GW-071

Ballard Ponds

Limited Site Investigation

DATE:

January 17, 2011

LIMITED SITE INVESTIGATION

Property:

Chaco Gas Plant – Ballard Ponds
NE ¼ of SW ¼, S16 T26N R12W
San Juan County, New Mexico

January 17, 2011
SWG Project No. 041001A

Prepared for:

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NE ¼ of SW ¼, S16 T26N and R12W
San Juan County, New Mexico

SWG Project No. 0410001A

1.0 INTRODUCTION

1.1 Site Description & Background

Southwest Geoscience (SWG) has completed a Limited Site Investigation (LSI) within the Enterprise Field Services, LLC (Enterprise) Chaco Gas Plant in an area known as the Ballard Ponds located in the northeast (NE) ¼ of the southwest (SW) ¼ in Section 16 of Township 26 North and Range 12 West in San Juan County, New Mexico, hereinafter referred to as the "Site" or "subject Site".

The Ballard Ponds include two (2) water evaporation/disposal ponds, which contain petroleum contact water. The Ballard Ponds were constructed circa 1994 and lined with high density polyethylene sheeting with dimensions being approximately 130 long by 130 feet wide, and approximately 2 to 3 feet in depth. SWG understands that Enterprise has scheduled the Ballard Ponds for removal in 2011.

A topographic map of the Site vicinity is included as Figure 1; an aerial photograph depicting the location of the Ballard Ponds is included as Figure 2. In addition, a site map depicting improvements within the Site vicinity and the location of LSI field activities is included as Figure 3. Photographs of the Site are available in Appendix B.

1.2 Site Investigation Scope of Work

The objective of SWG's LSI was to evaluate the presence of petroleum hydrocarbons in the on-Site soil and groundwater as a result of historic and current operational use of the Ballard Ponds for petroleum contact water disposal.

1.3 Standard of Care & Limitations

The findings and recommendations contained in this report represent SWG's professional opinions based upon information derived from the on-Site activities and other services performed under this scope of work and were prepared in accordance with currently acceptable professional standards. The findings were based upon analytical results provided by an independent laboratory. Evaluations of the geologic/hydrogeologic conditions at the Site for the purpose of this investigation are made from a limited number of available data points (i.e. soil borings and ground water samples) and Site-wide subsurface conditions may vary from these data points. 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 report is based upon a specific scope of work requested by Enterprise. The agreement between SWG and Enterprise outlines the scope of work, and only those

tasks specifically authorized by that agreement or outlined in this report were performed. This report has been prepared for the intended use of Enterprise and it's subsidiaries, 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 and SWG.

2.0 SITE INVESTIGATION

2.1 Soil Borings & Temporary Sampling Wells

SWG's field investigation activities were conducted from November 30, 2010 through December 8, 2010 by Kyle Summers, a SWG environmental professional. As part of the approved scope of work, six (6) soil borings were advanced in the vicinity of the Ballard Ponds. Soil borings SB-1 and SB-2 were advanced north of the Ballard Ponds. Soil borings TSW-1 and TSW-2 were advanced east and south of the Ballard Ponds, respectively. Soil borings TSW-3 and TSW-4 were advanced to the west and northwest of the Ballard Ponds, respectively. Based on the surface topography, the surface and groundwater flow appears to be to the northwest.

Figure 3 is a Site Map depicting the soil boring at the Site in relation to pertinent structures and land features.

Utilizing a hyro-vac unit, each soil boring location was investigated for underground lines or obstacles from the surface to approximately 8 feet below ground surface (bgs). The soil borings were subsequently advanced using direct-push Geoprobe® equipment. The soil samples were collected continuously, utilizing a core barrel and acetate sleeve sampler from the ground surface to the termination depth of each soil boring. Soil samples were observed to document soil lithology, color, moisture content and visual and olfactory evidence of petroleum hydrocarbons. Upon retrieval of each sampler from the borehole, each sample was immediately divided into portions designated for field screening or laboratory analysis. Field headspace analysis was conducted by placing the portion of the soil sample designated for field screening into a plastic Ziplock® bag. The plastic bag was sealed and then placed in a warm area to promote volatilization. The air above the sample, the headspace, was then evaluated using a photoionization detector (PID) capable of detecting volatile organic compounds (VOCs). The PID was calibrated utilizing an isobutylene standard prior to use in the field.

During the completion of each soil boring, an on-Site geoscientist documented the lithology encountered and constructed a continuous profile of the soil column from the surface to the soil boring terminus. Undisturbed soil samples from each soil boring location were visually inspected and classified in the field. The lithology encountered during the advancement of soil boring SB-2 included a moderate yellowish brown silty sand fill from the surface to a depth of approximately 8.0 feet bgs followed by native moderate yellowish brown silty sand from 8.0 feet bgs to a depth of 15.5 feet bgs. A moderate brown to reddish brown clay was encountered from 15.5 feet bgs to 28.0 feet bgs. The moderate brown to reddish brown clay was underlain by a moderate yellowish brown silty sandstone from 28.0 to 29.0 feet bgs. The lithology observed in soil borings SB-1, TSW-1, TSW-2, TSW-3, and TSW-4 was generally similar to that observed in soil boring SB-2. Groundwater was encountered in soil borings TSW-1, TSW-2, TSW-3, and TSW-4 between 18.0 and

22.0 feet bgs. Detailed lithologic descriptions are presented on the soil boring logs included in Appendix C.

SWG field screened the soil samples collected from the soil borings for olfactory and/or PID evidence of petroleum hydrocarbon impact. No significant olfactory evidence of impact was noted in the soil borings. PID readings from soil samples screened in the soil borings ranged from below the instrument detection level to 23 parts per million (ppm). The highest PID reading was observed in the soil sample collected from a depth of 15 to 16 feet bgs in soil boring SB-2. Field screening results are presented on the soil boring logs included in Appendix C.

Subsequent to advancement, four (4) of the six (6) soil borings were converted to temporary sampling wells. The temporary sampling wells were completed by inserting the casing into the subsurface and exposing the slotted or screened interval of the casing to the "wet" or saturated media (initial groundwater-bearing unit[1]), enabling the recharge of groundwater into the sampling well. Temporary sampling well construction details are presented on the soil boring/temporary sampling well logs included in Appendix C. Groundwater samples were collected for laboratory analysis from temporary sampling wells TSW-1, TSW-2, TSW-3, and TSW-4.

Following the conclusion of field activities, the borings and temporary sampling wells were plugged and abandoned in accordance with the New Mexico Administrative Code (NMAC) 19.27.4.30 *Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells.*

2.2 Investigation Sampling Program

2.2.1 Soil Sampling Program

SWG's soil sampling program involved submitting up to two (2) soil samples from each of the six (6) soil borings for laboratory analysis. The soil samples were collected from the zone exhibiting the most significant impact based on PID evidence of impact, visual and/or olfactory evidence of impairment, or a change in lithology. The soil sample intervals are presented with the soil sample analytical results (Table 1) in Appendix D and are provided on the soil boring logs included in Appendix C.

2.2.2 Groundwater Sampling Program

Groundwater samples were collected for laboratory analysis from temporary sampling wells TSW-1, TSW-2, TSW-3, and TSW-4 utilizing a dedicated disposable bailer for each. The temporary sampling wells were purged dry the day prior to groundwater sample collection. The groundwater sample results are presented with the analytical results (Table 2) in Appendix D.

[1] *A groundwater-bearing unit or zone is defined as a saturated geologic formation, group of formations, or part of a formation which has a hydraulic conductivity equal to or greater than 1 x 10^{-5} centimeters/second*

3.0 LABORATORY ANALYTICAL PROGRAM

3.1 Laboratory Analytical Methods

The soil and groundwater samples were analyzed for total petroleum hydrocarbons (TPH) Gasoline Range Organics (GRO)/Diesel Range Organics (DRO) utilizing EPA method SW-846 #8015B and benzene, toluene, ethylbenzene, and xylenes (BTEX) utilizing EPA method SW-846 #8021B. Laboratory results are summarized in Table 1 and Table 2, included in Appendix D. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix E.

3.2 Quality Assurance/Quality Control (QA/QC)

Sampling equipment was cleaned using an Alconox® wash and potable water rinse prior to the beginning of the project and before each soil boring. Soil samples were recovered using disposable acetate liners inside the sampling core barrel.

