GW - 125

Soil Remediation

2010 - 2011

Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Tuesday, March 08, 2011 9:36 AM
To: 'jknowlton@yatespetroleum.com'
Cc: 'jenniferk@yatespetroleum.com'; Swazo, Sonny, EMNRD
Subject: Penasco CS

Jennifer,

I have reviewed the recommendations for installation and monitoring of passive soil ventilation at Agave's Penasco Compressor Station as provided by SESI in their letters of 2/7/11 and 3/4/11. Those efforts are hereby approved and you may begin installation of the vents as soon as possible. Please retain a copy of this email for your files as no hardcopy will be mailed. Thank you as always for your efforts and good luck. Please keep me apprised of your progress.

Jim Griswold
Senior Hydrologist
EMNRD/Oil Conservation Division
1220 South St. Francis Drive
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direct: 505.476.3465
email: jim.griswold@state.nm.us

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Safety & Environmental Solutions, Inc.

March 4, 2011

Mr. Jim Griswold
Senior Hydrologist, Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Yates Penasco Compressor station, Passive Vent Well Installation

Dear Mr. Griswold:

This letter is an addendum to my correspondence of February 11, 2011 which provided recommendations for installation and monitoring of the passive ventilation wells at the Yates Penasco compressor station. It is submitted following yesterday's telephone conference call between OCD, Yates and myself that discussed monitoring and closure provisions in the letter. As a result of that conversation Yates is revising those sections of the February 11 letter and substituting the provisions below. For continuity, the description of the passive vent well installation is included.

Passive Vent Well Installation

Passive wind ventilation turbines will be installed at the former tank battery and Sump 23 locations. A passive system will be used due to the presence of lighter organics and the fact that the use of an active system would likely trigger air permitting requirements, delaying implementation of the vapor extraction system. The New Mexico Environment Department's Air Quality Bureau has been notified of the pending installation.

Eleven vents will be installed at the tank battery in a modified five-spot array. The distance between the vents will be approximately 15 feet. The pipe to be used is 3-inch PVC which will be slotted in a manner similar to pipe used in septic tank leach fields. At the tank battery the pipe will be slotted from 25 to 45 feet with blank pipe above. The annular space above 25 feet will be sealed with hydrated bentonite to prevent short circuiting of air.

At Sump 23 one vent will be installed in the center of the former sump and will be slotted from 10 to 45 feet. Again the upper area will be sealed with bentonite.

Monitoring

At both the former tank battery and sump 23 locations the individual pipes will be equipped with sample valves so that they can be monitored for vapors in the vent pipe. The vents will be shut-in monthly for a 72 hour period and at the end of that period monitored for vapors using a PID. Additionally, the vent well at sump 23 and a representative sample of four vents at the tank battery location will be sampled quarterly with the first quarterly sampling to include an analysis for BTEX and other volatile hydrocarbons using EPA Method 8260. If the results of the first sampling do not show the presence of regulated volatile hydrocarbons other than BTEX,

subsequent quarterly samples may be analyzed using EPA Method 8021. The results of the PID measurement and laboratory testing will be submitted to the OCD in an annual report.

Based on our research, we do not recommend using CO_2 as an indicator of biodegradation. One reference text* on remediation with a section on bioventing cautions that higher pH and higher alkalinity soils will exhibit little CO_2 in soil gas due to the formation of carbonates. Soil water content will also impact the measurable CO_2 due to the solubility of the gas. At the a depth of 35 feet in the center tank battery boring we observed saturated clayey gravel (likely due to the previous flooding of the partially excavated pit; no other saturation was observed in the other borings). Therefore, monitoring of CO_2 may provide little information as the results may falsely show little or no activity, or indicate completion of activity when in fact microbial-generated CO_2 is being removed downhole. Monitoring with the PID together with initial and periodic BTEX sampling will best provide progress on remediation.

Closure

We propose closure of the passive ventilation system once we have two consecutive quarters with less than 100 ppm PID results and BTEX sampling provides confirmation of the results. At that time OCD will be advised of our intent to close the system and Yates will be requesting OCD approval. Upon approval by the agency, Yates will remove the vents or alternately, if removal is not possible, plug them by cutting off the PVC below grade and filling with bentonite which will be hydrated.

If you have any questions or I may be of further assistance, please call me at (575) 397-0510.

Sincerely,

s/DGB

David G. Boyer, P.G.

Encl.

cc. Jennifer Knowlton, Agave Energy

*S.S. Suthersan, 1997. "Remediation Engineering, Design Concepts." Geraghty & Miller Environmental and Engineering Series, Lewis Publishers, New York.

Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Tuesday, March 01, 2011 4:15 PM
To: 'jenniferk@yatespetroleum.com'
Cc: 'jknowlton@yatespetroleum.com'
Subject: Penasco CS

Jennifer,

In an effort to expedite our planned teleconference of Thursday, I am sending you my current comments regarding the 2/7/11 submission by SESI regarding the installation of passive vents to deal with remaining soil contamination at Agave's Penasco CS west of Atoka. I will leave it to you to forward these comments to others as you see fit.

On Page 4 of the document discussing the well installation it states, *"A passive system will be used due to the presence of lighter organics and the fact that the use of an active system would likely trigger air permitting requirements, delaying implementation of the vapor extraction system."* To reiterate my past statements on the use of passive vs. active venting, in this instance with what appears to be a relatively modest volume of remaining contaminant mass, I have no problem with a passive system other than it would almost invariably require a longer time to reach closure. However, I am surprised Agave and SESI feel that emissions from even a passive system would not be of some concern to the NMED's Air Quality Bureau. I would think this would constitute only a minor modification to whatever permit you may have and can be dealt with quickly with a simple administrative approval. Nonetheless, they should be informed. I am willing to speak with them if you think it'll help.

Also on Page 4 in the section discussing monitoring, it basically says that every quarter each of the vents will be shut in for 3 days prior to sampling to allow for vapors to accumulate. Then a sample would be gathered for BTEX analysis. PID readings would be taken on a more frequent basis to evaluate the effectiveness of the system. Carbon dioxide will not be monitored as y'all feel the soil chemistry is such that it might lead to false conclusions as to the pace of remediation. Given that the probable released hydrocarbon was condensate, my concern is that SESI should analyze the laboratory samples by Method 8260 full list, at least at the start, rather than just for BTEX. However, all 11 of the proposed vents within the tank battery area do not need to be regularly sampled for lab analysis. Maybe just 3 or 4, but all should be monitored with the PID.

On Page 5 discussing system closure, Agave and SESI propose not submitting sampling data until 2 consecutive quarters with less than 100 ppm PID readings are achieved. A BTEX sample would also be taken at that time for lab confirmation. Furthermore, if the BTEX and PID data are both less than 100 ppm, you would either remove or plug the vents. Bless your heart for not wanting to trouble me any more than necessary. However, I respectfully suggest you get OCD concurrence before you go to all the expense of taking the vents permanently out of service. We need to consider advancing confirmation borings before implementing closure. Furthermore, annual reporting is justified.

Jim Griswold
Senior Hydrologist
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1220 South St. Francis Drive
Santa Fe, New Mexico 87505
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email: jim.griswold@state.nm.us

Griswold, Jim, EMNRD

From: Jennifer Knowlton [jenniferk@yatespetroleum.com]
Sent: Thursday, February 24, 2011 9:12 AM
To: 'David Boyer'; Griswold, Jim, EMNRD
Cc: 'Bob Allen'; 'Matt Joy'
Subject: RE: Agave's Penasco CS

Mr. Grizwold,

Agave would like to see a draft of the conditions of approval if OCD is going to add monitoring and closure requirements that we haven't we yet. We will make every effort to turn around any drafts in as short a time as possible.

Jennifer Knowlton, PE

Agave Energy Company

105 South Fourth Street

Artesia, NM 88210

575-748-4471 (work)

505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

> -----Original Message-----
> **From:** David Boyer [mailto:dgboyer@sesi-nm.com]
> **Sent:** Thursday, February 24, 2011 9:10 AM
> **To:** Griswold, Jim, EMNRD
> **Cc:** Bob Allen; Jennifer Knowlton
> **Subject:** RE: Agave's Penasco CS
>
> Jim,
> Thanks for the note. Will be looking for your comments.
> Dave
>
> David G. Boyer, P.G.
> Hydrogeologist
> Safety and Environmental Solutions, Inc.
> P.O. Box 1613
> 703 E. Clinton
> Hobbs, NM 88241
> office: 575-397-0510
> fax: 575-393-4388
> cell: 575-390-7067
> email: dgboyer@sesi-nm.com
>
> > -----Original Message-----
> > **From:** Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
> > **Sent:** Thursday, February 24, 2011 8:57 AM
> > **To:** dgboyer@sesi-nm.com
> > **Subject:** Agave's Penasco CS
> >
> > David,

Got your voicemail. Sorry I haven't been able to respond. Eyeballs and alligators, I'm sure you know the situation. I'm booked solid today, but am scheduled to speak with Sonny Swazo about the project tomorrow morning, so I will be in touch thereafter. My cursory review indicates were are going to need more specifics regarding monitoring and closure but those can be handled as conditions of approval rather than requiring resubmission (with Agave's agreement, of course). Thanks for your patience.

