern water storage tank. Soil boring MW-12 was advanced immediately to the west, in a hydrogeologically down-gradient position, from the condensate storage tanks. Soil boring MW-13 was advanced to the south-southwest of the condensate

storage tanks, and soil boring MW-14 was advanced within the historic drainage to the west, in a hydrogeologically down-gradient position, from the condensate and water storage tanks.

- Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and BTEX concentrations were not identified in the soil samples collected from MW-10, MW-11 and MW-14 above the laboratory Practical Quantitative Limits (PQLs).

- Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and BTEX concentrations were identified in the soil sample collected from soil boring MW-12 above the OCD's *Remediation Action Levels*; however, the identified TPH GRO/DRO concentrations do not exceed the RBSL calculated for the site-specific TPH mixture.

- Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and/or BTEX concentrations were not identified above the laboratory PQLs in the groundwater sample collected from monitoring well MW-11.

- Based on SWG's review of the laboratory analytical results, benzene, toluene and/or xylenes concentrations were identified in the groundwater samples collected from monitoring wells MW-12 and MW-14 in exceedance of the NMWQC *Ground Water Standards*.

- No measurable volume of groundwater recharged into monitoring wells MW-10 and MW-13 during the completion of site investigation activities (monitoring wells were dry).

Based on the laboratory analytical results and the absence of groundwater recharge into monitoring wells MW-10 and MW-13, the extent of constituents of concern (COCs) in soil and groundwater have been generally delineated to below the applicable OCD *Remediation Action Levels* or NMWQC *Ground Water Standards*. Based on the results of supplemental Site investigation activities, SWG has the following recommendations:

- Report the results of the supplemental investigation to the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division and coordinate additional investigation and corrective action activities through the Oil Conservation Division; and,

- Develop a Remediation Abatement Plan detailing proposed corrective actions designed to reduce the concentrations of COCs in soil and groundwater at the Site to below OCD *Remediation Action Levels* or NMWQC *Ground Water Standards*.

2.0 INTRODUCTION

2.1 Site Description & Background

SWG has completed a SESI at the Blanco Products Storage facility located off County Road (CR) 4900, north-northeast of Bloomfield in San Juan County, New

Mexico. The Site is utilized for storage of condensate and water generated at the adjacent Enterprise Blanco Gas Plant, located to the east of the Site.

A topographic map is included as Figure 1, and a Site Vicinity Map, composed from a 2005 aerial photograph, is included as Figure 2 of Appendix A.

Subsequent to a precipitation event, Enterprise personnel observed apparent petroleum hydrocarbon staining in association with surface soils located to the northwest of three (3) large volume condensate storage tanks and to the southwest of an open-top storage tank utilized to store water prior to off-site disposal. The New Mexico Energy, Minerals and Natural Resources Department OCD *Release Notification and Corrective Action* form (Form C-141) was then submitted to the OCD on October 31, 2006, within 24 hours of observing the stained soils. Enterprise then removed the water tank from service and inspected the interior and exterior portions of the tank for leaks or defects. Obvious indications of cracks, holes or similar defects with the storage tank were not identified during the inspection.

SWG conducted a Limited Site Investigation (LSI) on May 30, 2007 to evaluate the presence, magnitude and extent of petroleum hydrocarbons in the on-Site soil and groundwater. SWG advanced nine (9) soil borings during the completion of Site investigation activities. Four (4) of the soil borings were converted to temporary sampling wells. Based on SWG's review of the laboratory analytical results, benzene, toluene, ethylbenzene and/or xylenes concentrations were not identified above the OCD's *Remediation Action Levels*. However, TPH GRO/DRO and total BTEX concentrations were identified in the soil samples above the OCD's *Remediation Action Levels*. The identified TPH GRO/DRO concentrations in the soil samples did not exceed the Risk Based Screening Level (RBSL) calculated for the site-specific TPH mixture. Based on SWG's review of the laboratory analytical results, BTEX concentrations in exceedance of the New Mexico Water Quality Commission (NMWQC) *Ground Water Standards* were identified in groundwater samples collected from the Site.

In addition, the LSI identified an apparent historic drainage feature which traverses the Site. The initial groundwater-bearing unit was encountered at depths ranging from 5 to 8 feet bgs during the advancement of select soil borings/temporary sampling wells, which appear to have been installed within the historic drainage feature. The groundwater-bearing unit appears to be associated with perched water which has collected within the historic drainage feature.

2.2 Scope of Work

The objective of SWG's scope of services was to further evaluate the presence, magnitude and extent of petroleum hydrocarbons in the on-site soil and groundwater, if encountered, in the vicinity of the condensate and water storage tanks.

SWG's SESI was conducted in accordance with SWG's proposal 01071071220 dated July 23, 2007, as authorized by Enterprise Products Operating L.P. on July 27, 2007.

2.3 Standard of Care

SWG's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. SWG makes no warranties, express or implied, as to the services performed

hereunder. Additionally, SWG does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client, as detailed in our proposal.

2.4 Additional Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and SWG cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. SWG's findings, and recommendations are based solely upon data available to SWG at the time of these services.

2.5 Reliance

This report has been prepared for the exclusive use of Enterprise Products Operating, L.P. and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Enterprise Products Operating, L.P. and SWG. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, LSI report, and SWG's Agreement. The limitation of liability defined in the agreement is the aggregate limit of SWG's liability to the client.

3.0 FIELD ACTIVITIES

3.1 Borings and Monitoring Wells

SWG's field activities were conducted on September 5 and 6, 2007 by Mr. B. Chris Mitchell, a SWG environmental professional. As part of the approved scope of work, five (5) soil borings were advanced at the Site during the completion of the investigation activities. Soil boring MW-10 was advanced within the historic drainage, hydrogeologically up-gradient of the condensate storage tanks. Soil boring MW-11 was advanced along the property boundary to the north of the northern water storage tank. Soil boring MW-12 was advanced immediately to the west, in a hydrogeologically down-gradient position, from the condensate storage tanks. Soil boring MW-13 was advanced to the south-southwest of the condensate storage tanks, and soil boring MW-14 was advanced within the historic drainage to the west, in a hydrogeologically down-gradient position, from the condensate and water storage tanks.

Figure 3 is a Site Plan that indicates the approximate locations of the soil borings in relation to pertinent structures and general site boundaries (Appendix A).

Drilling services were performed under the supervision of a State of New Mexico licensed water well driller using a truck-mounted hollow-stem auger drilling rig. An

SWG professional was present to observe the drilling procedures. Soil samples were collected using split-spoon samplers. Drilling equipment was cleaned using a high pressure washer prior to beginning the project and before beginning each soil boring. Sampling equipment was cleaned using an Alconox® wash and potable water rinse prior to the beginning of the project and before collecting each soil sample.

Soil samples were collected continuously and observed to document soil lithology, color, moisture content and evidence of petroleum hydrocarbon impact. The soil samples were field-screened using a calibrated photoionization detector (PID) to indicate the presence of VOCs.

The lithology encountered during sample collection consisted of silty sand and silty clay overlying sandstone. Detailed lithologic descriptions are presented on the soil boring logs included in Appendix B. Figure 4 *Sandstone Elevation Map* depicts the top of the initial sandstone unit (Appendix A).

Petroleum hydrocarbon odors and PID readings ranging up to 126 parts per million (ppm) were detected in the soil samples collected from soil boring MW-12. The highest PID reading was observed in the soil sample collected from a depth of 8 to 9 feet below ground surface (bgs) in soil boring MW-12. Petroleum hydrocarbon odors and/or PID readings were not detected in the soil samples collected from soil borings MW-10, MW-11, MW-13 and MW-14. The soil boring logs are included in Appendix B.

Groundwater was encountered at depths ranging from approximately 7 to 13 feet bgs during the advancement of soil borings MW-10, MW-11, MW-12 and MW-14.