Soil and groundwater 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 Analytical Laboratory (HEAL) analytical laboratory in Albuquerque, New Mexico for normal turnaround.

HEAL performed the analyses of samples under an adequate and documented quality assurance program. 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 HEAL 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.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD). To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 Remediation. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

Based on SWG's review of Site characteristics (specifically: depth to groundwater, wellhead protection area and distance to surface water) an associated ranking score of 20 was determined for the Site in accordance with the *Guidelines for Remediation of Leaks, Spills and Releases*. Consequently, the OCD's *Remediation Action Levels* for soils on sites having a total ranking score greater than 19 is 10 milligrams per kilogram (mg/Kg) benzene, 50 mg/Kg total BTEX and 100 mg/Kg TPH GRO/DRO.

The OCD defaults to the New Mexico Water Quality Control Commission (WQCC) for groundwater remediation standards. The WQCC utilizes NMAC 19.6.2.3102 Human

Health Standards to establish *Groundwater Quality Standards* for Sites which have groundwater impacted by COCs. The WQCC *Groundwater Quality Standards* for groundwater of 10,000 mg/L total dissolved solids (tds) or less is 10 µg/L for benzene, 750 µg/L for toluene, 750 µg/L for ethylbenzene, and 620 µg/L for xylenes.

4.1 Soil Samples

SWG compared the TPH GRO/DRO and BTEX concentrations or practical quantitation limits (PQLs) associated with the soil samples collected from soil borings SB-1, SB-2, TSW-1, TSW-2, TSW-3, and TSW-4 to the OCD *Remediation Action Levels* for sites having a total ranking score greater than 19.

The results of the soil sample analyses are summarized in Table 1 included in Appendix D.

Total Petroleum Hydrocarbons

The soil samples collected from soil borings SB-1, SB-2, TSW-1, TSW-2, TSW-3, and TSW-4 did not exhibit TPH GRO/DRO concentrations above the laboratory PQLs, which are below the OCD's *Remediation Action Level* of 100 mg/Kg.

Benzene and Total BTEX

The soil samples collected from soil borings SB-1, SB-2, TSW-1, TSW-2, TSW-3, and TSW-4 did not exhibit benzene concentrations above the laboratory PQLs, which are below the OCD's *Remediation Action Level* of 10 mg/Kg.

The soil samples collected from soil borings SB-1, SB-2, TSW-1, TSW-2, TSW-3, and TSW-4 did not exhibit total BTEX concentrations above the laboratory PQLs, which are below the OCD's *Remediation Action Level* of 50 mg/Kg.

4.2 Groundwater Samples

SWG compared BTEX concentrations or PQLs associated with the groundwater samples collected from temporary sampling wells TSW-1 through TSW-4 to the WQCC *Groundwater Quality Standards*.

The results of the groundwater sample analyses are summarized in Table 2 included in Appendix D.

Total Petroleum Hydrocarbons

The groundwater samples collected from temporary sampling wells TSW-1 through TSW-4 exhibited TPH GRO/DRO concentrations ranging from below the laboratory PQLs to 2.01 mg/L.

Benzene, Toluene, Ethylbenzene and Xylenes

The groundwater samples collected from temporary sampling wells TSW-1 through TSW-4 did not exhibit benzene concentrations above the laboratory PQLs, which are below the WQCC *Groundwater Quality Standard* of 10 µg/L.

The groundwater samples collected from temporary sampling wells TSW-1 through TSW-4 exhibited toluene concentrations ranging from below the laboratory PQLs to 1.3 µg/L, which are below the WQCC *Groundwater Quality Standard* of 750 µg/L.

The groundwater samples collected from temporary sampling wells TSW-1 through TSW-4 did not exhibit ethylbenzene concentrations above the laboratory PQLs, which are below the WQCC *Groundwater Quality Standard* of 750 µg/L.

The groundwater samples collected from temporary sampling wells TSW-1 through TSW-4 exhibited total xylene concentrations ranging from below the laboratory PQLs to 11 µg/L, which are below the WQCC *Groundwater Quality Standard* of 620 µg/L.

5.0 FINDINGS AND RECOMMENDATIONS

SWG performed LSI activities at the Site to evaluate the presence of petroleum hydrocarbons in the on-Site soil and groundwater as a result of historic and current operational use of the Ballard Ponds for petroleum contact water disposal.

The findings and recommendations of this investigation are as follows:

- Six (6) soil borings (SB-1, SB-2, TSW-1, TSW-2, TSW-3, and TSW-4) were advanced in the vicinity of the Ballard Ponds. Up to two (2) soil samples were collected from each soil boring and submitted for TPH GRO/DRO and BTEX analysis.

- Four (4) of the soil borings advanced at the Site, were subsequently converted to temporary sampling wells (TSW-1, TSW-2, TSW-3, and TSW-4). Groundwater samples were collected from each of the temporary sampling wells (TSW-1 through TSW-4) and submitted for TPH GRO/DRO and BTEX analysis.

- Based on the laboratory analytical results, the soil samples collected from the soil borings did not exhibit TPH GRO/DRO, benzene, and total BTEX concentrations above the OCD *Remediation Action Levels*.

- Based on the laboratory analytical results, the groundwater samples collected from the temporary sampling wells exhibited TPH GRO/DRO concentrations ranging from below the laboratory PQLs to 2.01 mg/Kg.

- Based on the laboratory analytical results, the groundwater samples collected from the temporary sampling wells did not exhibit BTEX concentrations above the WQCC *Groundwater Quality Standards*.

Based on the results of this LSI, SWG has the following recommendations:

- **Based on the laboratory analytical results, no further action appears to be warranted with regard to TPH GRO/DRO and/or BTEX concentrations in the soil and/or groundwater collected from the Site.**

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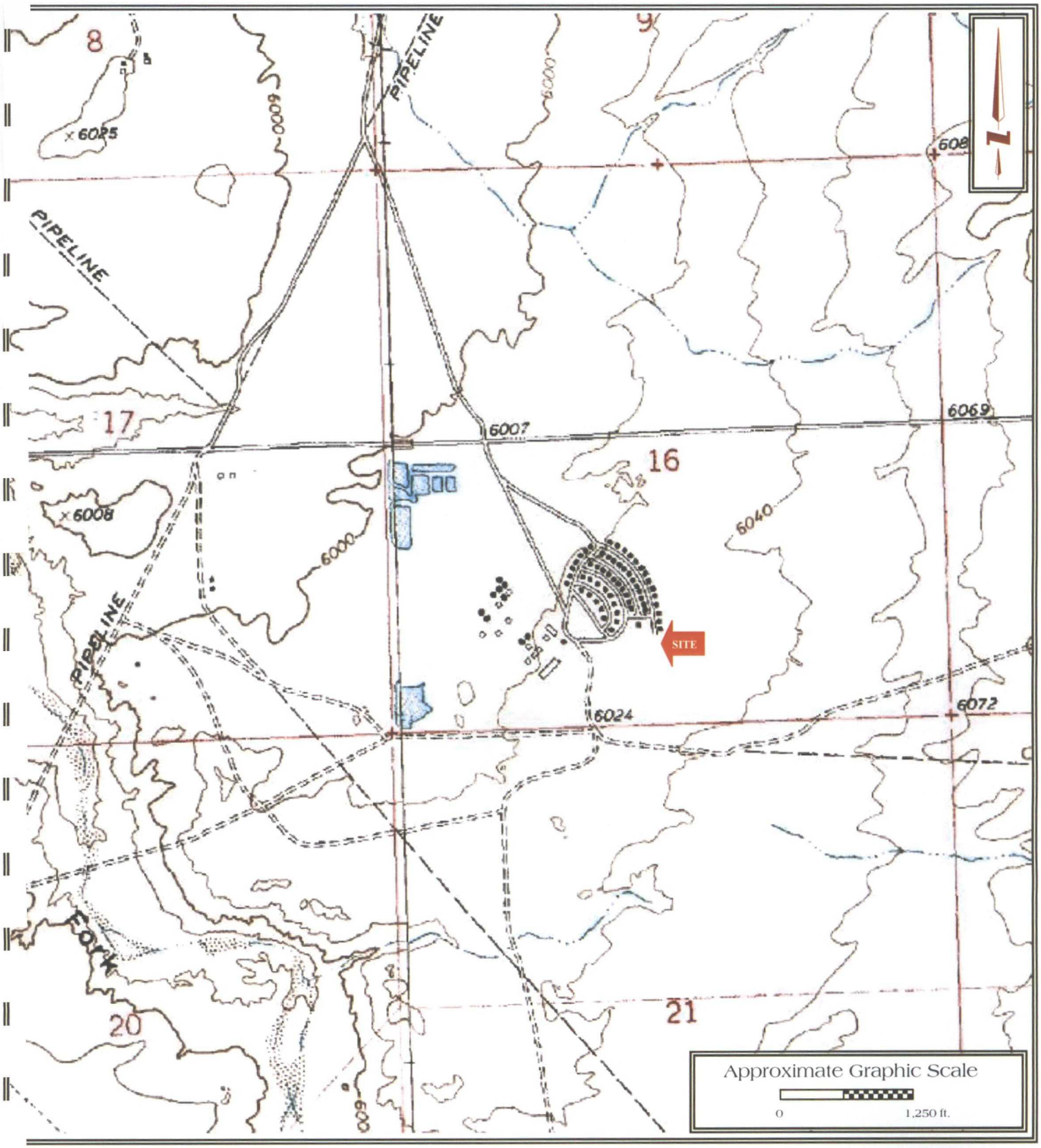
APPENDIX A