Jim Griswold
Senior Hydrologist
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Safety & Environmental Solutions, Inc.

February 7, 2011

Mr. Jim Griswold
Senior Hydrologist, Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Dear Mr. Griswold:

This letter provides specific recommendations for installation and monitoring of the passive ventilation wells at the Yates Penasco compressor station. It also summarizes the results of the work performed to date as that work supports the recommendations.

Two reports submitted to Yates in the fourth quarter of 2010 detailed the investigation conducted at the compressor station (Report of Investigation dated October 8, 2010) and the excavation and backfill of the tank battery location (Closure Report dated December 5, 2010). Copies of these reports were submitted to the Oil Conservation Division as part of the remediation process.

Background

Two areas originally contained sumps (Sump 2 and Sump 23) that were removed and contamination was found in the soil beneath the sumps. The third area originally contained above ground tanks (the tank battery) and contamination was found after the tanks were removed. The locations of the areas investigated are shown in the attached figures (site plan and aerial photograph).

At Sumps #2 and #23 the most highly contaminated soils were removed to a depth of 20' and 13' respectively. Subsequent sampling determined that neither vertical nor horizontal extent of contamination had been reached in either excavation.

Following earlier removal of the tanks, the bermed tank battery area was sampled and it too was determined that vertical and horizontal extent of contamination had not been reached.

Summary of October, 2010 Investigation Report

A soil boring investigation was conducted in June and July 2010 to determine horizontal and vertical extent of contamination at the three locations at the Yates yard. At each location borings were advanced to either auger refusal or until hydrocarbon impacted material was no longer encountered. Sampling results and analyses were previously reported and presented to Yates in the October report of Investigation.

Results of the review were compared with NM Oil Conservation Division "Guidelines for Remediation of Leaks, Spills and Releases" (1993) to determine the relative threat to public health, fresh waters and the environment, and to provide guidance for remediation.

Depth to water for the five wells closest to the Peñasco yard averages 182 feet. The closest private well is used by Yates and its distance is 285 feet from the location of Sump 2. The depth to water in that well was reported as 200 feet. Comparing values of depth to water, wellhead protection area and distance to a surface water body (ephemeral Peñasco Draw approximately 1,560 feet) with the ranking criteria results in a ranking score of 20 and establishes recommended remediation levels of benzene at 10 ppm (mg/Kg), total BTEX of 50 ppm and TPH of 100 ppm.

Based on the above ranking criteria, four of the soil borings from the tank battery location, two borings at the Sump 2 location and one boring from Sump 23 exceed the ranking criteria in one or more soil samples from each boring.

At the tank battery, two borings (center excavation, BSB-1, 40 feet; and south-side excavation, BSB-2, 42 feet) exceeded the 100 mg/Kg standard at boring total depth. At those depths, minimal levels of benzene, total BTEX and TPH remain in these two boreholes. Auger refusal in boulders and cobbles prevented further sampling below 40-42 feet from the surface. Vertical extent of contamination was established in tank battery borings other than those two shown above.

Though upper samples from both Sumps 2 and 23 showed contaminants above OCD standards, such contaminants were not detected at laboratory quantitation levels at boring depth.

The table attached with this letter presents a summary of the analytical results for those borings at the former tank battery, Sump 2 and Sump 23 not meeting the ranking criteria.

In accordance with OCD guidelines, the October 8 investigation report included recommendations for removal of highly contaminated soil in the tank battery area and passive wind ventilation turbine for remediation of soil exceeding guidance standards but not able to be excavated.

Contaminated soil had previously been removed to a depth of 20 and 13 feet at Sump 2 and Sump 23, respectively, which was the maximum practical depth at these locations, and to between 5 and 7 feet at the Tank Battery. Based on the results of the soil borings, additional excavation was a practical remedy only at the former Tank Battery location.

Summary of Closure Activities

Beginning October 25, 2010 and concluding on October 29, the tank battery location was excavated to a depth of twenty-four (24) feet below ground surface. Approximately 3,300 yards of contaminated soils were excavated from the tank battery area and transferred to Jay-Dan Land Farm, an OCD approved disposal facility. Returning trucks contained clean caliche for later backfill of the excavation.

In addition, several hundred yards of unsaturated, non-stained material were removed from the excavation and stockpiled on site for later return to the excavation. This material was tested on October 26 with results of the analysis shown in the table below. This material was directed to be blended with the caliche before placement in the excavation.

Soil Sample ID	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl-benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	GRO C6-C10 (mg/Kg)	DRO C10-C28 (mg/Kg)	Method 418.1 TPH (mg/Kg)
Non-stained stockpile	<0.100	0.100	<0.100	<0.100	<0.100	<10.0	25.1	110
Bottom (24'bgs)	<0.050	0.181	<0.050	<0.150	0.181	<10.0	89.4	170
West Wall	<0.050	0.054	<0.050	<0.150	0.054	<10.0	<10.0	<10.0
East Wall	<0.050	0.117	<0.050	<0.150	0.117	<10.0	<10.0	12.0
North Wall	<0.050	0.070	<0.050	<0.150	0.070	<10.0	22.9	100
South Wall	<0.050	0.155	<0.050	<0.050	0.155	<10.0	<10.0	10.0

NMOCD approved backfilling of the excavation on November 4, 2010; backfill began on November 10 and concluded on November 12, 2010. Approximately 3,536 cubic yards of caliche plus the non-stained stockpiled material were used as backfill. The location area was then contoured to its natural earth form.

Subsequent Work

With the completion of the excavation of the highly contaminated soil material, the following recommendations from the October 8 report remained:

1. Provided that air quality issues and/or permitting are not a restrictive consideration, installation of a grid of passive wind ventilation turbines is recommended with a grid pattern defined by battery soil boring locations BSB-1, BSB-2, BSB-4 and the sides of the existing excavation.
2. Installation of a passive wind ventilation turbine is recommended at the center of Sump 2 and the center of Sump 23 provided that air quality issues and/or permitting are not a restrictive consideration.

The above recommendations were discussed in a January 4 conference call with Mr. Jim Griswold, Senior Hydrologist with the Oil Conservation Division. Mr. Griswold requested that we perform contaminate mass calculations at the tank battery and Sump 23 locations. The results of those calculations, as well as the calculation for Sump 2, are shown below:

Total Mass	Benzene (Kg)	Total BTEX (Kg)	GRO (Kg)	DRO (Kg)	418.1 TPH (Kg)
Tank Battery	0.377	25.1	189	183	797
Sump 23	<0.043	0.774	10.0	17.9	3,987
Sump 2	<0.008	<0.008	<0.165	4.55	59

Because the 418.1 TPH results are elevated in the analytical results, Cardinal Laboratories in Hobbs was requested to look at EPA method 8015 and 8260 chromatograms at all three locations for indications as to the hydrocarbon composition.

They reported that chromatograms at the tank battery and Sump 23 locations have the characteristics of petroleum condensate. However, neither of the two analytical methods would detect other organics such as ethylene glycol or organic soaps that might be contributing to the high 418.1 TPH in Sump 23. At Sump 2 they reported that the chromatograms were indicative of DRO hydrocarbons.

At my request they also reported results of higher range organics (MRO) not previously included in the method 8015 analytical report. For all three locations and for all sample intervals, MRO was <10.0 mg/Kg. The MRO results are included in the table at the end of this letter. The absence of heavier hydrocarbons indicates that passive venting will be highly effective in removing the lighter ends at the former tank battery and Sump 23 locations.

During the conversation with Mr. Griswold on January 4 and based on the original GRO/GRO/418.1 TPH analytical data in the attached table, he recommended that no further action be taken at Sump 2. Supplemental data from Cardinal Laboratories further supports this recommendation as no hydrocarbons above diesel range organics were detected (MRO <10.0 mg/Kg). Additionally, 8015 TPH is less than the 100 mg/Kg OCD-TPH guideline for this location. Finally, though the 418.1 TPH values exceed 100 mg/Kg, maximum vertical hydrocarbon extent was determined (30 feet) and the depth to groundwater is in the range of 200 feet.

Passive Vent Well Installation

Passive wind ventilation turbines will be installed at the former tank battery and Sump 23 locations. A passive system will be used due to the presence of lighter organics and the fact that the use of an active system would likely trigger air permitting requirements, delaying implementation of the vapor extraction system.

Eleven vents will be installed at the tank battery in a modified five-spot array. The distance between the vents will be approximately 15 feet. The pipe to be used is 3-inch PVC which will be slotted in a manner similar to pipe used in septic tank leach fields. At the tank battery the pipe will be slotted from 25 to 45 feet with blank pipe above. The annular space above 25 feet will be sealed with hydrated bentonite to prevent short circuiting of air.