To further evaluate the presence of groundwater overlying the sandstone stratum, each soil boring was converted to a permanent groundwater monitoring well. The permanent monitoring wells were completed using the following methodology:

- Installation of 5.0 to 15.0 feet of 2-inch diameter, 0.010-inch machine slotted PVC well screen with a threaded bottom cap;
- Installation of 2-inch diameter, threaded flush joint PVC riser pipe to the ground surface;
- Addition of a pre-sieved 20/40 grade annular silica sand pack from the bottom of the boring to at least 0.5-feet above the top of the well screen;
- Addition of a hydrated bentonite seal above the sand pack filter zone;
- Addition of grout to the surface; and,
- Installation of a locking well cap and circular, bolt-down, flush mount or an above grade monitoring well cover.

Well construction details are presented on the soil boring/monitoring well logs for monitoring wells MW-10 through MW-14 in Appendix B.

Each monitoring well was developed by surging and removing groundwater with a new, disposable, polypropylene bailer until the groundwater was relatively free of fine-grained sediment or the monitoring well went dry.

3.2 Soil and Groundwater Sampling

SWG's soil sampling program involved submitting one soil sample from each soil boring for laboratory analysis with the exception of soil boring MW-13. The soil samples were collected from the zone exhibiting the highest concentration of VOC's based on visual, olfactory or PID evidence, from the capillary fringe zone, from a change in lithology, or from the bottom of the boring. Soil sample intervals for each boring are presented with the soil sample analytical results (Appendix C) and are provided on the boring logs included in Appendix B.

No measurable volume of groundwater recharged into monitoring wells MW-10 and MW-13 during the completion of site investigation activities (monitoring wells were dry).

Soil samples were collected and placed in laboratory prepared glassware, sealed with custody tape and placed on ice in a cooler, which was secured with a custody seal. The sample coolers and completed chain-of-custody forms were relinquished to Hall Environmental Analysis Laboratory analytical laboratory in Albuquerque, New Mexico for normal turnaround.

4.0 LABORATORY ANALYTICAL METHODS

The soil samples collected from each boring and the groundwater samples collected from the monitoring wells were analyzed for TPH GRO and DRO utilizing EPA utilizing EPA method SW-846# 5030B/8015B-modified and BTEX using EPA SW-846 method #8021B.

Hall Environmental Analysis Laboratory performed the analyses of samples under an adequate and documented quality assurance program to meet the project and measurement objectives. The laboratory's quality assurance program is consistent the quality standards outlined in the National Environmental Laboratory Accreditation Program, as amended. In addition, the data generated by Hall Environmental Analysis Laboratory meets the intralaboratory performance standards for the selected analytical method and the performance standards are sufficient to meet the bias, precision, sensitivity, representativeness, comparability, and completeness, as specified in the project data quality objectives.

Laboratory results are summarized in the tables included in Appendix C. The executed chain-of-custody form and laboratory data sheets are provided in Appendix D.

5.0 DATA EVALUATION

5.1 Soil Samples

SWG compared the petroleum hydrocarbon constituent concentrations identified in the on-Site soils to the New Mexico Energy, Minerals and Natural Resources Department OCD's *Remediation Action Levels* for sites affected by a release of oilfield products (i.e. crude oil, condensate, etc.) having a Total Ranking Score greater than 19 in accordance with the OCD's *Guidelines for Remediation of Leaks, Spills and Releases.*

Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and BTEX concentrations were not identified in the soil samples collected from MW-10, MW-11 and MW-14 above the laboratory Practical Quantitative Limits (PQLs).

Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and BTEX concentrations were identified in the soil sample collected from soil boring MW-12 above the OCD's *Remediation Action Levels*; however, the identified TPH GRO/DRO concentrations do not exceed the RBSL calculated for the site-specific TPH mixture.

The results of the soil sample analyses are summarized in Table 1, included in Appendix C. In addition, results of soil sample analyses are included on Figure 5 *COC Distribution in Soil Map* (Appendix A).

5.2 Groundwater Samples

SWG compared the TPH GRO/DRO and BTEX concentrations identified in on-Site groundwater to the NMWQC *Ground Water Standards* for sites affected by a release of oilfield products (i.e. crude oil, condensate, etc.) in accordance with the *Guidelines for Remediation of Leaks, Spills and Releases*. Groundwater samples were collected from monitoring wells MW-11, MW-12 and MW-14; however, no measurable volume of groundwater recharged into monitoring wells MW-10 and MW-13 during the completion of site investigation activities.

Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and/or BTEX concentrations were not identified above the laboratory PQLs in the groundwater sample collected from monitoring well MW-11.

Based on SWG's review of the laboratory analytical results, benzene, toluene and/or xylenes concentrations were identified in the groundwater samples collected from monitoring wells MW-12 and MW-14 in exceedance of the NMWQC *Ground Water Standards*.

The results of the groundwater sample analyses are summarized in Table 2, included in Appendix C. In addition, results of groundwater sample analyses are included on Figure 6 *COC Distribution in Groundwater Map* (Appendix A).

6.0 FINDINGS AND RECOMMENDATIONS

The objective of SWG's scope of services was to evaluate the presence, magnitude and extent of petroleum hydrocarbons in the on-site soil and groundwater, if encountered, in the vicinity of the condensate and water storage tanks.

- Five (5) soil borings were advanced at the Site during the completion of the investigation activities. Soil boring MW-10 was advanced within the historic drainage hydrogeologically up-gradient of the condensate storage tanks. Soil boring MW-11 was advanced along the property boundary to the north of the northern water storage tank. Soil boring MW-12 was advanced immediately to the west, in a hydrogeologically down-gradient position, from the condensate storage tanks. Soil boring MW-13 was advanced to the south-southwest of the condensate storage tanks, and soil boring MW-14 was

advanced within the historic drainage to the west, in a hydrogeologically down-gradient position, from the condensate and water storage tanks.

- Groundwater was encountered at depths ranging from approximately 7 to 13 feet bgs during the advancement of soil borings MW-10, MW-11, MW-12 and MW-14.

- Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and BTEX concentrations were not identified in the soil samples collected from MW-10, MW-11 and MW-14 above the laboratory Practical Quantitative Limits (PQLs).

- Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and BTEX concentrations were identified in the soil sample collected from soil boring MW-12 above the OCD's *Remediation Action Levels*; however, the identified TPH GRO/DRO concentrations do not exceed the RBSL calculated for the site-specific TPH mixture.

- Based on SWG's review of the laboratory analytical results, TPH GRO/DRO and/or BTEX concentrations were not identified above the laboratory PQLs in the groundwater sample collected from monitoring well MW-11.

- Based on SWG's review of the laboratory analytical results, benzene, toluene and/or xylenes concentrations were identified in the groundwater samples collected from monitoring wells MW-12 and MW-14 in exceedance of the NMWQC *Ground Water Standards*.

- No measurable volume of groundwater recharged into monitoring wells MW-10 and MW-13 during the completion of site investigation activities (monitoring wells were dry).

Based on the laboratory analytical results and the absence of groundwater recharge into monitoring wells MW-10 and MW-13, the extent of constituents of concern (COCs) in soil and groundwater have been generally delineated to below the applicable OCD *Remediation Action Levels* or NMWQC *Ground Water Standards*. Based on the results of supplemental Site investigation activities, SWG has the following recommendations:

- Report the results of the supplemental investigation to the New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division and coordinate additional investigation and corrective action activities through the Oil Conservation Division; and,

- Develop a Remediation Abatement Plan detailing proposed corrective actions designed to reduce the concentrations of COCs in soil and groundwater at the Site to below OCD *Remediation Action Levels* or NMWQC *Ground Water Standards*.