Figures



imited Site Investigation
haco Gas Plant – Ballard Ponds
NE ¼ of SW ¼, S16 T26N R12W
an Juan Co., New Mexico
° 36' 28" 59.42"; W108° 07' 04.68"

WG Project No. 0410001A

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FIGURE 1

Topographic Map
Carson Trading Post, NM Quadrangle
Contour Interval – 20 Feet
1995

Limited Site Investigation
haco Gas Plant – Ballard Ponds
.E ¼ of SW ¼, S16 T26N R12W
San Juan Co., New Mexico
° 36' 28" 59.42"; W108° 07' 04.68"

WG Project No. 0410001A

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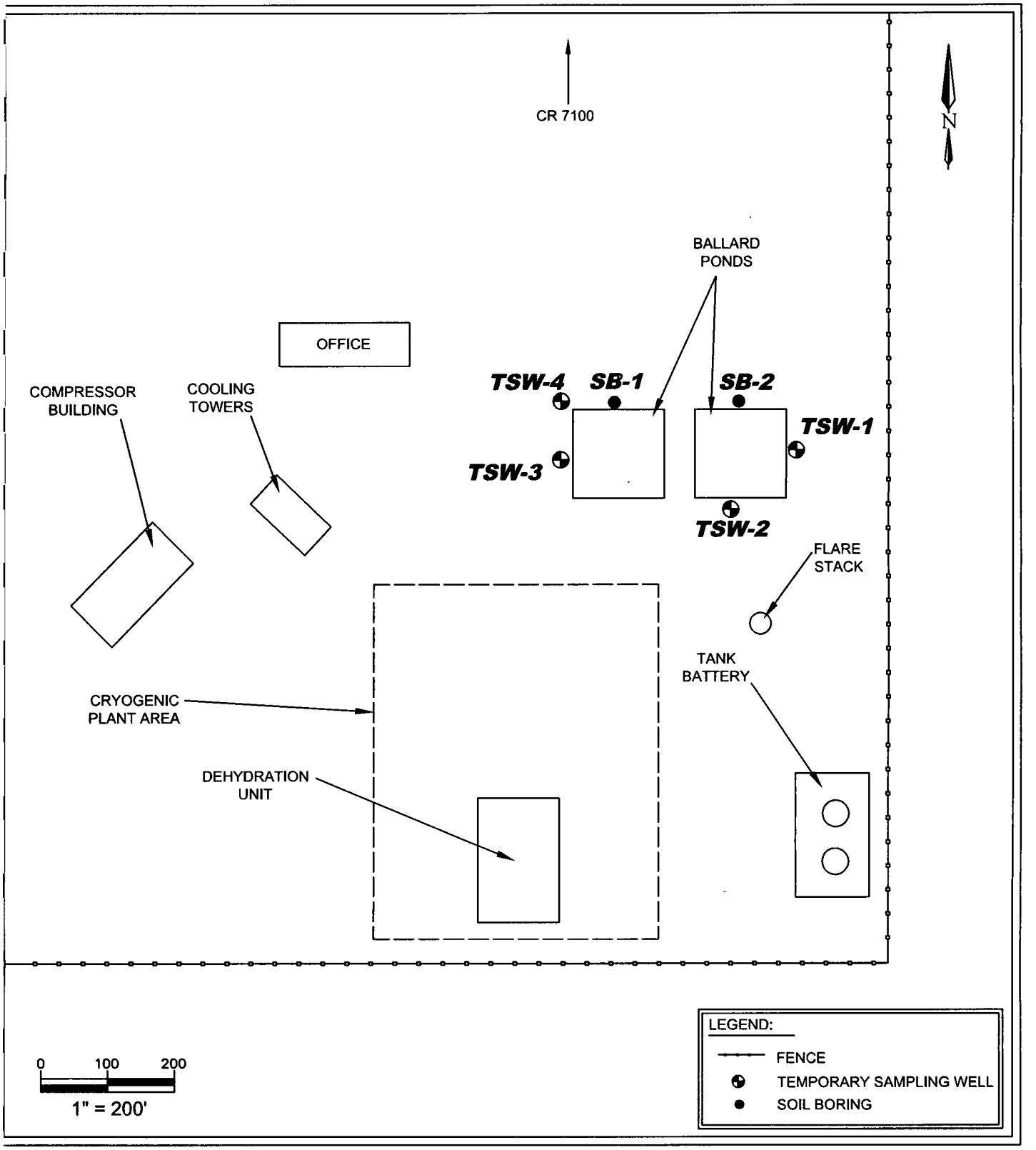
FIGURE 2
Site Vicinity Map
2010 Google Earth



Limited Site Investigation
Chaco Gas Plant - Ballard Ponds
NE 1/4 of SW 1/4, S16 T26N R12W
San Juan Co, New Mexico
N36° 28' 59.42"; W108° 07' 04.68"

SWG Project No. 0410001A

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FIGURE 3

SITE MAP

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APPENDIX B

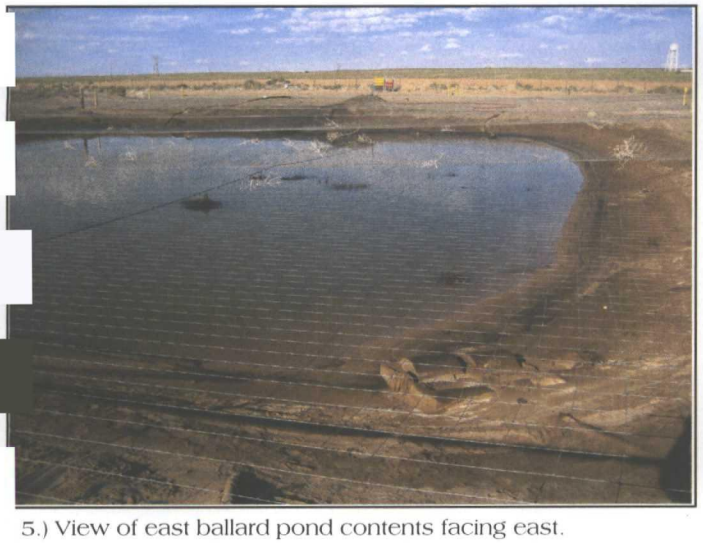
Site Photographs

1.) View of west ballard pond facing southeast.

2.) View of east ballard pond facing south.

3.) View of east ballard pond facing southeast.

4.) View of east ballard pond contents.



5.) View of east ballard pond contents facing east.

6.) View of west ballard pond contents facing northwest.