At Sump 23 one vent will be installed in the center of the former sump and will be slotted from 10 to 45 feet. Again the upper area will be sealed with bentonite.

Monitoring

At both locations the individual pipes will be equipped with sample valves so that they can be monitored for vapors in the vent pipe. The vents will be shut-in for a 72 hour period and at the end of that period monitored for vapors using a PID. The vents will be sampled quarterly with the first sampling to include an analysis for BTEX. Yates may decide to take more frequent PID measurements at the start of the remediation to ensure that the passive vent system is effective.

Based on our research, we do not recommend using CO_2 as an indicator of biodegradation. One reference text* on remediation with a section on bioventing cautions that higher pH and higher alkalinity soils will exhibit little CO_2 in soil gas due to the formation of carbonates. Soil water content will also impact the measurable CO_2 due to the solubility of the gas. At the a depth of 35 feet in the center tank battery boring we observed saturated clayey gravel (likely due to the previous flooding of the partially excavated pit; no other saturation was observed in the other borings). Therefore, monitoring of CO_2 may provide little information as the results may falsely show little or no activity, or indicate completion of activity when in fact microbial-generated CO_2 is being removed downhole. Monitoring with the PID together with initial and periodic BTEX sampling will best provide progress on remediation.

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*S.S. Suthersan, 1997. "Remediation Engineering, Design Concepts." Geraghty & Miller Environmental and Engineering Series, Lewis Publishers, New York.

Closure

We propose submitting results of the vent sampling once we have two consecutive quarters with less than 100 ppm PID results. At that time we will take a BTEX sample which should provide confirmation of the results. Upon confirmation of the 100 ppm PID results, we will remove the vents or alternately, if removal is not possible, plug them by cutting off the PVC below grade and filling with bentonite which will be hydrated.

If you have any questions or I may be of further assistance, please call me at (575) 397-0510.

Sincerely,

David G. Boyer, P.G.

Encl.

cc. Jennifer Knowlton, Agave Energy

Soil Boring Analytical Results (mg/Kg) Exceeding OCD Guidelines, June-July 2010 Penasco Yard Investigation

Location:	Boring ID and Corrected Depth (feet below original land surface)	Sample Date	Benzene (<10 mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	MRO (>C28-C35) (mg/Kg)	TPH (8015) (<100 mg/Kg)	TPH (418.1) (<100 mg/Kg)
Tank Battery									
Center excavation	BSB-1, 10 ft.*	06/29/10	<0.050	<0.050	13.3	104	<10.0	**117**	**1,580**
Center excavation	BSB-1, 15 ft.*	06/29/10	<0.050	23.1	305	424	<10.0	**729**	**1,500**
Center excavation	BSB-1, 20 ft.*	06/29/10	1.68	**118**	1,420	1,240	<10.0	**2,660**	**7,030**
Center excavation	BSB-1, 25 ft.*	06/29/10	0.234	16.0	13.0	<10.0	<10.0	13	<100
Center excavation	BSB-1, 30 ft.	06/29/10	0.134	5.01	<10.0	<10.0	<10.0	<10.0	<100
Center excavation	BSB-1, 35 ft.	06/29/10	0.081	9.57	238	301	<10.0	**539**	**1,290**
Center excavation	BSB-1, 40 ft.	06/29/10	0.084	5.05	60.4	11.9	<10.0	72.3	**332**
S-side excavation	BSB-2, 10 ft.*	06/29/10	<0.050	7.21	33.5	28.3	<10.0	61.8	**1,690**
S-side excavation	BSB-2, 15 ft.*	06/29/10	<0.050	4.32	47.6	10.7	<10.0	58.3	<100
S-side excavation	BSB-2, 20 ft.*	06/29/10	<0.050	0.704	<10.0	<10.0	<10.0	<10.0	<100
S-side excavation	BSB-2, 25 ft.*	06/29/10	<0.050	<0.050	80.8	57.1	<10.0	**138**	**255**
S-side excavation	BSB-2, 30 ft.	06/29/10	<0.050	1.66	41.0	56.2	<10.0	97.2	<100
S-side excavation	BSB-2, 35 ft.	06/29/10	0.156	21.8	479	387	<10.0	**866**	**1,470**
S-side excavation	BSB-2, 40 ft.	06/29/10	0.235	17.3	180	124	<10.0	**304**	**530**
S-side excavation	BSB-2, 42 ft.	06/29/10	<0.050	0.916	33.6	71.7	<10.0	**105**	**163**

Table Notes:
* Tank battery soil above 24 feet was subsequently excavated October/November 2010 and replaced with clean fill material
Bold – exceeds NMOCD guideline value for this facility as shown on the top of each table column.

Soil Boring Analytical Results (mg/Kg) Exceeding OCD Guidelines, June-July 2010 Penasco Yard Investigation (continued)

Location:	Boring ID and Corrected Depth (feet below original land surface)	Sample Date	Benzene (<10 mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	MRO (>C28-C35) (mg/Kg)	TPH (8015) (<100 mg/Kg)	TPH (418.1) (<100 mg/Kg)
Tank Battery									
W-side excavation.	BSB-4, 10.5 ft.*	07/27/10	1.92	**123**	1,140	994	<10.0	**2,134**	**3,240**
W-side excavation.	BSB-4, 15.5 ft.*	07/27/10	3.84	**148**	445	743	<10.0	**1,188**	**3,070**
W-side excavation.	BSB-4, 20.5 ft.*	07/27/10	1.67	**124**	306	619	<10.0	**925**	**2,870**
W-side excavation.	BSB-4, 25.5 ft.*	07/27/10	4.24	**100**	440	351	<10.0	**791**	**1,620**
W-side excavation.	BSB-4, 30.5 ft.	07/27/10	2.71	**132**	608	570	<10.0	**1,178**	**2,740**
W-side excavation.	BSB-4, 35.5 ft.	07/27/10	0.278	62.7	295	388	<10.0	**683**	**1,430**
W-side excavation.	BSB-4, 40.5 ft.	07/27/10	<0.100	<0.100	<10.0	<10.0	<10.0	<10.0	<100
W-side excavation.	BSB-4, 45.5 ft.	07/27/10	<0.100	<0.100	<10.0	<10.0	<10.0	<10.0	<100
N-side excavation.	BSB-5, 10.5 ft.*	07/27/10	<0.100	<0.100	<10.0	<10.0	N/A	- -	**580**
N-side excavation.	BSB-5, 20.5 ft.*	07/27/10	<0.100	1.37	<10.0	<10.0	N/A	- -	<100
N-side excavation.	BSB-5, 25.5 ft.*	07/27/10	<0.100	1.96	<10.0	<10.0	N/A	- -	<100
N-side excavation.	BSB-5, 30.5 ft.	07/27/10	<0.100	<0.100	<10.0	<10.0	N/A	- -	<100

Table Notes:
* Tank battery soil above 24 feet was subsequently excavated October/November 2010 and replaced with clean fill material
Bold – exceeds NMOCD guideline value for this facility as shown on the top of each table column.