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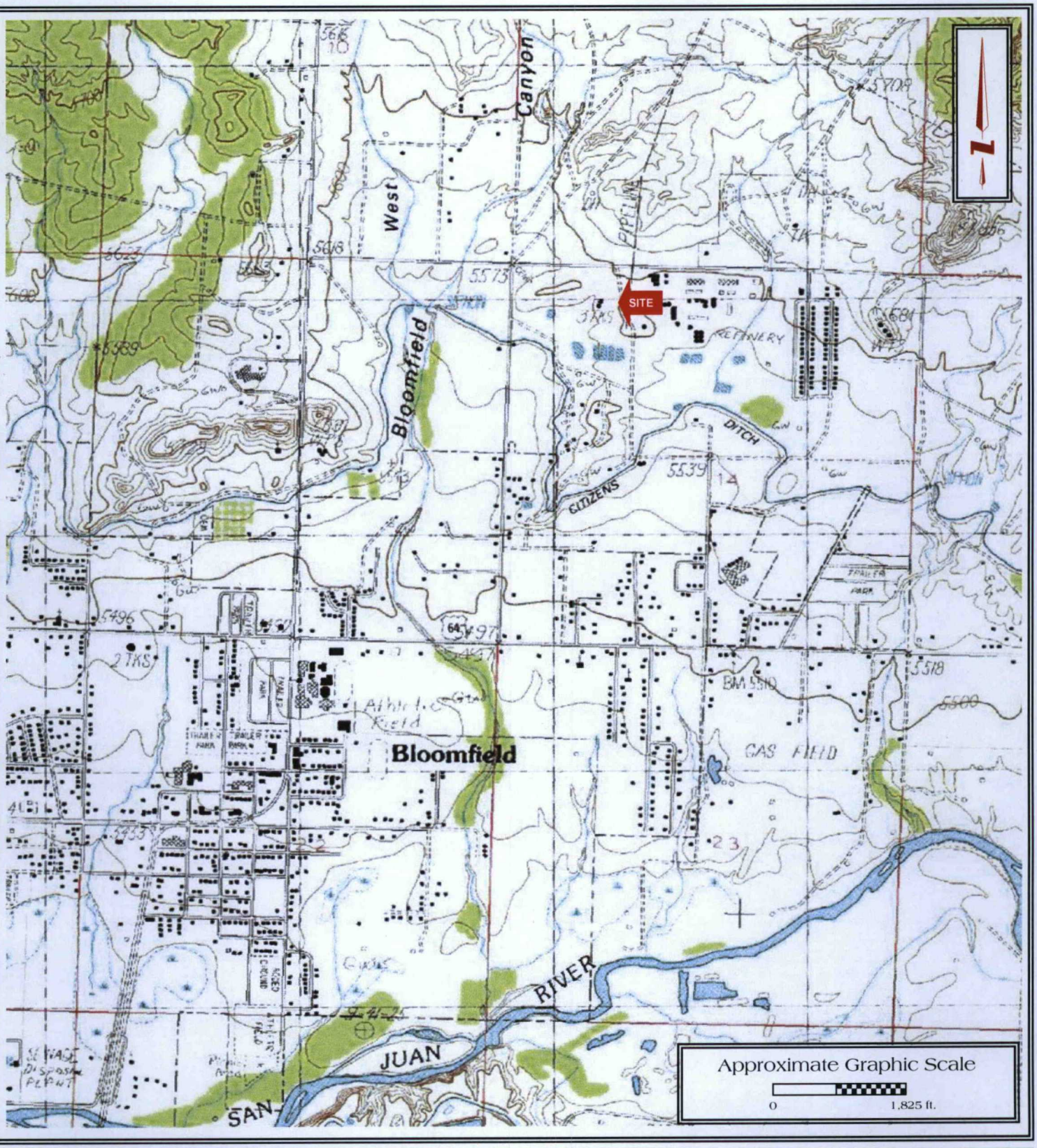
APPENDIX A

Figures



Supplemental Environmental
Site Investigation
Enterprise Products Operating, L.P.
Blanco Storage Facility
Off San Juan County Road 4900
Bloomfield, New Mexico
SWG Project No. 0107039

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FIGURE 1
Topographic Map
Bloomfield, NM Quadrangle
Contour Interval - 10 Feet
1985

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Site Investigation
Enterprise Products Operating, L.P.
Blanco Storage Facility
Off San Juan County Road 4900
Bloomfield, New Mexico
SWG Project No. 0107039

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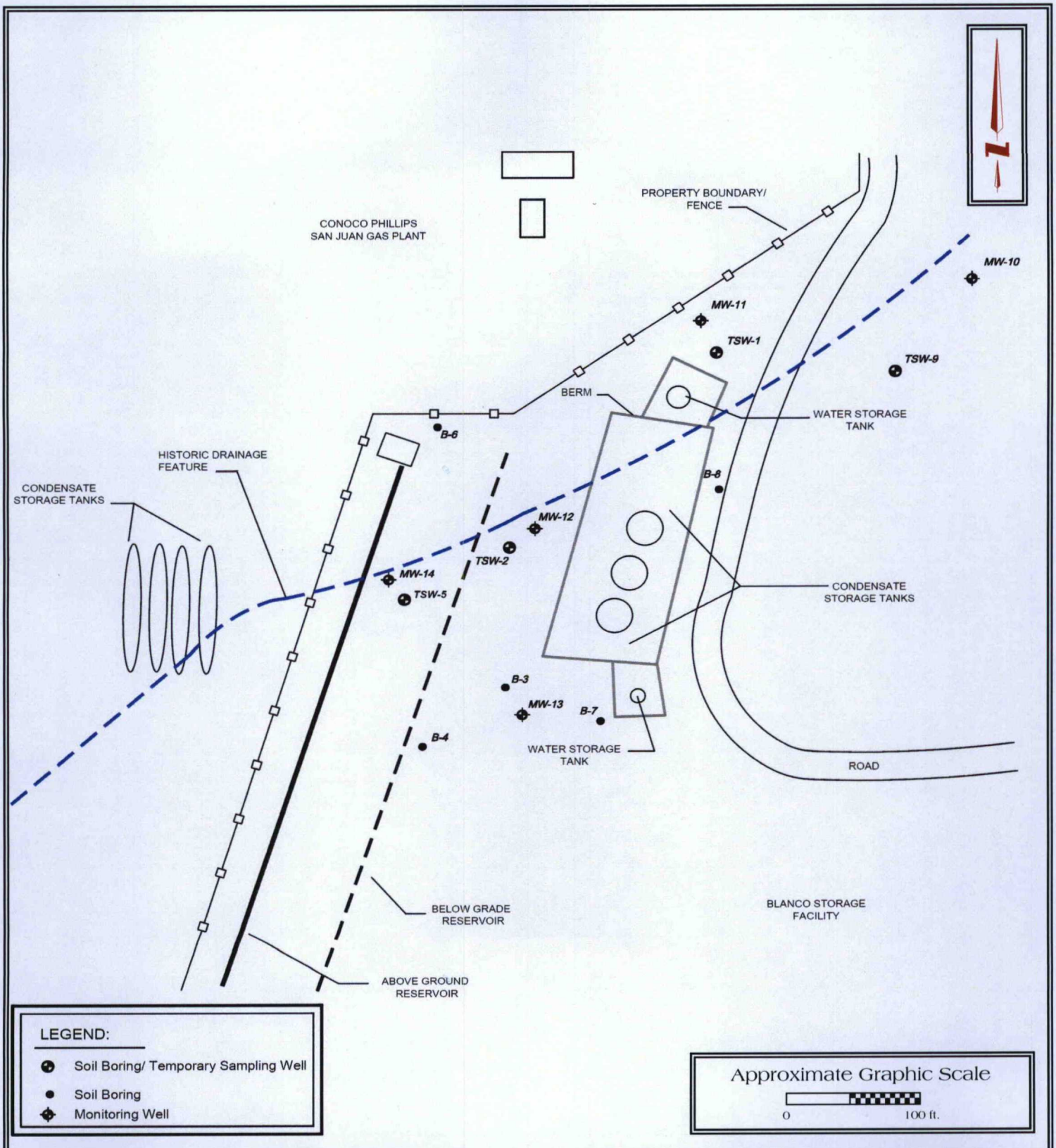
FIGURE 2
Site Vicinity Map



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Bloomfield, New Mexico
SWG Project No. 0107039