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APPENDIX C

Soil Boring/ Temporary Sampling Well Logs

Client Enterprise Field Services, LLC
Project Name Chaco Gas Plant - Ballard Ponds
Project Location San Jaun Co., NM
Project Manager Kyle Summers

SOIL BORING LOG

DRILLING & SAMPLING INFORMATION

Date Started 11.30.10
Date Completed 11.30.10
Drilling Company Earth Worx
Driller Louis Trujillo
Geologist Kyle Summers, C.P.G.
Boring Method GP
Bore Hole Dia 2.25"
Sampler OD 2"

Soil Boring SB-1
Project # 04100001A
Drawn By JWM
Approved By KS

Well Diam NA
Screen Size NA
Screen Length NA
Casing Length NA

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	PID/FID Readings (ppm)	BORING AND SAMPLING NOTES
	SURFACE ELEVATION								
	SILTY SAND FILL, Moderate Yellowish Brown, with gravel, loosley to moderately compacted, no odor.							0	Native soil cleared using hydrovac from 0 to 8 feet bgs.
								0	
								0	
								0	
			5					0	
								0	
								0	
								0	
	SILTY SAND, Moderate Yellowish Brown, unconsolidated, no odor.							0	
			10	10' - 11' 1245				3	
								0	
								0	
								0	
								0	
			15					0	
	SILTY CLAY, Moderate Yellowish Brown to Reddish Brown, semi-consolidated, well compacted, dry, no odor.							0	
								0	
								0	
			20					0	
								0	
								0	
				23' - 24' 1300				0	
	SILTY SANDSTONE, Moderate Yellowish Brown, very hard, dry, no odor.		25					0	
	Bottom of Boring @ 25'								
			30						

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

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Client: Enterprise Field Services, LLC
Project Name: Chaco Gas Plant - Ballard Ponds
Project Location: San Jaun Co., NM
Project Manager: Kyle Summers

SOIL BORING LOG

DRILLING & SAMPLING INFORMATION

Date Started: 11.30.10
Date Completed: 11.30.10
Drilling Company: Earth Worx
Driller: Louis Trujillo
Geologist: Kyle Summers, C.P.G.
Boring Method: GP
Bore Hole Dia: 2.25"
Sampler OD: 2"

Soil Boring: SB-2
Project #: 0410001A
Drawn By: JWM
Approved By: KS

Well Diam: NA
Screen Size: NA
Screen Length: NA
Casing Length: NA

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 FILL, Moderate Yellowish Brown, with gravel, unconsolidated, moderately compacted, no odor.							<5	Native soil cleared using hydrovac from 0 to 8 feet bgs.
								<5	
								<5	
								<5	
								<5	
			5					<5	
								<5	
								<5	
								<5	
	SILTY SAND, Moderate Yellowish Brown, no odor. Slightly moist at 15.5 feet bgs.							<5	
			10					<5	
								<5	
								<5	
								<5	
								10	
			15	15' 16' 1400				19	
								23	
	CLAY, Moderate Brown to Reddish Brown, stiff, moist to dry, no odor.							5	
				18' 19' 1415				<5	
			20					<5	
								<5	
								<5	
								<5	
								<5	
			25					<5	
								<5	
								<5	
								<5	
	SILTY SANDSTONE, Moderate Yellowish Brown, hard, dry, no odor.		30						
	Bottom of Boring @ 29'								

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

Southwest GEOSCIENCE

Client Enterprise Field Services, LLC
Project Name Chaco Gas Plant - Ballard Ponds
Project Location San Jaun Co., NM
Project Manager Kyle Summers

SOIL BORING/TEMPORARY SAMPLING WELL LOG

DRILLING & SAMPLING INFORMATION

Date Started 11.30.10
Date Completed 11.30.10
Drilling Company Earth Worx
Driller Louis Trujillo
Geologist Kyle Summers, C.P.G.
Boring Method GP
Bore Hole Dia 2.25"
Sampler OD 2"

Soil Boring / Temporary Sampling Well Number TSW-1
Project # 0410001A
Drawn By JWM
Approved By KS

Well Diam 1"
Screen Size 0.010
Screen Length 10'
Casing Length 12'

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	PID/FID Readings (ppm)	BORING AND SAMPLING NOTES
	SURFACE ELEVATION								
	SILTY SAND FILL, Moderate Yellowish Brown, with gravel, moderately compacted, no odor.							<5	Native soil cleared using hydrovac from 0 to 8 feet bgs
			5					5	
								5	
								<5	
								3	
								5	
								3	
								2	
	SILTY SAND, Moderate Yellowish Brown, slightly moist, no odor. Saturated at 22 feet bgs.							8	
			10	9 to 10' 1500				10	
								12	
								7	
								10	
								8	
								6 7	
			15					6	Thin clay lenses at 13 feet bgs and 19 feet bgs.
								7	
								9	
								8	
								<5	
			20					6	
	CLAY, Moderate Yellowish Brown, dry, no odor.						▽	5	
	Bottom of Boring @ 23'							6 7	
			25						
			30						

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

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Client: Enterprise Field Services, LLC
Project Name: Chaco Gas Plant - Ballard Ponds
Project Location: San Jaun Co., NM
Project Manager: Kyle Summers

SOIL BORING/TEMPORARY SAMPLING WELL LOG

DRILLING & SAMPLING INFORMATION

Date Started: 11.30.10
Date Completed: 11.30.10
Drilling Company: Earth Worx
Driller: Louis Trujillo
Geologist: Kyle Summers, C.P.G.
Boring Method: GP
Bore Hole Dia: 2.25"
Sampler OD: 2"

Soil Boring / Temporary Sampling Well Number: TSW-2
Project #: 0410001A
Drawn By: JWM
Approved By: KS
Well Diam: 1"
Screen Size: 0.010
Screen Length: 10'
Casing Length: 14'

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 FILL, Moderate Yellowish Brown, with gravel, no odor.							<5	Native soil cleared using hydrovac from 0 to 8 feet bgs.
	SANDY CLAY, Moderate Yellowish Brown, slightly moist, no odor.		5					<5	
								<5	
								<5	
								<5	
								<5	
								<5	
								<5	
			10	10' to 11' 1600				17	Thin lenses of silty sand at 10.5 feet bgs and 13 feet bgs
	SILTY SAND, Moderate Yellowish Brown, moist, no odor. Saturated at 19 feet bgs.							7	
								7	
								7	
								5	
			15					<5	
	Clay, Moderate Yellowish Brown, moist, no odor. Dry from 22.5 feet bgs to 24 feet bgs.							12	
							▽	<5	
			20					<5	
								<5	
								<5	
								<5	
								<5	
	Bottom of Boring @ 24'		25						
			30						

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

Southwest GEOSCIENCE

Client: Enterprise Field Services, LLC
Project Name: Chaco Gas Plant - Ballard Ponds
Project Location: San Jaun Co., NM
Project Manager: Kyle Summers

SOIL BORING/TEMPORARY SAMPLING WELL LOG

DRILLING & SAMPLING INFORMATION

Date Started: 12.01.10
Date Completed: 12.01.10
Drilling Company: Earth Worx
Driller: Louis Trujillo
Geologist: Kyle Summers, C.P.G.
Boring Method: GP
Bore Hole Dia.: 2.25"
Sampler OD: 2"

Soil Boring / Temporary Sampling Well Number: TSW-3
Project #: 04100001A
Drawn By: JWM
Approved By: KS

Well Diam: 1"
Screen Size: 0.010
Screen Length: 10'
Casing Length: 14'

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

BORING AND SAMPLING NOTES

Native soil cleared using hydrovac from 0 to 8 feet bgs.