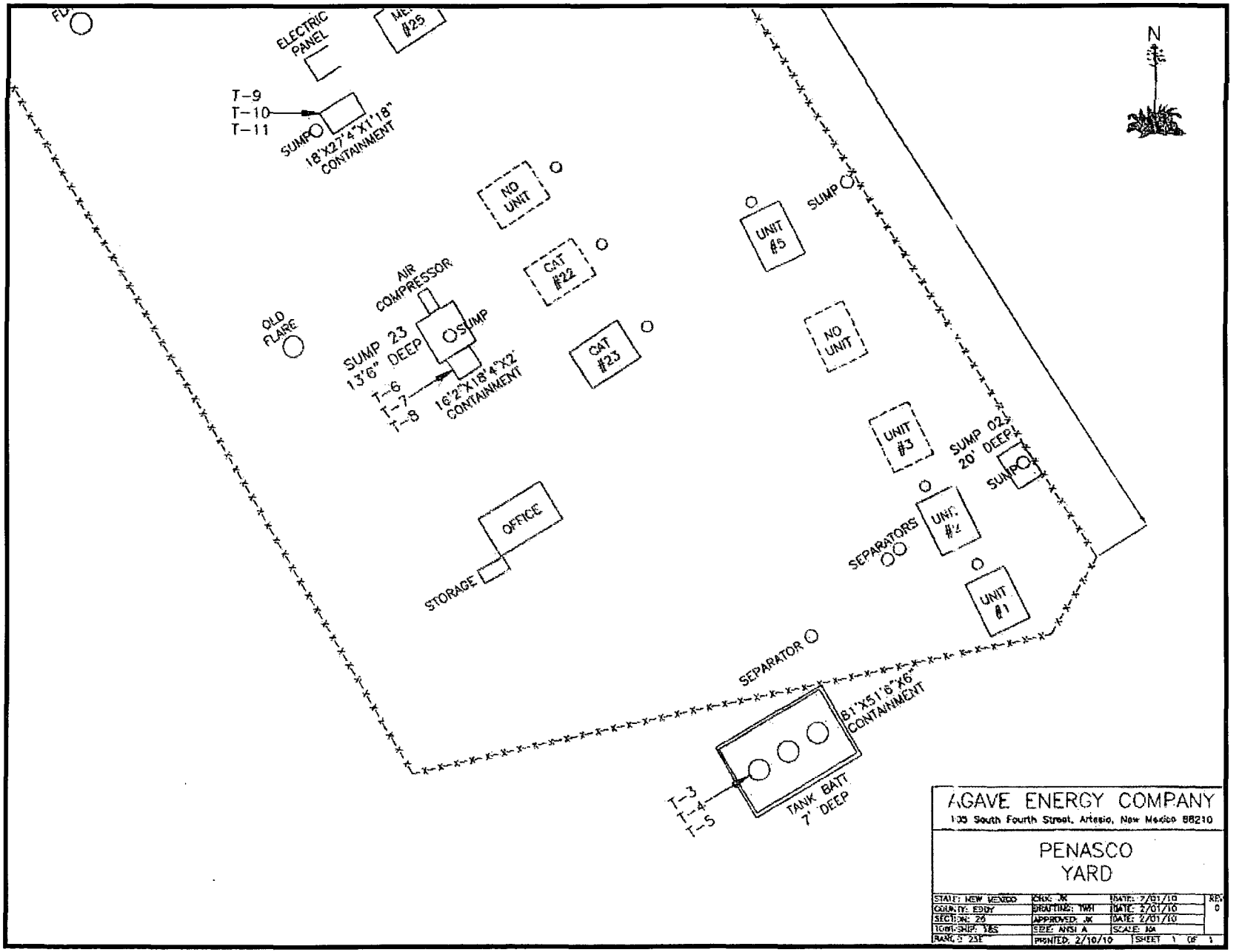
Soil Boring Analytical Results (mg/Kg) Exceeding OCD Guidelines, June-July 2010 Penasco Yard Investigation (concluded)

Location:	Boring ID and Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	MRO (>C28-C35) (mg/Kg)	TPH (8015) (<100 mg/Kg)	TPH (418.1) (<100 mg/Kg)
Sump 2									
Center	S2SB-2, 20 ft.*	07/27/10	<0.100	<0.100	<10.0	<10.0	<10.0	<10.0	**855**
Center	S2SB-2, 25 ft.	07/27/10	<0.100	<0.100	<10.0	<10.0	<10.0	<10.0	**182**
Center	S2SB-2, 30 ft.	07/27/10	<0.100	<0.100	<10.0	55.2	<10.0	55.2	**357**
Center	S2SB-2, 40 ft.	07/27/10	<0.100	<0.100	<10.0	<10.0	<10.0	<10.0	<100
19.5' SW of center	S2SB-4, 10 ft.	07/28/10	<0.100	<0.100	<10.0	64.5	<10.0	64.5	**937**
19.5' SW of center	S2SB-4, 15 ft.	07/28/10	<0.100	<0.100	<10.0	<10.0	N/A	--	<100
19.5' SW of center	S2SB-4, 20 ft.	07/28/10	<0.100	<0.100	<10.0	<10.0	N/A	--	<100
19.5' SW of center	S2SB-4, 25 ft.	07/28/10	<0.100	<0.100	<10.0	<10.0	N/A	--	<100
19.5' SW of center	S2SB-4, 35 ft.	07/28/10	<0.100	<0.100	<10.0	<10.0	N/A	--	<100

Table Notes:
* Center sump soil above 20 feet was previously excavated and replaced with clean fill material
Bold – exceeds NMOCD guideline value for this facility as shown on the top of each table column.

Location:	Boring ID and Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	MRO (>C28-C35) (mg/Kg)	TPH (8015) (<100 mg/Kg)	TPH (418.1) (<100 mg/Kg)
Sump 23									
Center	S23SB-2, 15 ft.*	07/29/10	<0.100	4.93	36.2	47.5	<10.0	83.7	**4,870**
Center	S23SB-2, 20 ft.	07/29/10	<0.100	0.803	17.9	27.1	<10.0	45.0	**9,040**
Center	S23SB-2, 25 ft.	07/29/10	<0.100	1.40	15.5	20.9	<10.0	36.4	**9,500**
Center	S23SB-2, 40 ft.	07/29/10	<0.100	1.90	25.8	51.7	<10.0	77.5	**9,450**
Center	S23SB-2, 45.5 - 46.5 ft.	07/29/10	<0.100	<0.100	<10.0	<10.0	<10.0	<10.0	<100

Table Notes:
* Center sump soil above 14 feet was previously excavated and replaced with clean fill material
Bold – exceeds NMOCD guideline value for this facility as shown on the top of each table column.



AGAVE ENERGY COMPANY
105 South Fourth Street, Artesia, New Mexico 88210

PENASCO
YARD

STATE: NEW MEXICO	CHK: JK	DATE: 2/01/10	REV: 0
COUNTY: EDDY	DRAFTING: TWH	DATE: 2/01/10	
SECTION: 20	APPROVED: JK	DATE: 2/01/10	
TOWNSHIP: 18S	SIZE: ANSI A	SCALE: NA	
RANGE: 25E	PRINTED: 2/10/10	SHEET 1 OF 1	


RA05344 200' OSE
Sump #23
13'6" Deep
Sump #2
20' Deep
Tank Battery
7' Deep
Image NMRGIS
© 2010 Google
404 ft
Google
Imagery Date: Jun 30, 2005
32°42'50.59" N
104°26'59.55" W
elev 3478 ft
Eye alt 4884 ft


© 2010 Google
Google
44 ft
Imagery Date: Mar 28, 2010
lat 32.712836° lon -104.448943° elev 3478 ft
Eye alt 3631 ft

Agave Energy Company

Closure Report
Penasco Compressor Station

Section 26, Township 18S, Range 25E
Eddy County, New Mexico

December 3, 2010

Prepared for:

Agave Energy
105 South 4th Street
Artesia, New Mexico 88210

Prepared by:

Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240

TABLE OF CONTENTS

I. Contacts

Representative	Company	Telephone	E-mail
Jennifer Knowlton	Agave Energy Company	(575) 748-4471	jknowlton@yatespetroleum.com
Bob Allen	SESI	(575) 397-0510	ballen@sesi-nm.com

II. Background

Safety & Environmental Solutions, Inc. (SESI) was contracted by Agave Energy Company to propose a workplan for the investigation and remediation of three areas located within the Penasco Compressor Station yard south of Artesia, New Mexico. The site is located in E/2 SE/4 of Section 26, Township 18 South, Range 25 East, Eddy County, New Mexico (Figure 1).

Two areas originally contained sumps that were removed and contamination was found in the soil beneath the sumps. The third area originally contained above ground tanks and contamination was found after the tanks were removed. The locations of the areas investigated are shown in Figures 2 (site plan) and 3 (aerial photograph).

After sumps #2 and #23 were removed the most highly contaminated soils were removed to a depth of 20' and 13' respectively. On February 10, 2010 and February 12, 2010, the bottoms and sidewalls of the existing excavations were sampled and found to still contain hydrocarbons (TPH) in concentrations ranging from 7,000 ppm to 12,600 ppm in sump # 23, and from 711 ppm to 1,460 ppm in sump #2. BTEX analysis of these samples showed no benzene and small amounts of toluene, ethyl-benzene and xylenes*. Vertical and horizontal extents of contamination had not yet been determined in either excavation. Chloride concentrations in these samples are less than 50 ppm.

Following earlier removal of the tanks, the bermed tank battery area was sampled on December 10, 2009 and found to also contain hydrocarbons (TPH) in concentrations ranging from 593 ppm to 881 ppm with small amounts of BTEX. The vertical and horizontal extent of contamination had not yet been determined to date. Chloride concentrations in these samples are less than 120 ppm.

A soil boring investigation was conducted in June and July 2010 to determine horizontal and vertical extent of contamination at three locations at the Agave Penasco yard. At each location borings were advanced to either auger refusal or until hydrocarbon impacted material was no longer encountered. Boring locations are shown in Figures 4, 5 and 6. Borings outside the center of each excavation were advanced to determine if horizontal migration had occurred. Samples were collected from auger splitspoons for laboratory analysis of benzene, toluene, ethylbenzene and total xylene volatiles (BTEX), gasoline and diesel range organics (GRO and DRO, EPA method 8015B) and Total Petroleum Hydrocarbons (EPA method 418.1). Sampling results and analyses were previously reported and presented to Agave in a "Report of Investigation" dated October 8, 2010. The table showing the results is provided in Appendix A of the current report.