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FIGURE 3
Site Plan

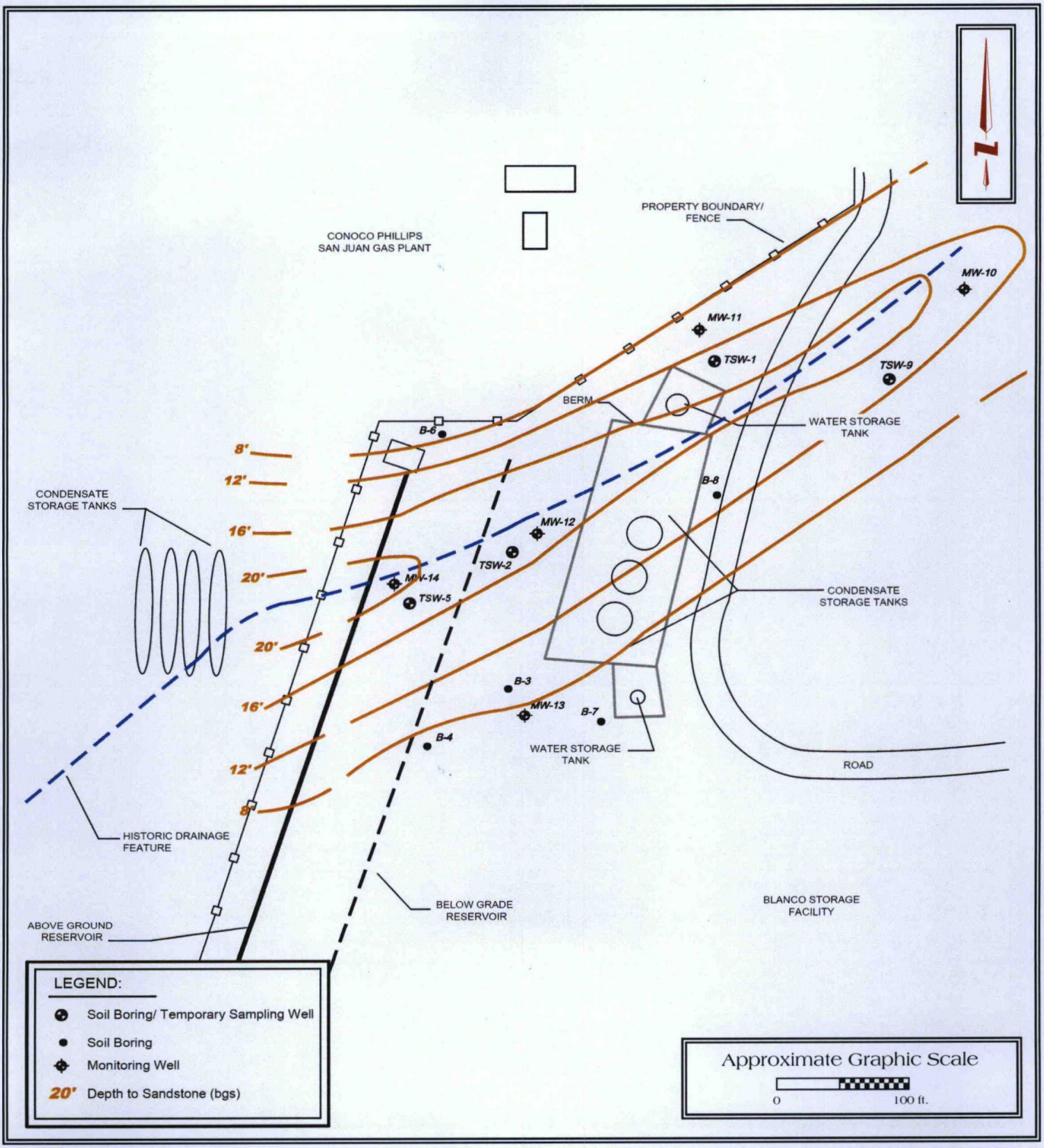

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FIGURE 4
Sandstone Elevation Map