Monitor Well Detail	SOIL CLASSIFICATION	Stratum Depth	Depth Scale	Sample No	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)
	SURFACE ELEVATION							
	SILTY SAND FILL, Moderate Yellowish Brown, with gravel, no odor.		5					<5 <5 <5 <5 <5 <5 <5 <5
	SILTY SAND, Moderate Yellowish Brown, slightly moist, no odor. Saturated at 19 feet bgs.		10					<5 <5 <5 <5 <5
			15	13' to 14' 1015				5 <5 <5 <5 <5
	CLAY, Moderate Brown to Reddish Brown, dry, no odor.		20				▽	<5 <5 <5 <5 <5 <5
	Bottom of Boring @ 24'		25					
			30					

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

Southwest GEOSCIENCE

Client: Enterprise Field Services, LLC
Project Name: Chaco Gas Plant - Ballard Ponds
Project Location: San Jaun Co., NM
Project Manager: Kyle Summers

SOIL BORING/TEMPORARY SAMPLING WELL LOG

DRILLING & SAMPLING INFORMATION

Date Started: 12.01.10
Date Completed: 12.01.10
Drilling Company: Earth Worx
Driller: Louis Trujillo
Geologist: Kyle Summers, C.P.G.
Boring Method: GP
Bore Hole Dia: 2.25"
Sampler OD: 2"

Soil Boring / Temporary Sampling Well Number: TSW-4
Project #: 04100001A
Drawn By: JWM
Approved By: KS
Well Diam: 1"
Screen Size: 0.010
Screen Length: 10'
Casing Length: 14'

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	PID/FID Readings (ppm)	BORING AND SAMPLING NOTES
	SURFACE ELEVATION								
	SILTY SAND FILL, Moderate Yellowish Brown, with gravel, no odor.							<2	Native soil cleared using hydrovac from 0 to 8 feet bgs
								<2	
								<2	
								<2	
								<2	
								<2	
								<2	
								<2	
								<2	
								<2	
			5					<2	
								<5	
								<5	
								<5	
								<5	
								<5	
			10					<5	
								<5	
								<5	
								<5	
			15		17' to 18'		▽	<3	
					1105			<3	
								<3	
			20					<3	
								<3	
								<3	
								<3	
			25						
			30						
	CLAY, Dark Yellowish Brown, dry, no odor.								
	Bottom of Boring @ 24'								

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

Southwest GEOSCIENCE

Southwest GEOSCIENCE

APPENDIX D

Tables

Southwest GEOSCIENCE

TABLE 1
Chaco Gas Plant - Ballard Ponds
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division Remediation Action Level			10	NE	NE	NE	50	100	
SB-1	11 30 10	10 to 11	<0 05	<0.05	<0 05	<0 10	<0 25	<5 0	<10
SB-1	11 30 10	23 to 24	<0 05	<0 05	<0 05	<0 10	<0 25	<5 0	<10
SB-2	11 30 10	15 to 16	<0 05	<0 05	<0 05	<0 10	<0 25	<5 0	<10
SB-2	11 30 10	18 to 19	<0 05	<0 05	<0 05	<0 10	<0.25	<5 0	<10
TSW-1	11 30 10	9 to 10	<0 05	<0 05	<0 05	<0 10	<0 25	<5 0	<10
TSW-2	11 30 10	10 to 11	<0 05	<0 05	<0.05	<0 10	<0.25	<5 0	<10
TSW-3	12 1 10	13 to 14	<0 05	<0 05	<0 05	<0.10	<0 25	<5 0	<10
TSW-4	12 1 10	17 to 18	<0 05	<0 05	<0 05	<0 10	<0 25	<5 0	<10

Note Concentrations in **bold** and yellow exceed the applicable OCD *Remediation Action Level*
NE = Not Established

TABLE 2
Chaco Gas Plant - Ballard Ponds
GROUNDWATER ANALYTICAL SUMMARY

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 Control Commmission Groundwater Quality Standards		10	750	750	620	NE	NE
TSW-1	12.8.10	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
TSW-2	12.8.10	<1.0	1.3	<1.0	11	0.11	1.9
TSW-3	12.8.10	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0
TSW-4	12 8.10	<1.0	<1.0	<1.0	<2.0	<0.05	<1.0

Note Concentrations in **bold** and yellow exceed the applicable WQCC *Groundwater Quality Standards*
NE = Not Established

Southwest GEOSCIENCE

APPENDIX E

Laboratory Data Reports & Chain-of-Custody Documentation

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Monday, January 10, 2011

Kyle Summers
Southwest Geoscience
606 S. Rio Grande Unit A
Aztec, NM 87410

TEL: (903) 821-5603
FAX

RE: Chaco Ballard Ponds

Order No.: 1012142

Dear Kyle Summers:

Hall Environmental Analysis Laboratory, Inc. received 8 sample(s) on 12/3/2010 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 7, 2010.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Jan-11*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	SB-1
Lab Order:	1012142	**Collection Date:**	11/30/2010 12:45:00 PM
Project:	Chaco Ballard Ponds	**Date Received:**	12/3/2010
Lab ID:	1012142-01	**Matrix:**	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	12/4/2010 8:53:03 PM
Surr: DNOP	84.2	81.8-129		%REC	1	12/4/2010 8:53:03 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/6/2010 4:36:25 PM
Surr: BFB	94.2	89.7-125		%REC	1	12/6/2010 4:36:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/6/2010 4:36:25 PM
Toluene	ND	0.050		mg/Kg	1	12/6/2010 4:36:25 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/6/2010 4:36:25 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/6/2010 4:36:25 PM
Surr: 4-Bromofluorobenzene	106	88.9-151		%REC	1	12/6/2010 4:36:25 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Jan-11*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	SB-1
Lab Order:	1012142	**Collection Date:**	11/30/2010 1:00:00 PM
Project:	Chaco Ballard Ponds	**Date Received:**	12/3/2010
Lab ID:	1012142-02	**Matrix:**	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	12/5/2010 10:01:54 AM
Surr: DNOP	90.3	81.8-129		%REC	1	12/5/2010 10:01:54 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/6/2010 5:06:29 PM
Surr: BFB	88.9	89.7-125	S	%REC	1	12/6/2010 5:06:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/6/2010 5:06:29 PM
Toluene	ND	0.050		mg/Kg	1	12/6/2010 5:06:29 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/6/2010 5:06:29 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/6/2010 5:06:29 PM
Surr: 4-Bromofluorobenzene	93.4	88.9-151		%REC	1	12/6/2010 5:06:29 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Jan-11*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	SB-2
Lab Order:	1012142	**Collection Date:**	11/30/2010 2:00:00 PM
Project:	Chaco Ballard Ponds	**Date Received:**	12/3/2010
Lab ID:	1012142-03	**Matrix:**	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	12/4/2010 10:00:49 PM
Surr: DNOP	97.4	81.8-129		%REC	1	12/4/2010 10:00:49 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/6/2010 5:36:46 PM
Surr: BFB	87.2	89.7-125	S	%REC	1	12/6/2010 5:36:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/6/2010 5:36:46 PM
Toluene	ND	0.050		mg/Kg	1	12/6/2010 5:36:46 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/6/2010 5:36:46 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/6/2010 5:36:46 PM
Surr: 4-Bromofluorobenzene	92.0	88.9-151		%REC	1	12/6/2010 5:36:46 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Jan-11*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	SB-2
Lab Order:	1012142	**Collection Date:**	11/30/2010 2:15:00 PM
Project:	Chaco Ballard Ponds	**Date Received:**	12/3/2010
Lab ID:	1012142-04	**Matrix:**	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	12/5/2010 10:36:00 AM
Surr: DNOP	90.9	81.8-129		%REC	1	12/5/2010 10:36:00 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/6/2010 6:06:54 PM
Surr: BFB	103	89.7-125		%REC	1	12/6/2010 6:06:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/6/2010 6:06:54 PM
Toluene	ND	0.050		mg/Kg	1	12/6/2010 6:06:54 PM
Ethylbenzene	ND	0.050		mg/Kg	1	12/6/2010 6:06:54 PM
Xylenes, Total	ND	0.10		mg/Kg	1	12/6/2010 6:06:54 PM
Surr: 4-Bromofluorobenzene	113	88.9-151		%REC	1	12/6/2010 6:06:54 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Jan-11*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TSW-1
Lab Order:	1012142	**Collection Date:**	11/30/2010 3:00:00 PM
Project:	Chaco Ballard Ponds	**Date Received:**	12/3/2010
Lab ID:	1012142-05	**Matrix:**	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	12/5/2010 11:10:06 AM
Surr: DNOP	94.0	81.8-129		%REC	1	12/5/2010 11:10:06 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/7/2010 12:37:57 AM
Surr: BFB	88.3	89.7-125	S	%REC	1	12/7/2010 12:37:57 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/7/2010 12:37:57 AM
Toluene	ND	0.050		mg/Kg	1	12/7/2010 12:37:57 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/7/2010 12:37:57 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/7/2010 12:37:57 AM
Surr: 4-Bromofluorobenzene	94.2	88.9-151		%REC	1	12/7/2010 12:37:57 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Jan-11*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TSW-2
Lab Order:	1012142	**Collection Date:**	11/30/2010 4:00:00 PM
Project:	Chaco Ballard Ponds	**Date Received:**	12/3/2010
Lab ID:	1012142-06	**Matrix:**	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	12/4/2010 11:41:49 PM
Surr: DNOP	86.1	81.8-129		%REC	1	12/4/2010 11:41:49 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/7/2010 1:07:59 AM
Surr: BFB	96.8	89.7-125		%REC	1	12/7/2010 1:07:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/7/2010 1:07:59 AM
Toluene	ND	0.050		mg/Kg	1	12/7/2010 1:07:59 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/7/2010 1:07:59 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/7/2010 1:07:59 AM
Surr: 4-Bromofluorobenzene	105	88.9-151		%REC	1	12/7/2010 1:07:59 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Jan-11*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TSW-3
Lab Order:	1012142	**Collection Date:**	12/1/2010 10:15:00 AM
Project:	Chaco Ballard Ponds	**Date Received:**	12/3/2010
Lab ID:	1012142-07	**Matrix:**	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	12/5/2010 12:49:05 AM
Surr: DNOP	87.6	81.8-129		%REC	1	12/5/2010 12:49:05 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/7/2010 1:38:01 AM
Surr: BFB	103	89.7-125		%REC	1	12/7/2010 1:38:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/7/2010 1:38:01 AM
Toluene	ND	0.050		mg/Kg	1	12/7/2010 1:38:01 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/7/2010 1:38:01 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/7/2010 1:38:01 AM
Surr: 4-Bromofluorobenzene	114	88.9-151		%REC	1	12/7/2010 1:38:01 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *10-Jan-11*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TSW-4
Lab Order:	1012142	**Collection Date:**	12/1/2010 11:05:00 AM
Project:	Chaco Ballard Ponds	**Date Received:**	12/3/2010
Lab ID:	1012142-08	**Matrix:**	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	12/5/2010 11:44:28 AM
Surr: DNOP	98.0	81.8-129		%REC	1	12/5/2010 11:44:28 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/7/2010 2:08:06 AM
Surr: BFB	103	89.7-125		%REC	1	12/7/2010 2:08:06 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	12/7/2010 2:08:06 AM
Toluene	ND	0.050		mg/Kg	1	12/7/2010 2:08:06 AM
Ethylbenzene	ND	0.050		mg/Kg	1	12/7/2010 2:08:06 AM
Xylenes, Total	ND	0.10		mg/Kg	1	12/7/2010 2:08:06 AM
Surr: 4-Bromofluorobenzene	113	88.9-151		%REC	1	12/7/2010 2:08:06 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Glorieta GeoScience
Project: Bonestroo Dairies **Work Order:** 1012940