Results of the review were compared with NM Oil Conservation Division "Guidelines for Remediation of Leaks, Spills and Releases" (1993) to determine the relative threat to public health, fresh waters and the environment, and to provide guidance for remediation. The OCD uses a ranking system with depth to groundwater, wellhead

* Agave Energy Company, "Report of Investigation, Penasco Compressor Station" October 8, 2010.

protection area and distance to a surface water body to determine possible remediation scenarios.

Depth to groundwater at the site was determined from state engineer records. 32 water wells were found within a five mile radius of the Penasco yard. Depth to water averages 134 feet with values ranging from 42 feet to 270 feet. Depth to water for the five wells closest to the Peñasco yard averages 182 feet. The closest private well is used by Agave and its distance is 285 feet from the location of sump 2. The depth to water in that well was reported as 200 feet. The distance to the nearest surface water body (ephemeral Peñasco Draw) is approximately 1,560 feet.

Comparing values of depth to water, wellhead protection area and distance to a surface water body with the ranking criteria results in a ranking score of 20 and establishes recommended remediation levels of benzene at 10 ppm (mg/Kg), total BTEX of 50 ppm and TPH of 100 ppm.

Based on the above ranking criteria, four of the soil borings from the tank battery location, two borings from the sump 2 location and one boring from sump 23 exceed the ranking criteria in one or more samples from each boring (Table, Appendix A).

Of those, only two borings from the tank battery (center excavation, BSB-1, 40 feet; and southside excavation, BSB-2, 42 feet) exceeded the 100 mg/Kg standard at boring total depth. At those depths, minimal levels of benzene, total BTEX and TPH remain in these two boreholes. Auger refusal in boulders and cobbles prevented further sampling below 40-42 feet from the surface.

Vertical extent of contamination was established in all other borings other than those two shown above.

The October 8 investigation report included recommendations for removal of highly contaminated soil in the tank battery area and passive wind ventilation turbine for remediation of soil exceeding guidance standards but not able to be excavated

III. Removal of Highly Contaminated Soil

When contaminated soils exceed OCD guidelines ("Guidelines for Remediation of Leaks, Spills and Releases") and require remediation, the following methods are described in the guidance:

> Highly contaminated/saturated soils and unsaturated contaminated soils exceeding the standards described in Section IV.A should be either:
>
> a) Excavated from the ground until a representative sample from the walls and bottom of the excavation is below the contaminant specific remediation level listed in Section IV.A.2.b or an alternate approved remediation level, or;
>
> b) Excavated to the maximum depth and horizontal extent practicable. Upon reaching this limit a sample should be taken from the walls and bottom of the excavation to determine the remaining levels of soil contaminants, or;
>
> c) Treated in place, as described in Section VI.A.2.b.ii. - Treatment of Soil in Place, until a representative sample is below the contaminant specific remediation level listed in Section IV.A.2.b, or an alternate approved remediation level, or;
>
> d) Managed according to an approved alternate method.

Highly contaminated soil had previously been removed to a depth of 20 and 13 feet at Sump 2 and Sump 23, respectively, which was the maximum practical depth at these locations, and to between 5 and 7 feet at the Tank Battery. Based on the results of the soil borings, additional excavation was a practical remedy for the former Tank Battery location.

On Monday, October 25, 2010, Safety and Environmental Solutions, Inc. (SESI) and Watson Construction were onsite to begin excavation at the tank battery area. Excavated soils were stockpiled on site for subsequent transfer to Jay-Dan Land Farm, an OCD approved disposal facility. Returning trucks contained clean caliche for later backfill of the excavation.

Excavation continued daily through Friday, October 29. Transport of materials for disposal, and stockpiling of clean caliche backfill on site continued through Wednesday, November 3. Approximately 3,300 yards of contaminated soils were transported to the approved disposal facility.

In addition several hundred yards of unsaturated, non-stained material were removed from the excavation and stockpiled on site for later return to the excavation. This material was tested on October 26 with results of the analysis shown below. This material was directed to be blended with the caliche before placement in the excavation.

The location was excavated to a depth of twenty-four (24) feet below grade surface and the surface area was approximately 80 feet by 60 feet for a total volume of 4,267 cubic yards. Approximately five (5) feet (889 cubic yards) had been previously removed leaving a difference of about 3,378 cubic yards. Therefore the estimated yards excavated and stockpiled or removed for disposal are close to the calculated volume.

SESI was onsite on November 5 to obtain samples from excavated area bottom and side walls. A three-point composite sample was obtained from each side wall and a five-point sample was obtained from the bottom floor of excavation. Samples were then transported to Cardinal Laboratories in Hobbs, NM under Chain-of-Custody to be analyzed for Total Petroleum Hydrocarbons (TPH EPA Method 418.1 and TPH EPA Method 8015) and Benzene, Toluene, Ethyl Benzene, and Total Xylene (BTEX EPA Method 8021B).

The results of the sample analyses are as follows:

Soil Sample ID	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl-benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	GRO C6-C10 (mg/Kg)	DRO C10-C28 (mg/Kg)	Method 418.1 TPH (mg/Kg)
Non-stained stockpile	<0.100	0.100	<0.100	<0.100	<0.100	<10.0	25.1	110
Bottom (24'bgs)	<0.050	0.181	<0.050	<0.150	0.181	<10.0	89.4	170
West Wall	<0.050	0.054	<0.050	<0.150	0.054	<10.0	<10.0	<10.0
East Wall	<0.050	0.117	<0.050	<0.150	0.117	<10.0	<10.0	12.0
North Wall	<0.050	0.070	<0.050	<0.150	0.070	<10.0	22.9	100
South Wall	<0.050	0.155	<0.050	<0.050	0.155	<10.0	<10.0	10.0

NMOCD approved backfill of the excavation on November 4, 2010. SESI and Watson Construction began backfilling with clean caliche from an offsite location on November 10, 2010. Backfill continued on November 11-12. Approximately 3,536 cubic yards of caliche plus the non-stained stockpiled material were used as backfill. The location area was then contoured to its natural earth form.

IV. Recommendations

With the completion of the excavation of the highly contaminated soil material, the following recommendations from the October 8 report remain:

1. Provided that air quality issues and/or permitting are not a restrictive consideration, installation of a grid of passive wind ventilation turbines is recommended with a grid pattern defined by battery soil boring locations BSB-1, BSB-2, BSB-4 and the sides of the existing excavation.
2. Installation of a passive wind ventilation turbine is recommended at the center of sump 2 and the center of sump 23 provided that air quality issues and/or permitting are not a restrictive consideration.

Not recommended is the installation of a protective cover liner when only hydrocarbons are present. Unlike chlorides, these can be remediated with active or passive remediation methods and do not require long term isolation to prevent migration.

V. Figures & Appendices

Figure 1- Vicinity Map
Figure 2- Site Plan
Figure 3- Aerial Photograph of Penasco Yard
Figure 4- Location of Tank Battery Soil Borings
Figure 5- Location of Sump 2 Soil Borings
Figure 6- Location of Sump 23 Soil Borings
Appendix A- Soil Boring Analytical Results, June-July 2010, Agave Penasco Yard Investigation
Appendix B- Site Photographs
Appendix C- Copy of Laboratory Analytical Results