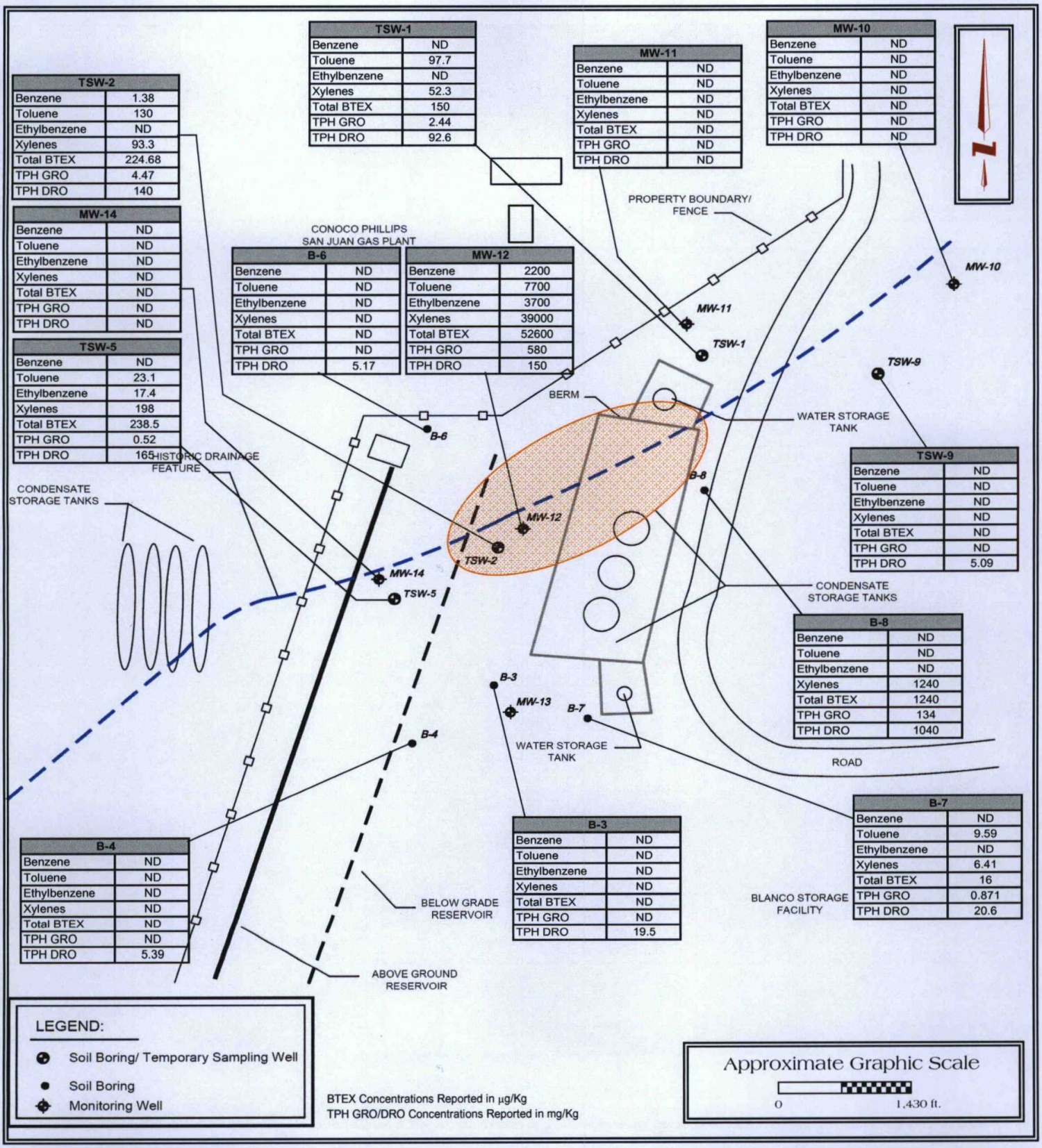

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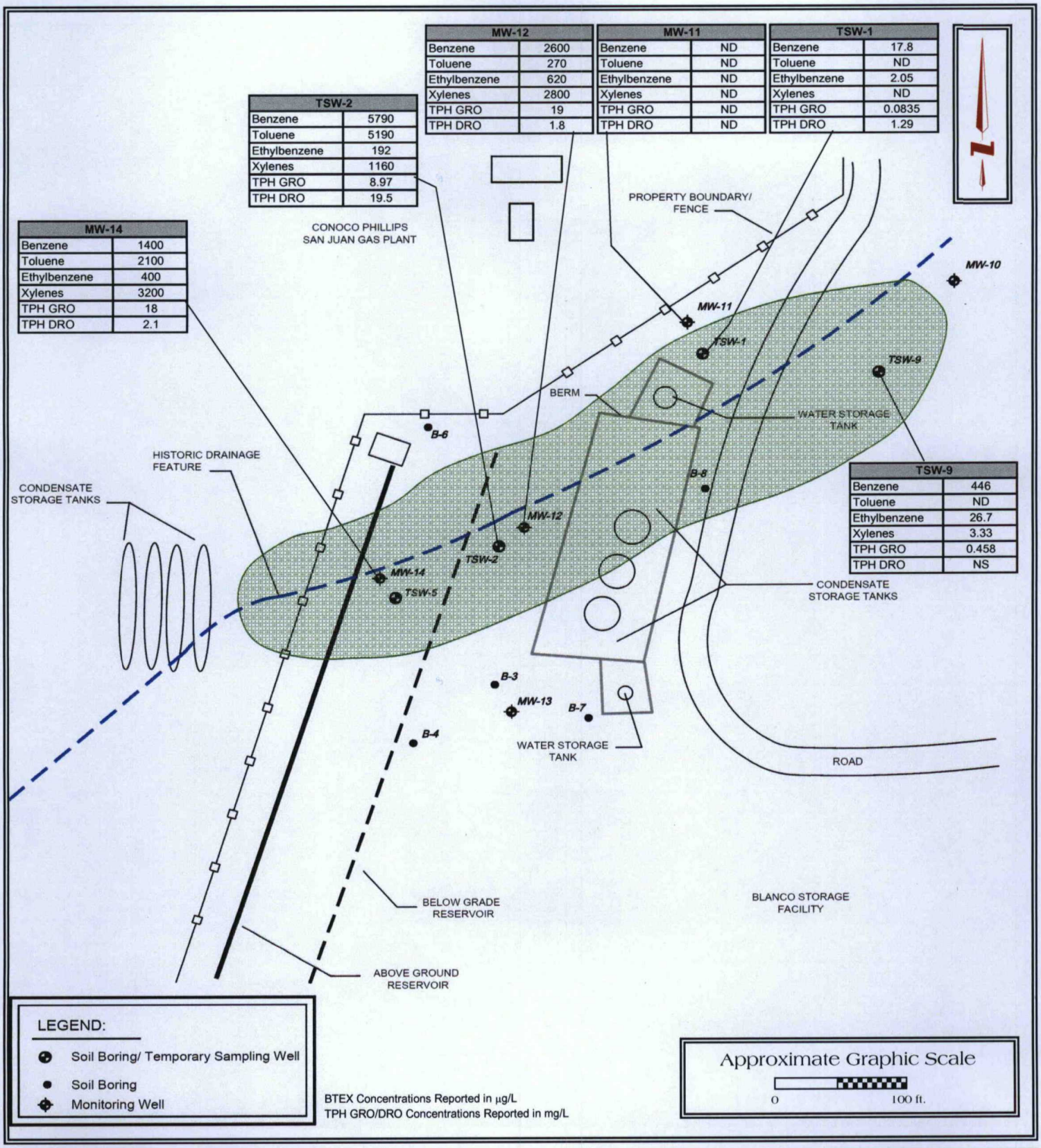
FIGURE 5
COC Distribution in Soil Map



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Enterprise Products Operating, L.P.
Blanco Storage Facility
Off San Juan County Road 4900
Bloomfield, New Mexico
SWG Project No. 0107039

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FIGURE 6
COC Distribution in Groundwater Map

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APPENDIX B

Soil Boring/Monitoring Well Logs

Client: Enterprise Products Operating, L.P.
Project Name: Blanco Storage Facility
Project Location: Off Country Road 4900
Project Manager: C. Mitchell

SOIL BORING/MONITOR WELL LOG

DRILLING & SAMPLING INFORMATION

Date Started: 9/3/07
Date Completed: 9/3/07
Drilling Company: Envirotech
Driller:
Geologist: C. Mitchell
Boring Method: HSA
Bore Hole Dia: 8"

Well Diam: 3"
Screen Size: 0.010
Screen Length: 10'
Casing Length: 5'

Soil Boring / Monitor Well Number: MW-10
Project #: 0107039
Drawn By: BCM
Approved By: KRH

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE
AR - AIR ROTARY

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
AT COMPLETION
AT WELL STABILIZATION

SOIL CLASSIFICATION
SURFACE ELEVATION:

Soil Classification	Depth Scale	Sample Interval	Groundwater Depth	FID/PID Readings (ppm)
SILTY SAND, Grayish Brown, Dry, No Odor	0–1			0
	1–2			0
	2–3			0
	3–4			0
	4–5			0
	5–6			0
	6–7			0
	7–8	■		0
	8–9		▽	0
	9–10			0
SILTY CLAY, Dark Brown, Wet, No Odor	10–11			0
	11–12			0
	12–13			0
SANDSTONE, Light Gray, Dry, No Odor	13–14			0
	14–15			0

(SANDSTONE) Bottom of Boring @ 15'

Depth scale: 5, 10, 15, 20, 25, 30

Monitor Well Detail | Stratum Depth | Sample No. | % Recovery

BORING AND SAMPLING NOTES

NOTE: This log is not to be used outside of the original report.

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Client: Enterprise Products Operating, L.P.
Project Name: Blanco Storage Facility
Project Location: Off Country Road 4900
Project Manager: C. Mitchell

SOIL BORING/MONITOR WELL LOG

DRILLING & SAMPLING INFORMATION

Soil Boring / Monitor Well Number: MW-11
Date Started: 9/3/07
Project #: 0107039
Date Completed: 9/3/07
Drawn By: BCM
Drilling Company: Envirotech
Approved By: KRH
Driller:
Geologist: C. Mitchell
Well Diam: 3"
Boring Method: HSA
Screen Size: 0.010
Bore Hole Dia: 8"
Screen Length: 10'
Casing Length: 3'

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE
AR - AIR ROTARY

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
▽ AT COMPLETION
▼ AT WELL STABILIZATION

Monitor Well Detail	SOIL CLASSIFICATION SURFACE ELEVATION:	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)	BORING AND SAMPLING NOTES
	SILTY SAND, Grayish Brown, Dry, No Odor		5				▽	0 0 0 0 0 0 0	
	SILTY CLAY, Brown, Wet, No Odor		10					0 0 0 0 0 0 0 0	
	SANDSTONE, Gray, Dry, No Odor		15					0 0	
	(SANDSTONE) Bottom of Boring @ 13'		20						
			25						
			30						

NOTE: This log is not to be used outside of the original report.

Southwest GEOSCIENCE

Client: Enterprise Products Operating, L.P.
Project Name: Blanco Storage Facility
Project Location: Off Country Road 4900
Project Manager: C. Mitchell

SOIL BORING/MONITOR WELL LOG

DRILLING & SAMPLING INFORMATION

Soil Boring / Monitor Well Number: MW-12
Date Started: 9/3/07
Project #: 0107039
Date Completed: 9/3/07
Drawn By: BCM
Drilling Company: Envirotech
Approved By: KRH
Driller:
Geologist: C. Mitchell
Well Diam: 3"
Boring Method: HSA
Screen Size: 0.010
Bore Hole Dia: 8"
Screen Length: 13'
Casing Length: 5'

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE
AR - AIR ROTARY

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
▼ AT COMPLETION
▼ AT WELL STABILIZATION

Monitor Well Detail	SOIL CLASSIFICATION	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)	BORING AND SAMPLING NOTES
	SURFACE ELEVATION:								
	SILTY SAND, Dark Gray, Dry, Petroleum Odor		5				▼	38	
								16	
								12	
			10					23	
								30	
								73	
								126	
			15					64	
	SILTY CLAY, Dark Gray, Wet, Petroleum Odor							72	
	SANDSTONE, Gray, Dry, No Odor							45	
								83	
	(SANDSTONE) Bottom of Boring @ 18'		20					5	
								2	
								0	
			25					0	
								0	
			30						

NOTE: This log is not to be used outside of the original report.