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions											
Sample ID: MB		*MBLK*				Batch ID:	**R42898**	Analysis Date:		12/28/2010 11:26:26 AM	
Chloride	ND	mg/L	0.50								
Nitrogen, Nitrate (As N)	ND	mg/L	0.10								
Sample ID: LCS		*LCS*				Batch ID:	**R42898**	Analysis Date:		12/28/2010 11:37:40 AM	
Chloride	5.067	mg/L	0.50	5	0	101	90	110			
Nitrogen, Nitrate (As N)	2.539	mg/L	0.10	2.5	0	102	90	110			
Method: SM2540C MOD: Total Dissolved Solids											
Sample ID: 1012940-05AMSD		*MSD*				Batch ID:	**25047**	Analysis Date:		1/3/2011 3:08:00 PM	
Total Dissolved Solids	1534	mg/L	20.0	1000	505	103	80	120	0.523	20	
Sample ID: MB-25047		*MBLK*				Batch ID:	**25047**	Analysis Date:		1/3/2011 3:08:00 PM	
Total Dissolved Solids	ND	mg/L	20.0								
Sample ID: LCS-25047		*LCS*				Batch ID:	**25047**	Analysis Date:		1/3/2011 3:08:00 PM	
Total Dissolved Solids	1015	mg/L	20.0	1000	0	102	80	120			
Sample ID: 1012940-05AMS		*MS*				Batch ID:	**25047**	Analysis Date:		1/3/2011 3:08:00 PM	
Total Dissolved Solids	1526	mg/L	20.0	1000	505	102	80	120			
Method: SM 4500 Norg C: TKN											
Sample ID: 1012940-07AMSD		*MSD*				Batch ID:	**25065**	Analysis Date:		1/4/2011 10:52:00 AM	
Nitrogen, Kjeldahl, Total	9.800	mg/L	1.0	10	0	98.0	75	125	4.38	20	
Sample ID: MB-25065		*MBLK*				Batch ID:	**25065**	Analysis Date:		1/4/2011 10:52:00 AM	
Nitrogen, Kjeldahl, Total	ND	mg/L	1.0								
Sample ID: LCS-25065		*LCS*				Batch ID:	**25065**	Analysis Date:		1/4/2011 10:52:00 AM	
Nitrogen, Kjeldahl, Total	9.520	mg/L	1.0	10	0	95.2	80	120			
Sample ID: 1012940-07AMS		*MS*				Batch ID:	**25065**	Analysis Date:		1/4/2011 10:52:00 AM	
Nitrogen, Kjeldahl, Total	9.380	mg/L	1.0	10	0	93.8	75	125			

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Southwest Geoscience
oject: Chaco Ballard Ponds **Work Order:** 1012142

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
thod: EPA Method 8015B: Diesel Range Organics											
mple ID: MB-24736		*MBLK*				Batch ID: **24736**		Analysis Date:		12/3/2010 7:01:08 AM	
Diesel Range Organics (DRO)	ND	mg/Kg	10								
tor Oil Range Organics (MRO)	ND	mg/Kg	50								
mple ID: LCS-24736		*LCS*				Batch ID: **24736**		Analysis Date:		12/3/2010 7:35:01 AM	
Diesel Range Organics (DRO)	43.46	mg/Kg	10	50	0	86.9	66.2	120			
mple ID: LCSD-24736		*LCSD*				Batch ID: **24736**		Analysis Date:		12/3/2010 8:08:52 AM	
sel Range Organics (DRO)	41.91	mg/Kg	10	50	0	83.8	66.2	120	3.62	14.3	
Method: EPA Method 8015B: Gasoline Range											
mple ID: 1012142-01AMSD		*MSD*				Batch ID: **24745**		Analysis Date:		12/6/2010 7:07:04 PM	
soline Range Organics (GRO)	26.40	mg/Kg	5.0	25	0	106	69.2	144	4.10	20.5	
Sample ID: MB-24745		*MBLK*				Batch ID: **24745**		Analysis Date:		12/7/2010 5:10:15 AM	
soline Range Organics (GRO)	ND	mg/Kg	5.0								
mple ID: LCS-24745		*LCS*				Batch ID: **24745**		Analysis Date:		12/6/2010 7:37:05 PM	
Gasoline Range Organics (GRO)	26.24	mg/Kg	5.0	25	0	105	95.7	120			
mple ID: 1012142-01AMS		*MS*				Batch ID: **24745**		Analysis Date:		12/6/2010 6:37:04 PM	
soline Range Organics (GRO)	25.34	mg/Kg	5.0	25	0	101	69.2	144			
Method: EPA Method 8021B: Volatiles											
mple ID: 1012142-01AMSD		*MSD*				Batch ID: **24745**		Analysis Date:		12/6/2010 8:37:18 PM	
thyl tert-butyl ether (MTBE)	0.9935	mg/Kg	0.10	1	0	99.4	61.3	215	2.10	19.6	
Benzene	0.9971	mg/Kg	0.050	1	0	99.7	67.2	113	0.654	14.3	
uene	0.9316	mg/Kg	0.050	1	0	93.2	62.1	116	1.32	15.9	
ylbenzene	1.009	mg/Kg	0.050	1	0	101	67.9	127	1.70	14.4	
Xylenes, Total	3.101	mg/Kg	0.10	3	0	103	60.6	134	0.842	12.6	
mple ID: MB-24745		*MBLK*				Batch ID: **24745**		Analysis Date:		12/7/2010 5:10:15 AM	
thyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10								
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
ylbenzene	ND	mg/Kg	0.050								
enes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-24745		*LCS*				Batch ID: **24745**		Analysis Date:		12/6/2010 9:07:17 PM	
thyl tert-butyl ether (MTBE)	1.004	mg/Kg	0.10	1	0	100	65.5	229			
nzene	1.050	mg/Kg	0.050	1	0	105	83.3	107			
Toluene	0.9881	mg/Kg	0.050	1	0	98.8	74.3	115			
ylbenzene	1.068	mg/Kg	0.050	1	0	107	80.9	122			
enes, Total	3.266	mg/Kg	0.10	3	0	109	85.2	123			
mple ID: 1012142-01AMS		*MS*				Batch ID: **24745**		Analysis Date:		12/6/2010 8:07:10 PM	
thyl tert-butyl ether (MTBE)	0.9729	mg/Kg	0.10	1	0	97.3	61.3	215			
nzene	0.9906	mg/Kg	0.050	1	0	99.1	67.2	113			
uene	0.9194	mg/Kg	0.050	1	0	91.9	62.1	116			
Ethylbenzene	0.9915	mg/Kg	0.050	1	0	99.2	67.9	127			
enes, Total	3.075	mg/Kg	0.10	3	0	102	60.6	134			