Figure 1- Vicinity Map

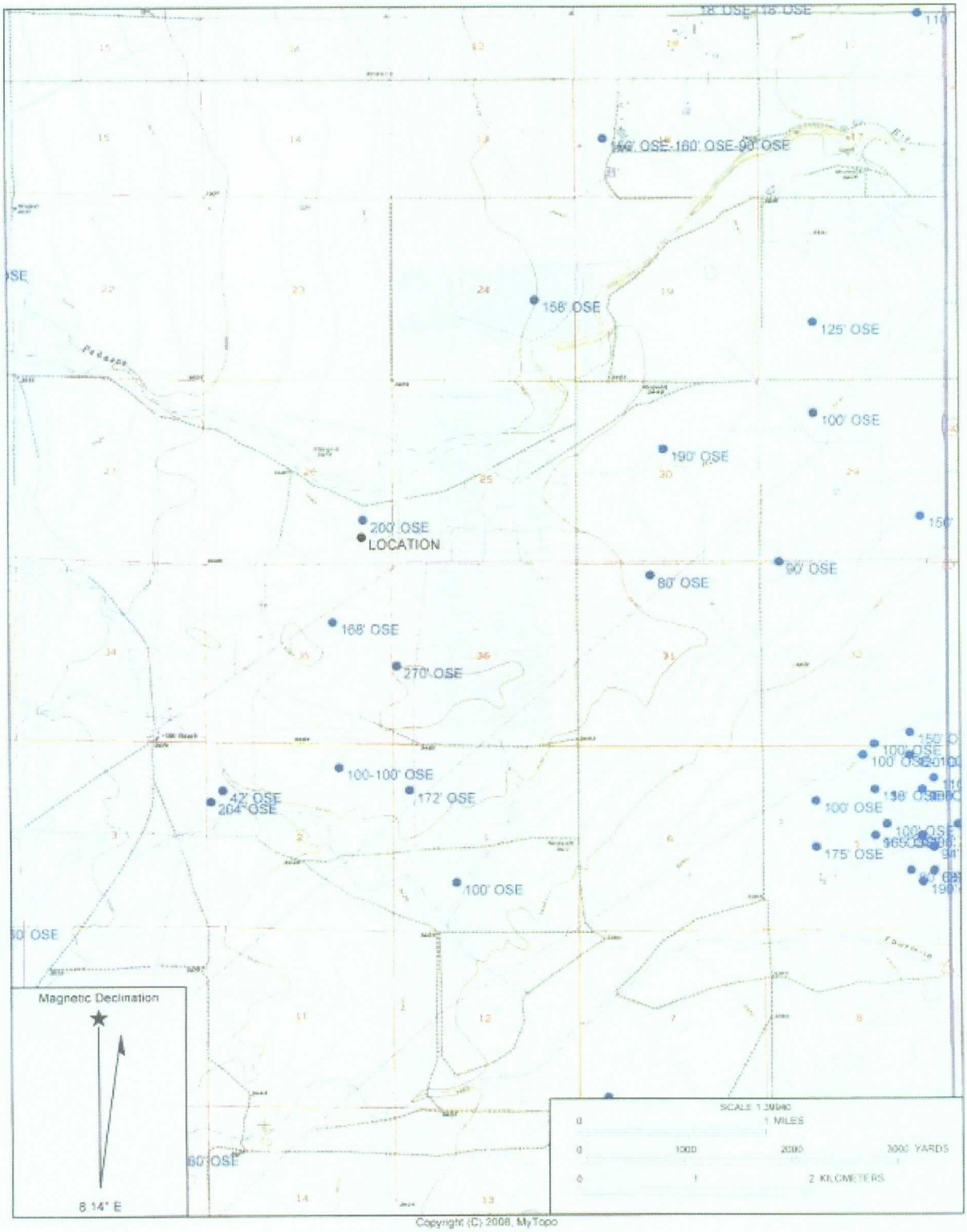


Figure 2- Site Plan

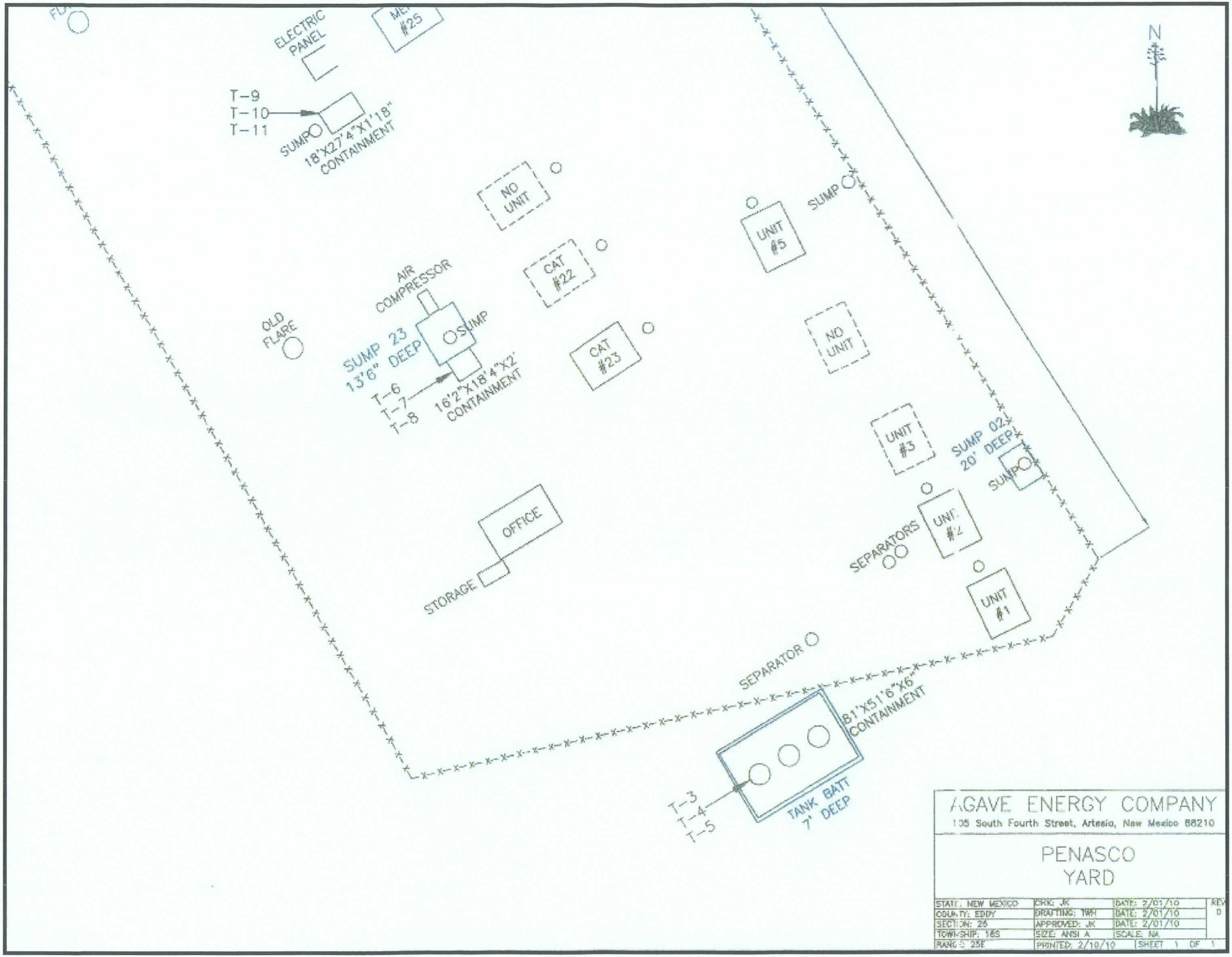

ELECTRIC PANEL
MET #25
T-9
T-10
T-11
SUMP
18'X27'4"X1'18" CONTAINMENT
NO UNIT
UNIT #5
SUMP
AIR COMPRESSOR
CAT #22
OLD FLARE
SUMP 23' DEEP 13'6"
SUMP
T-6
T-7
T-8
16'2"X18'4"X2' CONTAINMENT
CAT #23
NO UNIT
UNIT #3
SUMP 02 20' DEEP
SUMP
OFFICE
STORAGE
SEPARATORS
UNIT #2
UNIT #1
SEPARATOR
81'X51'6"X6' CONTAINMENT
T-3
T-4
T-5
TANK BATT 7' DEEP
N
AGAVE ENERGY COMPANY
105 South Fourth Street, Artesia, New Mexico 88210
PENASCO YARD
STATE: NEW MEXICO
COUNTY: EDDY
SECTION: 26
TOWNSHIP: 18S
RANGE: 25E
CHK: JK
DRAFTING: TWH
APPROVED: JK
SIZE: ANSI A
PRINTED: 2/10/10
DATE: 2/01/10
DATE: 2/01/10
DATE: 2/01/10
SCALE: NA
SHEET 1 OF 1
REV 0