Southwest GEOSCIENCE

Client: Enterprise Products Operating, L.P.
Project Name: Blanco Storage Facility
Project Location: Off Country Road 4900
Project Manager: C. Mitchell

SOIL BORING/MONITOR WELL LOG

DRILLING & SAMPLING INFORMATION

Soil Boring / Monitor Well Number: MW-13
Date Started: 9/3/07
Project #: 0107039
Date Completed: 9/3/07
Drawn By: BCM
Drilling Company: Envirotech
Approved By: KRH
Driller:
Geologist: C. Mitchell
Well Diam: 3"
Boring Method: HSA
Screen Size: 0.010
Bore Hole Dia: 8"
Screen Length:
Casing Length:

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE
AR - AIR ROTARY

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
AT COMPLETION
AT WELL STABILIZATION.

Monitor Well Detail	SOIL CLASSIFICATION	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)	BORING AND SAMPLING NOTES
	SURFACE ELEVATION:								
	SILTY SAND, Grayish Brown, Dry, No Odor							0	
	SANDSTONE, Gray & Tan, Dry, No Odor							0	
	(SANDSTONE) Bottom of Boring @ 8'		5					0	
								0	
			10					0	
								0	
			15					0	
			20						
			25						
			30						

NOTE: This log is not to be used outside of the original report.

Southwest GEOSCIENCE

Client: Enterprise Products Operating, L.P.
Project Name: Blanco Storage Facility
Project Location: Off Country Road 4900
Project Manager: C. Mitchell

SOIL BORING/MONITOR WELL LOG

DRILLING & SAMPLING INFORMATION

Soil Boring / Monitor Well Number: MW-14
Date Started: 9/3/07
Project #: 0107039
Date Completed: 9/3/07
Drawn By: BCM
Drilling Company: Envirotech
Approved By: KRH
Driller:
Geologist: C. Mitchell
Well Diam: 3"
Boring Method: HSA
Screen Size: 0.010
Bore Hole Dia: 8"
Screen Length: 15'
Casing Length: 5'

BORING METHOD
HSA - HOLLOW STEM AUGERS
CFA - CONTINUOUS FLIGHT AUGERS
GP - GEOPROBE
AR - AIR ROTARY

SAMPLER TYPE
CB - FIVE FOOT CORE BARREL
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

GROUNDWATER DEPTH
AT COMPLETION
AT WELL STABILIZATION

Monitor Well Detail	SOIL CLASSIFICATION	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)	BORING AND SAMPLING NOTES
	SURFACE ELEVATION:								
	SILTY SAND, Grayish Brown, Dry, No Odor							0	
								0	
								0	
								0	
								0	
			5					0	
								0	
								0	
								0	
								0	
			10					0	
	SILTY CLAY, Brown, Moist, No Odor							0	
								0	
								0	
								0	
	- No Recovery		15						
	SANDSTONE, Gray, Dry, No Odor							0	
								0	
	(SANDSTONE) Bottom of Boring @ 20'		20						
			25						
			30						

NOTE: This log is not to be used outside of the original report.

Southwest GEOSCIENCE

Southwest GEOSCIENCE

APPENDIX C

Tables

Southwest GEOSCIENCE

TABLE 1
SOIL ANALYTICAL RESULTS

Sample I.D.	Date	Sample Depth (feet)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Xylenes (µg/kg)	Total BTEX (µg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Energy, Minerals & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10,000	NE	NE	NE	50,000	100	100
Tier 1 Risk-Based Screening Level			-	-	-	-	-	7,400	7,400
TSW-1	4.24.07	10 to12	<1.22	97.7	<1.22	52.3	150	2.44	92.6
TSW-2	4.24.07	7 to 8	1.38	130	<1.14	93.3	224.68	4.47	140
B-3	4.24.07	4 to 6	<1.10	<1.10	<1.10	<3.31	<6.61	<0.0552	19.5
B-4	4.24.07	4 to 6	<1.08	<1.08	<1.08	<3.24	<6.48	<0.054	5.39
TSW-5	4.24.07	12 to 13	<1.12	23.1	17.4	198	238.5	0.52	165
B-6	4.24.07	4 to 6	<1.11	<1.11	<1.11	<3.32	<6.65	<0.0554	5.17
B-7	4.24.07	5 to 6	<1.08	9.59	<1.08	6.41	16	0.871	20.6
B-8	4.24.07	7 to 8	<1.11	<1.11	<1.11	1,240	1,240	134	1,040
TSW-9	4.24.07	10 to 11	<1.18	<1.18	<1.18	<3.55	<7.09	<0.0592	5.09
MW-10	9.5.2007	7 to 8	<5.0	<5.0	<5.0	<10.0	<25.0	<5.0	<10.0
MW-11	9.5.2007	6 to 7	<5.0	<5.0	<5.0	<10.0	<25.0	<5.0	<10.0
MW-12	9.5.2007	8 to 9	2,200	7,700	3,700	39,000	52,600	580	150
MW-13	9.5.2007	NSC							
MW-14	9.5.2007	11 to 12	<5.0	<5.0	<5.0	<10.0	<25.0	<5.0	<10.0

mg/Kg = milligrams per kilogram
µg/Kg = micrograms per kilogram
NSC = No Sample Collected

TABLE 2
GROUNDWATER ANALYTICAL RESULTS

Sample I.D.	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH GRO (mg/L	TPH DRO (mg/L)
New Mexico Water Quality Commission (NMWQC) Ground Water Standards		10	750	750	620	NE	NE
TSW-1	4/25/2007	17.8	<1.0	2.05	<3.0	0.0835	1.29
TSW-2	4/25/2007	5,790	5,190	192	1,160	8.97	19.5
TSW-5	4/25/2007	IVSC					
TSW-9	4/25/2007	446	<1.0	26.7	3.33	0.458	IVSC
MW-10	9.6.2207	IVSC					
MW-11	9.6.2007	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0
MW-12	9.6.2007	2,600	270	620	2,800	19	1.8
MW-13	9.6.2007	IVSC					
MW-14	9.6.2007	1,400	2,100	400	3,200	18	2.1

mg/L = milligrams per liter
µg/L = micrograms per liter
IVSC = Insufficient Volume for Sample Collection

Southwest GEOSCIENCE

APPENDIX D

Laboratory Data Reports & Chain-of-Custody Documentation

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Thursday, September 13, 2007

Chris Mitchell
Southwest Geoscience
2351 W Northwest Hwy Suite 3321
Dallas, TX 75220

TEL: (214) 350-5469
FAX (214) 350-2914

RE: Blanco Products Storage

Order No.: 0709063

Dear Chris Mitchell:

Hall Environmental Analysis Laboratory, Inc. received 9 sample(s) on 9/6/2007 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT: Southwest Geoscience
Lab Order: 0709063
Project: Blanco Products Storage
Lab ID: 0709063-01