Qualifiers:

J	Estimated value	H	Holding times for preparation or analysis exceeded
	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Southwest GEOSCIENCE

Environmental & Hydrogeologic Consultants

Office Location Aztec

Project Manager Mitchell Summers

Laboratory: Hall

Address: 4901 Hawkins Albuquerque

Contact: Andy Freeman

Phone: 505-345-3975

PO/SO #: 0410001B

Sampler's Name: Kyle Summers

Sampler's Signature: KyL

Proj. No. 0410001B

Project Name: Chaco Bolland Ponds

No/Type of Containers

ANALYSIS REQUESTED: TPH GRO/DRO 8015, BTEX 8021

Lab use only
Due Date:

Temp. of coolers when received (C°): 3.7

1 | 2 | 3 | 4 | 5

Page 1 of 1

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	11/30/10	1245		X	SB-1	10	11				1	1012142-1
		1300			SB-1	23	24				1	-2
		1400			SB-2	15	16				1	-3
		1415			SB-2	18	19				1	-4
		1500			TSW-1	9	10				1	-5
		1600			TSW-2	10	11				1	-6
	12/1/10	1015			TSW-3	13	14				1	-7
	12/1/10	1105			TSW-4	17	18				1	-8
					WES							

Turn around time ☑ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12/2/10	1245		12/2/10	935
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 _____

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Wednesday, December 22, 2010

Kyle Summers
Southwest Geoscience
606 S. Rio Grande Unit A
Aztec, NM 87410

TEL: (903) 821-5603
FAX

RE: Chaco Ballard Ponds

Order No.: 1012369

Dear Kyle Summers:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 12/9/2010 for the analyses presented in the following report.

This report is an addendum to the report dated December 21, 2010. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Dec-10*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TSW-1
Lab Order:	1012369	**Collection Date:**	12/8/2010 11:05:00 AM
Project:	Chaco Ballard Ponds	**Date Received:**	12/9/2010
Lab ID:	1012369-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/10/2010 10:58:04 AM
Surr: DNOP	92.6	86.9-151		%REC	1	12/10/2010 10:58:04 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/15/2010 3:33:16 AM
Surr: BFB	96.0	84.5-118		%REC	1	12/15/2010 3:33:16 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/15/2010 3:33:16 AM
Toluene	ND	1.0		µg/L	1	12/15/2010 3:33:16 AM
Ethylbenzene	ND	1.0		µg/L	1	12/15/2010 3:33:16 AM
Xylenes, Total	ND	2.0		µg/L	1	12/15/2010 3:33:16 AM
Surr: 4-Bromofluorobenzene	110	81.3-151		%REC	1	12/15/2010 3:33:16 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- E Estimated value
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- MCL Maximum Contaminant Level
- NC Non-Chlorinated
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Dec-10*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TSW-2
Lab Order:	1012369	**Collection Date:**	12/8/2010 11:30:00 AM
Project:	Chaco Ballard Ponds	**Date Received:**	12/9/2010
Lab ID:	1012369-02	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	1.9	1.0		mg/L	1	12/10/2010 11:32:27 AM
Surr: DNOP	97.6	86.9-151		%REC	1	12/10/2010 11:32:27 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.11	0.050		mg/L	1	12/18/2010 12:20:30 AM
Surr: BFB	89.2	84.5-118		%REC	1	12/18/2010 12:20:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/18/2010 12:20:30 AM
Toluene	1.3	1.0		µg/L	1	12/18/2010 12:20:30 AM
Ethylbenzene	ND	1.0		µg/L	1	12/18/2010 12:20:30 AM
Xylenes, Total	11	2.0		µg/L	1	12/18/2010 12:20:30 AM
Surr: 4-Bromofluorobenzene	94.1	81.3-151		%REC	1	12/18/2010 12:20:30 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Dec-10*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TSW-3
Lab Order:	1012369	**Collection Date:**	12/8/2010 10:15:00 AM
Project:	Chaco Ballard Ponds	**Date Received:**	12/9/2010
Lab ID:	1012369-03	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/10/2010 12:06:51 PM
Surr: DNOP	98.0	86.9-151		%REC	1	12/10/2010 12:06:51 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/15/2010 5:03:12 AM
Surr: BFB	86.1	84.5-118		%REC	1	12/15/2010 5:03:12 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/15/2010 5:03:12 AM
Toluene	ND	1.0		µg/L	1	12/15/2010 5:03:12 AM
Ethylbenzene	ND	1.0		µg/L	1	12/15/2010 5:03:12 AM
Xylenes, Total	ND	2.0		µg/L	1	12/15/2010 5:03:12 AM
Surr: 4-Bromofluorobenzene	93.8	81.3-151		%REC	1	12/15/2010 5:03:12 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: *22-Dec-10*

CLIENT:	Southwest Geoscience	**Client Sample ID:**	TSW-4
Lab Order:	1012369	**Collection Date:**	12/8/2010 10:40:00 AM
Project:	Chaco Ballard Ponds	**Date Received:**	12/9/2010
Lab ID:	1012369-04	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JB**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	12/10/2010 12:40:58 PM
Surr: DNOP	93.1	86.9-151		%REC	1	12/10/2010 12:40:58 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	12/16/2010 2:05:36 PM
Surr: BFB	97.9	84.5-118		%REC	1	12/16/2010 2:05:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	12/16/2010 2:05:36 PM
Toluene	ND	1.0		µg/L	1	12/16/2010 2:05:36 PM
Ethylbenzene	ND	1.0		µg/L	1	12/16/2010 2:05:36 PM
Xylenes, Total	ND	2.0		µg/L	1	12/16/2010 2:05:36 PM
Surr: 4-Bromofluorobenzene	116	81.3-151		%REC	1	12/16/2010 2:05:36 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Southwest Geoscience
Project: Chaco Ballard Ponds
Work Order: 1012369