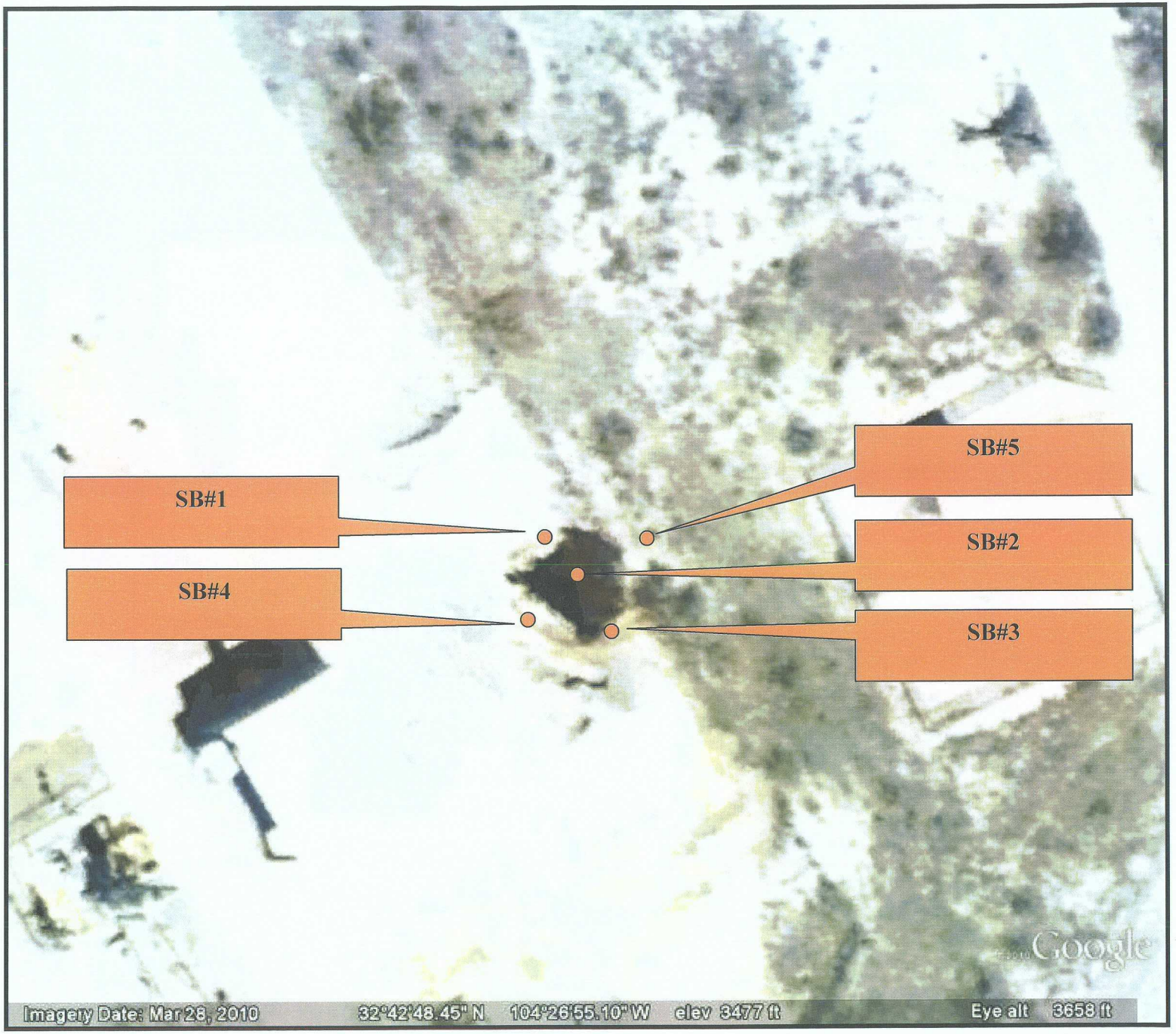
Figure 3- Aerial Photograph of Penasco Yard


RA05344 200' OSE
Sump #23
13'6" Deep
Sump #2
20' Deep
Tank Battery
7' Deep
Image NMRGIS
© 2010 Google
Google
404 ft
Imagery Date: Jun 30, 2005
32°42'50.59" N
104°26'59.55" W
elev 3478 ft
Eye alt 4884 ft

Figure 4- Location of Tank Battery Soil Borings

Tank Battery Soil Boring Locations

Figure 5- Location of Sump 2 Soil Borings



Sump 2 Soil Boring Locations

Figure 6- Location of Sump 23 Soil Borings

Sump 23 Soil Boring Locations

Appendix A- Soil Boring Analytical Results, June-July 2010, Agave Penasco Yard Investigation

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Tank Battery										
Center excavation	BSB-1, 10 ft.*	06/29/10	<0.050	<0.050	<0.050	<0.300	<0.050	13.3	104	**1,580**
Center excavation	BSB-1, 15 ft.*	06/29/10	<0.050	<0.050	5.61	17.5	23.1	305	424	**1,500**
Center excavation	BSB-1, 20 ft.*	06/29/10	1.68	5.02	24.2	87.2	**118**	1,420	1,240	**7,030**
Center excavation	BSB-1, 25 ft.*	06/29/10	0.234	0.667	3.21	11.9	16.0	13.0	<10.0	<100
Center excavation	BSB-1, 30 ft.*	06/29/10	0.134	0.132	1.05	3.69	5.01	<10.0	<10.0	<100
Center excavation	BSB-1, 35 ft.*	06/29/10	0.081	0.071	1.76	7.66	9.57	238	301	**1,290**
Center excavation	BSB-1, 40 ft.*	06/29/10	0.084	<0.050	0.964	4.00	5.05	60.4	11.9	**332**
* Five feet added to lab sample ID depth to account for depth of excavation.										
S-side excavation	BSB-2, 10 ft.*	06/29/10	<0.050	<0.050	0.845	6.36	7.21	33.5	28.3	**1,690**
S-side excavation	BSB-2, 15 ft.*	06/29/10	<0.050	<0.050	0.66	3.66	4.32	47.6	10.7	<100
S-side excavation	BSB-2, 20 ft.*	06/29/10	<0.050	<0.050	0.106	0.598	0.704	<10.0	<10.0	<100
S-side excavation	BSB-2, 25 ft.*	06/29/10	<0.050	<0.050	<0.050	<0.300	<0.050	80.8	57.1	**255**
S-side excavation	BSB-2, 30 ft.*	06/29/10	<0.050	0.104	0.201	1.35	1.66	41.0	56.2	<100
S-side excavation	BSB-2, 35 ft.*	06/29/10	0.156	0.326	2.30	19.0	21.8	479	387	**1,470**
S-side excavation	BSB-2, 40 ft.*	06/29/10	0.235	0.758	2.17	14.1	17.3	180	124	**530**
S-side excavation	BSB-2, 42 ft.*	06/29/10	<0.050	<0.050	0.128	0.788	0.916	33.6	71.7	**163**
* Five feet added to lab sample ID depth to account for depth of excavation.										
E-side excavation	BSB-3, 3-8 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 13 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 18 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 23 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 28 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 33 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

10 50 100

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Tank Battery (continued)										
W-side excavation	BSB-4, 10.5 ft.	07/27/10	1.92	31.6	20.0	69.9	**123**	1,140	994	**3,240**
W-side excavation	BSB-4, 15.5 ft.	07/27/10	3.84	39.8	23.5	80.9	**148**	445	743	**3,070**
W-side excavation	BSB-4, 20.5 ft.	07/27/10	1.67	28.0	16.6	77.9	**124**	306	619	**2,870**
W-side excavation	BSB-4, 25.5 ft.	07/27/10	4.24	9.87	16.5	69.0	**100**	440	351	**1,620**
W-side excavation	BSB-4, 30.5 ft.	07/27/10	2.71	24.9	19.9	84.4	**132**	608	570	**2,740**
W-side excavation	BSB-4, 35.5 ft.	07/27/10	0.278	7.05	7.40	48.0	62.7	295	388	**1,430**
W-side excavation	BSB-4, 40.5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
W-side excavation	BSB-4, 45.5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
N-side excavation	BSB-5, 10.5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	**580**
N-side excavation	BSB-5, 20.5 ft.	07/27/10	<0.100	<0.100	0.258	1.11	1.37	<10.0	<10.0	<100
N-side excavation	BSB-5, 25.5 ft.	07/27/10	<0.100	<0.100	<0.100	1.96	1.96	<10.0	<10.0	<100
N-side excavation	BSB-5, 30.5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 25 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 30 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	11.1	<100
20' W. of excavation	BSB-7, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 33 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 35 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 40 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 45 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Sump 2										
21' NW. of center S2	S2SB-1, 5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 10 ft.	07/27/10	<0.100	<0.100	<0.100	0.255	0.255	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 20 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 25 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 30 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 35 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 40 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
Center sump 2	S2SB-2, 20 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	**855**
Center sump 2	S2SB-2, 25 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	**182**
Center sump 2	S2SB-2, 30 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	55.2	**357**
Center sump 2	S2SB-2, 40 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SE. of center S2	S2SB-3, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SE. of center S2	S2SB-3, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SE. of center S2	S2SB-3, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SE. of center S2	S2SB-3, 32 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SW. of center S2	S2SB-4, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	64.5	**937**
19.5' SW. of center S2	S2SB-4, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SW. of center S2	S2SB-4, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SW. of center S2	S2SB-4, 25 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SW. of center S2	S2SB-4, 35 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Sump 2 (continued)										
18' NE. of center S2	S2SB-5, 5 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 30 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 34 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
Sump 23										
20' NE. of center S23	S23SB-1,15 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,20 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,25 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,30 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,40 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,45 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
Center sump 23	S23SB-2, 15 ft.	07/29/10	<0.100	0.683	0.572	3.67	4.93	36.2	47.5	**4,870**
Center sump 23	S23SB-2, 20 ft.	07/29/10	<0.100	0.101	0.105	0.597	0.803	17.9	27.1	**9,040**
Center sump 23	S23SB-2, 25 ft.	07/29/10	<0.100	0.247	0.18	0.968	1.40	15.5	20.9	**9,500**
Center sump 23	S23SB-2, 40 ft.	07/29/10	<0.100	0.27	0.217	1.41	1.90	25.8	51.7	**9,450**
Center sump 23	S23SB-2, 45.5 - 46.5 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 10 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 15 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 20 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 25 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 30 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Sump 23 (continued)										
41' NW. of center S23	S23SB-4, 10 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 15 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 20 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 25 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 30 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 35 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 40 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 44 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
40' SE. of center S23	S23SB-5, 15 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
40' SE. of center S23	S23SB-5, 20 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
40' SE. of center S23	S23SB-5, 25 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

Table Note:
Bold – exceeds NMOCD guideline value for this facility as shown on the top of each table column.