Client Sample ID: MW-11
Collection Date: 9/6/2007 7:45:00 AM
Date Received: 9/6/2007
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/12/2007 9:02:15 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/12/2007 9:02:15 PM
Surr: DNOP	114	58-140		%REC	1	9/12/2007 9:02:15 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/8/2007 9:22:52 AM
Surr: BFB	96.8	79.2-121		%REC	1	9/8/2007 9:22:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	ND	1.0		µg/L	1	9/8/2007 9:22:52 AM
Toluene	ND	1.0		µg/L	1	9/8/2007 9:22:52 AM
Ethylbenzene	ND	1.0		µg/L	1	9/8/2007 9:22:52 AM
Xylenes, Total	ND	2.0		µg/L	1	9/8/2007 9:22:52 AM
Surr: 4-Bromofluorobenzene	85.9	70.2-105		%REC	1	9/8/2007 9:22:52 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	MW-12
Lab Order:	0709063	**Collection Date:**	9/6/2007 8:55:00 AM
Project:	Blanco Products Storage	**Date Received:**	9/6/2007
Lab ID:	0709063-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	1.8	1.0		mg/L	1	9/12/2007 9:37:32 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/12/2007 9:37:32 PM
Surr: DNOP	116	58-140		%REC	1	9/12/2007 9:37:32 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	19	0.50		mg/L	10	9/8/2007 9:55:31 AM
Surr: BFB	118	79.2-121		%REC	10	9/8/2007 9:55:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	2600	100		µg/L	100	9/10/2007 10:08:24 PM
Toluene	270	10		µg/L	10	9/8/2007 9:55:31 AM
Ethylbenzene	620	10		µg/L	10	9/8/2007 9:55:31 AM
Xylenes, Total	2800	200		µg/L	100	9/10/2007 10:08:24 PM
Surr: 4-Bromofluorobenzene	95.9	70.2-105		%REC	100	9/10/2007 10:08:24 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT: Southwest Geoscience
Lab Order: 0709063
Project: Blanco Products Storage
Lab ID: 0709063-03

Client Sample ID: MW-14
Collection Date: 9/6/2007 8:20:00 AM
Date Received: 9/6/2007
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	2.1	1.0		mg/L	1	9/12/2007 10:12:47 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/12/2007 10:12:47 PM
Surr: DNOP	117	58-140		%REC	1	9/12/2007 10:12:47 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	18	2.5		mg/L	50	9/10/2007 11:13:40 PM
Surr: BFB	113	79.2-121		%REC	50	9/10/2007 11:13:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	1400	50		µg/L	50	9/10/2007 11:13:40 PM
Toluene	2100	50		µg/L	50	9/10/2007 11:13:40 PM
Ethylbenzene	400	50		µg/L	50	9/10/2007 11:13:40 PM
Xylenes, Total	3200	100		µg/L	50	9/10/2007 11:13:40 PM
Surr: 4-Bromofluorobenzene	102	70.2-105		%REC	50	9/10/2007 11:13:40 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TRIP BLANK
Lab Order:	0709063	**Collection Date:**	
Project:	Blanco Products Storage	**Date Received:**	9/6/2007
Lab ID:	0709063-04	**Matrix:**	TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/8/2007 11:57:53 AM
Surr: BFB	98.9	79.2-121		%REC	1	9/8/2007 11:57:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	ND	1.0		µg/L	1	9/8/2007 11:57:53 AM
Toluene	ND	1.0		µg/L	1	9/8/2007 11:57:53 AM
Ethylbenzene	ND	1.0		µg/L	1	9/8/2007 11:57:53 AM
Xylenes, Total	ND	2.0		µg/L	1	9/8/2007 11:57:53 AM
Surr: 4-Bromofluorobenzene	86.4	70.2-105		%REC	1	9/8/2007 11:57:53 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT: Southwest Geoscience
Lab Order: 0709063
Project: Blanco Products Storage
Lab ID: 0709063-05

Client Sample ID: MW-10 (7-8)
Collection Date: 9/5/2007 8:40:00 AM
Date Received: 9/6/2007
Matrix: MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/10/2007 3:59:45 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/10/2007 3:59:45 PM
Surr: DNOP	97.0	61.7-135		%REC	1	9/10/2007 3:59:45 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/8/2007 3:20:42 AM
Surr: BFB	103	84-138		%REC	1	9/8/2007 3:20:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	ND	0.050		mg/Kg	1	9/8/2007 3:20:42 AM
Toluene	ND	0.050		mg/Kg	1	9/8/2007 3:20:42 AM
Ethylbenzene	ND	0.050		mg/Kg	1	9/8/2007 3:20:42 AM
Xylenes, Total	ND	0.10		mg/Kg	1	9/8/2007 3:20:42 AM
Surr: 4-Bromofluorobenzene	90.1	68.2-109		%REC	1	9/8/2007 3:20:42 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	MW-11 (6-7)
Lab Order:	0709063	**Collection Date:**	9/5/2007 9:35:00 AM
Project:	Blanco Products Storage	**Date Received:**	9/6/2007
Lab ID:	0709063-06	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/10/2007 4:35:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/10/2007 4:35:38 PM
Surr: DNOP	96.8	61.7-135		%REC	1	9/10/2007 4:35:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/8/2007 3:50:44 AM
Surr: BFB	100	84-138		%REC	1	9/8/2007 3:50:44 AM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	ND	0.050		mg/Kg	1	9/8/2007 3:50:44 AM
Toluene	ND	0.050		mg/Kg	1	9/8/2007 3:50:44 AM
Ethylbenzene	ND	0.050		mg/Kg	1	9/8/2007 3:50:44 AM
Xylenes, Total	ND	0.10		mg/Kg	1	9/8/2007 3:50:44 AM
Surr: 4-Bromofluorobenzene	87.2	68.2-109		%REC	1	9/8/2007 3:50:44 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	MW-12 (8-9)
Lab Order:	0709063	**Collection Date:**	9/5/2007 10:55:00 AM
Project:	Blanco Products Storage	**Date Received:**	9/6/2007
Lab ID:	0709063-07	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	150	10		mg/Kg	1	9/10/2007 5:11:27 PM
Motor Oil Range Organics (MRO)	120	50		mg/Kg	1	9/10/2007 5:11:27 PM
Surr: DNOP	101	61.7-135		%REC	1	9/10/2007 5:11:27 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	580	100		mg/Kg	20	9/10/2007 9:05:51 PM
Surr: BFB	132	84-138		%REC	20	9/10/2007 9:05:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	2.2	1.0		mg/Kg	20	9/10/2007 9:05:51 PM
Toluene	7.7	1.0		mg/Kg	20	9/10/2007 9:05:51 PM
Ethylbenzene	3.7	1.0		mg/Kg	20	9/10/2007 9:05:51 PM
Xylenes, Total	39	2.0		mg/Kg	20	9/10/2007 9:05:51 PM
Surr: 4-Bromofluorobenzene	106	68.2-109		%REC	20	9/10/2007 9:05:51 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	MW-14 (11-12)
Lab Order:	0709063	**Collection Date:**	9/5/2007 1:10:00 PM
Project:	Blanco Products Storage	**Date Received:**	9/6/2007
Lab ID:	0709063-08	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/10/2007 5:47:17 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/10/2007 5:47:17 PM
Surr: DNOP	98.7	61.7-135		%REC	1	9/10/2007 5:47:17 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/8/2007 5:20:36 AM
Surr: BFB	106	84-138		%REC	1	9/8/2007 5:20:36 AM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	ND	0.050		mg/Kg	1	9/8/2007 5:20:36 AM
Toluene	ND	0.050		mg/Kg	1	9/8/2007 5:20:36 AM
Ethylbenzene	ND	0.050		mg/Kg	1	9/8/2007 5:20:36 AM
Xylenes, Total	ND	0.10		mg/Kg	1	9/8/2007 5:20:36 AM
Surr: 4-Bromofluorobenzene	93.9	68.2-109		%REC	1	9/8/2007 5:20:36 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *13-Sep-07*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	MeOH BLANK
Lab Order:	0709063	**Collection Date:**	
Project:	Blanco Products Storage	**Date Received:**	9/6/2007
Lab ID:	0709063-09	**Matrix:**	MEOH BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **SMP**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/8/2007 5:50:31 AM
Surr: BFB	104	84-138		%REC	1	9/8/2007 5:50:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: **SMP**
Benzene	ND	0.050		mg/Kg	1	9/8/2007 5:50:31 AM
Toluene	ND	0.050		mg/Kg	1	9/8/2007 5:50:31 AM
Ethylbenzene	ND	0.050		mg/Kg	1	9/8/2007 5:50:31 AM
Xylenes, Total	ND	0.10		mg/Kg	1	9/8/2007 5:50:31 AM
Surr: 4-Bromofluorobenzene	90.9	68.2-109		%REC	1	9/8/2007 5:50:31 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: Southwest Geoscience
Project: Blanco Products Storage **Work Order:** 0709063