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range											
Sample ID: MB-24818		*MBLK*				**Batch ID: 24818**		**Analysis Date: 12/10/2010 9:15:30 AM**			
Diesel Range Organics (DRO)	ND	mg/L	1.0								
Motor Oil Range Organics (MRO)	ND	mg/L	5.0								
Sample ID: LCS-24818		*LCS*				**Batch ID: 24818**		**Analysis Date: 12/10/2010 9:49:50 AM**			
Diesel Range Organics (DRO)	5.025	mg/L	1.0	5	0	101	74	157			
Sample ID: LCSD-24818		*LCSD*				**Batch ID: 24818**		**Analysis Date: 12/10/2010 10:23:58 AM**			
Diesel Range Organics (DRO)	5.145	mg/L	1.0	5	0	103	74	157	2.36	23	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 1012369-04A MSD		*MSD*				**Batch ID: R42721**		**Analysis Date: 12/16/2010 7:38:55 PM**			
Gasoline Range Organics (GRO)	0.5046	mg/L	0.050	0.5	0	101	74.6	134	0.593	17	
Sample ID: 5ML RB		*MBLK*				**Batch ID: R42665**		**Analysis Date: 12/14/2010 8:56:18 AM**			
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 5ML RB		*MBLK*				**Batch ID: R42721**		**Analysis Date: 12/16/2010 9:10:06 AM**			
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 5ML RB		*MBLK*				**Batch ID: R42751**		**Analysis Date: 12/17/2010 9:17:49 AM**			
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		*LCS*				**Batch ID: R42665**		**Analysis Date: 12/14/2010 11:55:59 AM**			
Gasoline Range Organics (GRO)	0.5130	mg/L	0.050	0.5	0	103	83.7	124			
Sample ID: 2.5UG GRO LCS		*LCS*				**Batch ID: R42721**		**Analysis Date: 12/16/2010 12:08:13 PM**			
Gasoline Range Organics (GRO)	0.5260	mg/L	0.050	0.5	0	105	83.7	124			
Sample ID: 2.5UG GRO LCS		*LCS*				**Batch ID: R42751**		**Analysis Date: 12/17/2010 7:19:44 PM**			
Gasoline Range Organics (GRO)	0.5292	mg/L	0.050	0.5	0	106	83.7	124			
Sample ID: 2.5UG GRO LCSD		*LCSD*				**Batch ID: R42751**		**Analysis Date: 12/17/2010 7:49:59 PM**			
Gasoline Range Organics (GRO)	0.5130	mg/L	0.050	0.5	0	103	83.7	124	3.11	12	
Sample ID: 1012369-04A MS		*MS*				**Batch ID: R42721**		**Analysis Date: 12/16/2010 7:08:46 PM**			
Gasoline Range Organics (GRO)	0.5076	mg/L	0.050	0.5	0	102	74.6	134			

Qualifiers:

I	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
N	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Southwest Geoscience
Project: Chaco Ballard Ponds **Work Order:** 1012369

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles											
Sample ID: 5ML RB		*MBLK*				**Batch ID: R42665**		**Analysis Date:**	12/14/2010 8:56:18 AM		
thyl tert-butyl ether (MTBE)	ND	µg/L	2.5								
nzene	ND	µg/L	1.0								
oluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
enes, Total	ND	µg/L	2.0								
,4-Trimethylbenzene	ND	µg/L	1.0								
1,3,5-Trimethylbenzene	ND	µg/L	1.0								
nple ID: 5ML RB		*MBLK*				**Batch ID: R42721**		**Analysis Date:**	12/16/2010 9:10:06 AM		
hyl tert-butyl ether (MTBE)	ND	µg/L	2.5								
Benzene	ND	µg/L	1.0								
ene	ND	µg/L	1.0								
ylbenzene	ND	µg/L	1.0								
nes, Total	ND	µg/L	2.0								
1.2.4-Trimethylbenzene	ND	µg/L	1.0								
5-Trimethylbenzene	ND	µg/L	1.0								
mple ID: 5ML RB		*MBLK*				**Batch ID: R42751**		**Analysis Date:**	12/17/2010 9:17:49 AM		
Methyl tert-butyl ether (MTBE)	ND	µg/L	2.5								
zene	ND	µg/L	1.0								
ene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
nes, Total	ND	µg/L	2.0								
-Trimethylbenzene	ND	µg/L	1.0								
,5-Trimethylbenzene	ND	µg/L	1.0								
Sample ID: 100NG BTEX LCS		*LCS*				**Batch ID: R42665**		**Analysis Date:**	12/14/2010 8:02:24 PM		
yl tert-butyl ether (MTBE)	19.23	µg/L	2.5	20	0	96.2	75.5	124			
ene	20.69	µg/L	1.0	20	0	103	84.7	118			
Toluene	21.13	µg/L	1.0	20	0	106	82	123			
lbenzene	21.27	µg/L	1.0	20	0	106	83	118			
nes, Total	65.57	µg/L	2.0	60	0	109	85.4	119			
1,2,4-Trimethylbenzene	19.91	µg/L	1.0	20	0	99.6	82.1	113			
1,3,5-Trimethylbenzene	21.85	µg/L	1.0	20	0	109	89.6	119			
Sample ID: 100NG BTEX LCS		*LCS*				**Batch ID: R42721**		**Analysis Date:**	12/16/2010 12:38:12 PM		
Methyl tert-butyl ether (MTBE)	21.69	µg/L	2.5	20	0	108	75.5	124			
Benzene	21.11	µg/L	1.0	20	0	106	84.7	118			
Toluene	21.86	µg/L	1.0	20	0	109	82	123			
Ethylbenzene	21.86	µg/L	1.0	20	0	109	83	118			
Xylenes, Total	67.04	µg/L	2.0	60	0	112	85.4	119			
1,2,4-Trimethylbenzene	20.68	µg/L	1.0	20	0	103	82.1	113			
1,3,5-Trimethylbenzene	22.54	µg/L	1.0	20	0	113	89.6	119			
Sample ID: 100NG BTEX LCS		*LCS*				**Batch ID: R42751**		**Analysis Date:**	12/17/2010 8:20:01 PM		
Methyl tert-butyl ether (MTBE)	19.89	µg/L	2.5	20	0	99.5	75.5	124			
Benzene	20.14	µg/L	1.0	20	0	101	84.7	118			
Toluene	20.86	µg/L	1.0	20	0	104	82	123			

Qualifiers:

	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Southwest Geoscience
oject: Chaco Ballard Ponds **Work Order:** 1012369

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
thod: EPA Method 8021B: Volatiles											
Sample ID: 100NG BTEX LCS		*LCS*				**Batch ID:**	**R42751**	**Analysis Date:**		**12/17/2010 8:20:01 PM**	
ylbenzene	20.67	µg/L	1.0	20	0	103	83	118			
enes, Total	64.28	µg/L	2.0	60	0	107	85.4	119			
,2,4-Trimethylbenzene	20.42	µg/L	1.0	20	0	102	82.1	113			
3,5-Trimethylbenzene	21.69	µg/L	1.0	20	0	108	89.6	119			
nple ID: 100NG BTEX LCSD		*LCSD*				**Batch ID:**	**R42751**	**Analysis Date:**		**12/17/2010 8:50:07 PM**	
....hyl tert-butyl ether (MTBE)	19.43	µg/L	2.5	20	0	97.2	75.5	124	2.35	15.7	
Benzene	19.36	µg/L	1.0	20	0	96.8	84.7	118	3.93	17.7	
uene	19.80	µg/L	1.0	20	0	99.0	82	123	5.22	21.1	
ylbenzene	19.90	µg/L	1.0	20	0	99.5	83	118	3.82	19	
Xylenes, Total	61.76	µg/L	2.0	60	0	103	85.4	119	4.00	16.5	
4-Trimethylbenzene	19.32	µg/L	1.0	20	0	96.6	82.1	113	5.52	8.83	
5-Trimethylbenzene	20.59	µg/L	1.0	20	0	103	89.6	119	5.20	11.3	

lifiers:

	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
]	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

Southwest GEOSCIENCE
Environmental & Hydrogeologic Consultants

Office Location: Aztec

Project Manager: Kyle Summers

Laboratory: Hall

Address: Albuquerque, NM

Contact:

Phone: 505-345-3975

PO/SO #: 04100018

Sampler's Name: Kyle Summers

Sampler's Signature: KyL

Proj. No.: 04100018

Project Name: Chaco Ballard Ponds

No/Type of Containers

ANALYSIS REQUESTED: TPH GRO-DRO 8015 | BTEX 8021

Lab use only
Due Date:

Temp. of coolers when received (C°): 2.9

1 | 2 | 3 | 4 | 5

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Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	P/O	TPH GRO-DRO 8015	BTEX 8021	Lab Sample ID (Lab Use Only)
H_2O	12/8/10	1105		X	TSW-1			4				X	X	1012369-1
	12/8/10	1130		X	TSW-2			4				X	X	-2
	12/8/10	1015		X	TSW-3			4				X	X	-3
	12/8/10	1040		X	TSW-4			4				X	X	-4

NFS
K.S.

Turn around time: [X] Normal [ ] 25% Rush [ ] 50% Rush [ ] 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
KyL	12/8/10	1700	[signature]	12/9/10	9:00
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 _____