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8015									
Sample ID: MB-13780		*MBLK*			Batch ID:	**13780**	Analysis Date:	9/10/2007 11:42:42 AM	
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-13780		*LCS*			Batch ID:	**13780**	Analysis Date:	9/10/2007 12:13:41 PM	
Diesel Range Organics (DRO)	40.17	mg/Kg	10	80.3	64.6	116			
Method: SW8015									
Sample ID: MB-13809		*MBLK*			Batch ID:	**13809**	Analysis Date:	9/12/2007 6:39:59 PM	
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCS-13809		*LCS*			Batch ID:	**13809**	Analysis Date:	9/12/2007 7:15:36 PM	
Diesel Range Organics (DRO)	6.027	mg/L	1.0	121	74	157			
Method: SW8015									
Sample ID: B		*MBLK*			Batch ID:	**R25072**	Analysis Date:	9/7/2007 4:21:08 PM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R25094**	Analysis Date:	9/10/2007 8:05:52 AM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID:	**R25072**	Analysis Date:	9/7/2007 5:50:57 PM	
Gasoline Range Organics (GRO)	23.10	mg/Kg	5.0	92.4	69.5	120			
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID:	**R25094**	Analysis Date:	9/10/2007 9:36:04 AM	
Gasoline Range Organics (GRO)	21.66	mg/Kg	5.0	86.6	69.5	120			
Method: SW8015									
Sample ID: B		*MBLK*			Batch ID:	**R25072**	Analysis Date:	9/7/2007 4:21:08 PM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R25094**	Analysis Date:	9/10/2007 8:05:52 AM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID:	**R25072**	Analysis Date:	9/7/2007 5:50:57 PM	
Gasoline Range Organics (GRO)	0.4620	mg/L	0.050	85.9	80	115			
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID:	**R25094**	Analysis Date:	9/10/2007 9:36:04 AM	
Gasoline Range Organics (GRO)	0.4332	mg/L	0.050	83.1	80	115			

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Southwest Geoscience
Project: Blanco Products Storage **Work Order:** 0709063

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R25072**	Analysis Date:	9/7/2007 7:56:48 AM	
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R25094**	Analysis Date:	9/10/2007 8:05:52 AM	
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R25072**	Analysis Date:	9/7/2007 8:51:01 PM	
Benzene	0.9345	mg/Kg	0.050	93.4	78.8	132			
Toluene	0.9096	mg/Kg	0.050	91.0	78.9	112			
Ethylbenzene	0.9321	mg/Kg	0.050	93.2	69.3	125			
Xylenes, Total	2.768	mg/Kg	0.10	92.3	73	128			
Sample ID: 100NG BTEX CCV		*LCS*			Batch ID:	**R25094**	Analysis Date:	9/10/2007 10:06:10 AM	
Benzene	0.9626	mg/Kg	0.050	96.3	78.8	132			
Toluene	0.9681	mg/Kg	0.050	96.8	78.9	112			
Ethylbenzene	0.9852	mg/Kg	0.050	98.5	69.3	125			
Xylenes, Total	2.973	mg/Kg	0.10	99.1	73	128			

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Southwest Geoscience
Project: Blanco Products Storage **Work Order:** 0709063

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R25072**	Analysis Date:	9/7/2007 7:56:48 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R25094**	Analysis Date:	9/10/2007 8:05:52 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
1,2,4-Trimethylbenzene	ND	µg/L	1.0						
1,3,5-Trimethylbenzene	ND	µg/L	1.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R25072**	Analysis Date:	9/7/2007 8:51:01 PM	
Benzene	18.69	µg/L	1.0	93.4	85.9	113			
Toluene	18.19	µg/L	1.0	91.0	86.4	113			
Ethylbenzene	18.64	µg/L	1.0	93.2	83.5	118			
Xylenes, Total	55.36	µg/L	2.0	92.3	83.4	122			
1,2,4-Trimethylbenzene	17.95	µg/L	1.0	89.8	83.5	115			
1,3,5-Trimethylbenzene	17.73	µg/L	1.0	88.6	85.2	113			
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R25094**	Analysis Date:	9/10/2007 10:06:10 AM	
Benzene	19.25	µg/L	1.0	96.3	85.9	113			
Toluene	19.36	µg/L	1.0	96.8	86.4	113			
Ethylbenzene	19.70	µg/L	1.0	98.5	83.5	118			
Xylenes, Total	59.45	µg/L	2.0	99.1	83.4	122			
1,2,4-Trimethylbenzene	19.74	µg/L	1.0	98.0	83.5	115			
1,3,5-Trimethylbenzene	19.58	µg/L	1.0	97.9	85.2	113			

Qualifiers:

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- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name SOUTHWEST GEOSCIENCE | Date and Time Received: 9/6/2007

Work Order Number 0709063 | Received by AT

Checklist completed by Signature Tanya Shomin Date Sept 4, 07

Matrix | Carrier name Client drop-off

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	5°	*4° C ± 2 Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted | Date contacted: | Person contacted

Contacted by: | Regarding

Comments:

Corrective Action

CHAIN OF CUSTODY RECORD

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

Office Location: DALLAS
Project Manager: C. MITCHELL

Laboratory: HALL ENV. ANALYSIS LAB
Address: 4901 HAWKINS NE
ALBUQUERQUE, NM 87109
Contact:
Phone: (505) 345-3975
PO/SO #:

Lab use only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Page 1 of 1

Sampler's Name: B. CHRIS MITCHELL
Sampler's Signature:

Proj. No.: 0107039
Project Name: BLANCO PRODUCTS STORAGE
No/Type of Containers: 5 oz

ANALYSIS REQUESTED: TPH GRO/DRO (SW-846 #8015) BTEX (SW-846 #8021B)

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	P/O	Lab Sample ID (Lab Use Only)
W	9.6.07	745		✓	MW-11			4				0709063-1
W	9.6.07	855		✓	MW-12			4				0709063-2
W	9.6.07	820		✓	MW-14			4				0709063-3
					Trip Blank							0709063-4

NO FURTHER ENTRIES

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	9.6.07	1345		9/6/07	1345
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES:

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil
Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

CHAIN OF CUSTODY RECORD

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

Office Location: DALLAS
Project Manager: C. MITCHELL

Laboratory: HALL ENV. ANALYSIS LAB
Address: 4901 HAWKINS NE ALBUQUERQUE, NM 87109
Contact:
Phone: (505) 345-3975
PO/SO #:

Lab use only
Due Date:
Temp. of coolers when received (C°): 1 2 3 4 5
Page 1 of 1

Sampler's Name: B. CHRIS MITCHELL
Sampler's Signature:

Proj. No.: 0107039
Project Name: BLANCO PRODUCTS STORAGE
No/Type of Containers

ANALYSIS REQUESTED: TPH GRO/DRO (SW-846 #8015) / BTEX (SW-846 #8021B)

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	P/O			Lab Sample ID (Lab Use Only)
S	9.5.07	940		✓	MW-10 (7-8)	7	8	2			1	✓	✓	5
S	9.5.07	935		✓	MW-11 (6-7)	6	7	2			1	✓	✓	6
S	9.5.07	1055		✓	MW-12 (8-9)	8	9	2			1	✓	✓	7
S	9.5.07	1310		✓	MW-14 (11-12)	11	12	2			1	✓	✓	8
					MeOH Blank									9

0709063

No Further Entries

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	9.6.07	1345		9/6/07	1345
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

NOTES:

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil
Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other