Appendix B- Site Photographs

Site photos 10-25-10

Excavated soils facing west

Highly stained soils stockpiled facing west

Non stained soils stockpiled southeast corner of excavation

Northwest corner wall facing northwest

West wall facing west

Southwest corner wall facing southwest

Site Photos 10-27-10

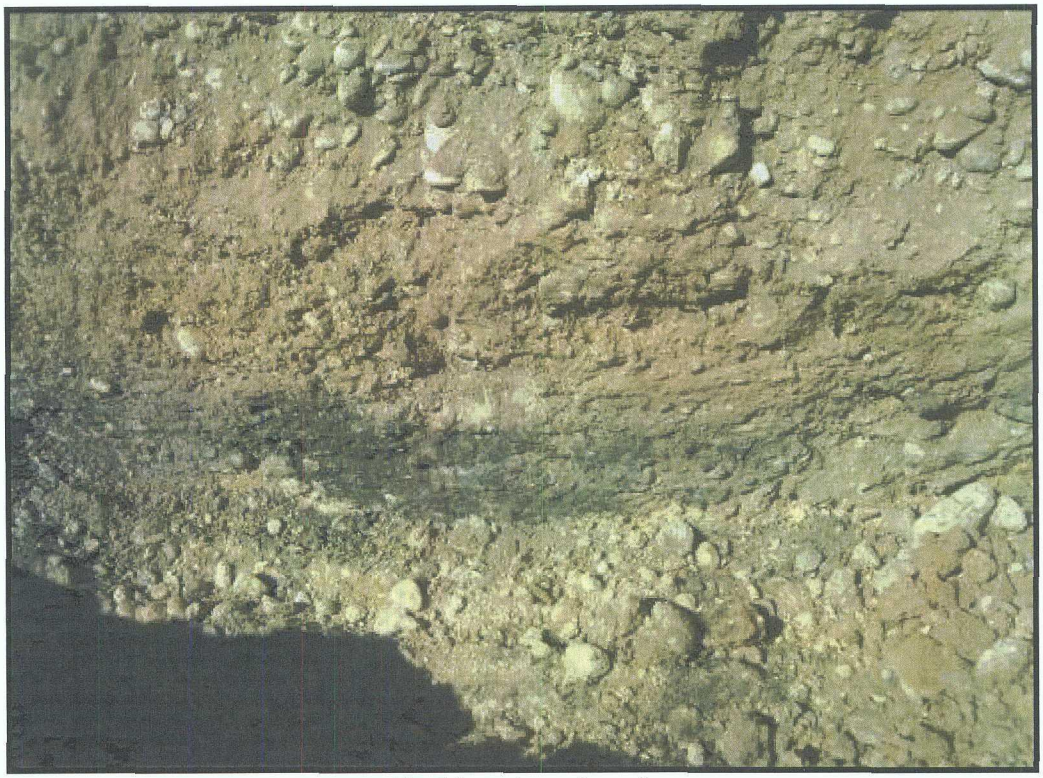
Bottom hole facing east

Southwest corner facing southwest

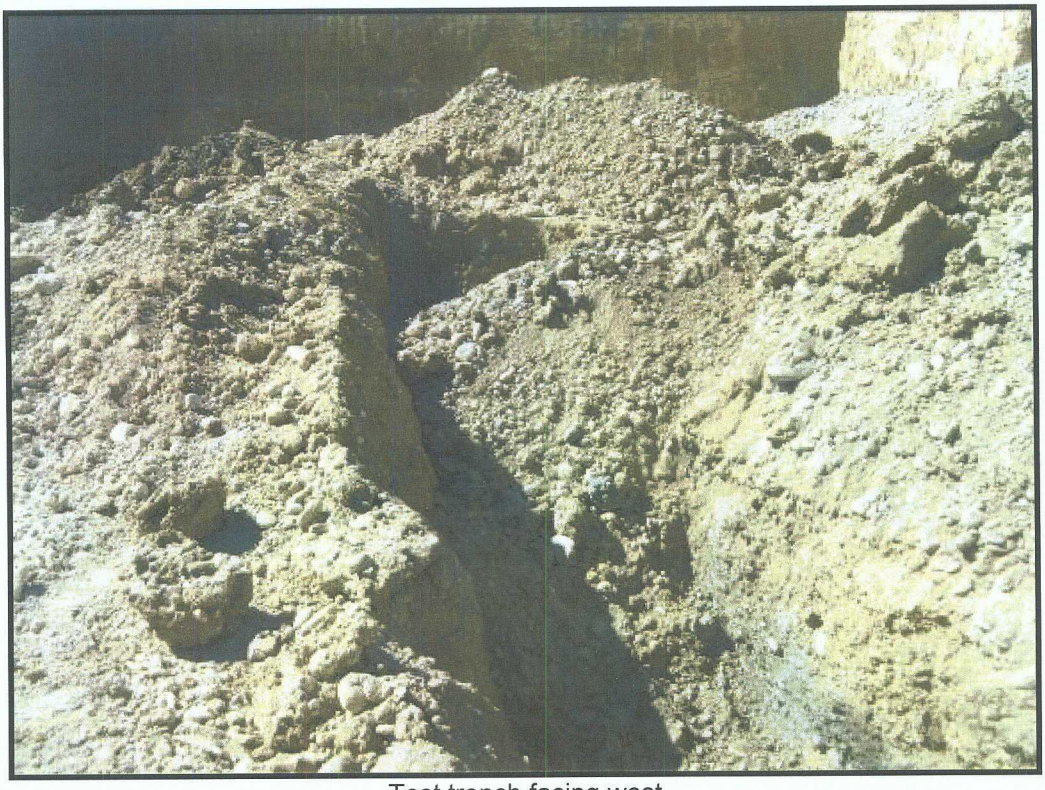
West wall facing southwest

East section facing east

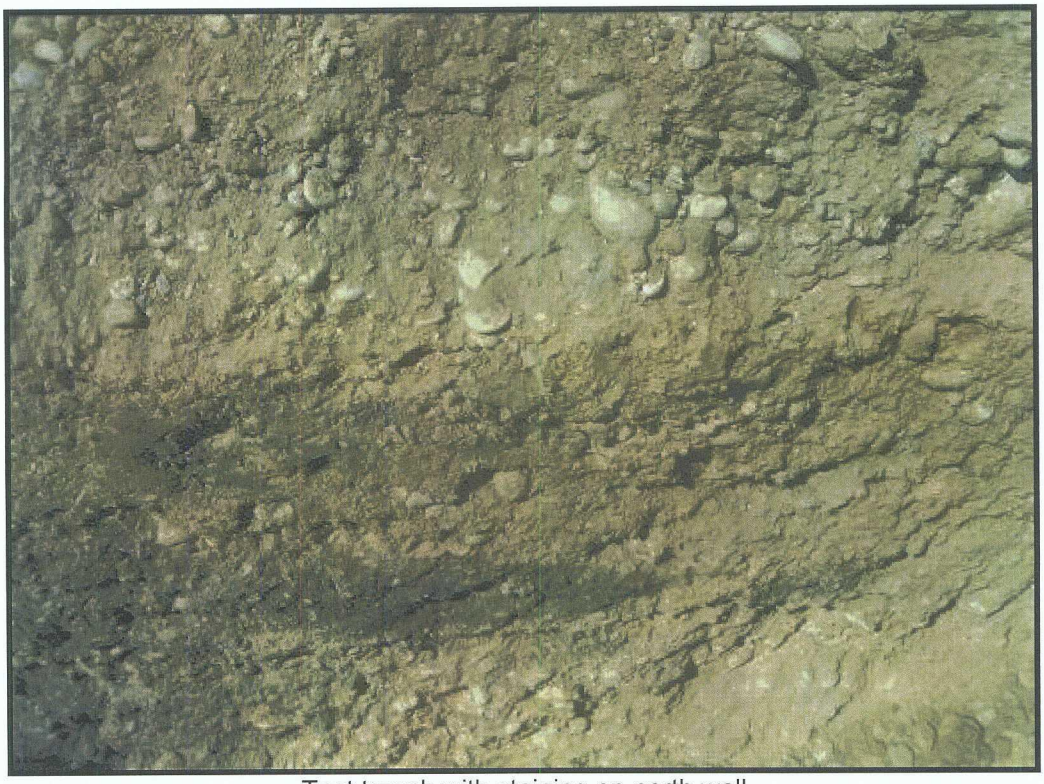
Trench with staining 30' from desire stop point facing east



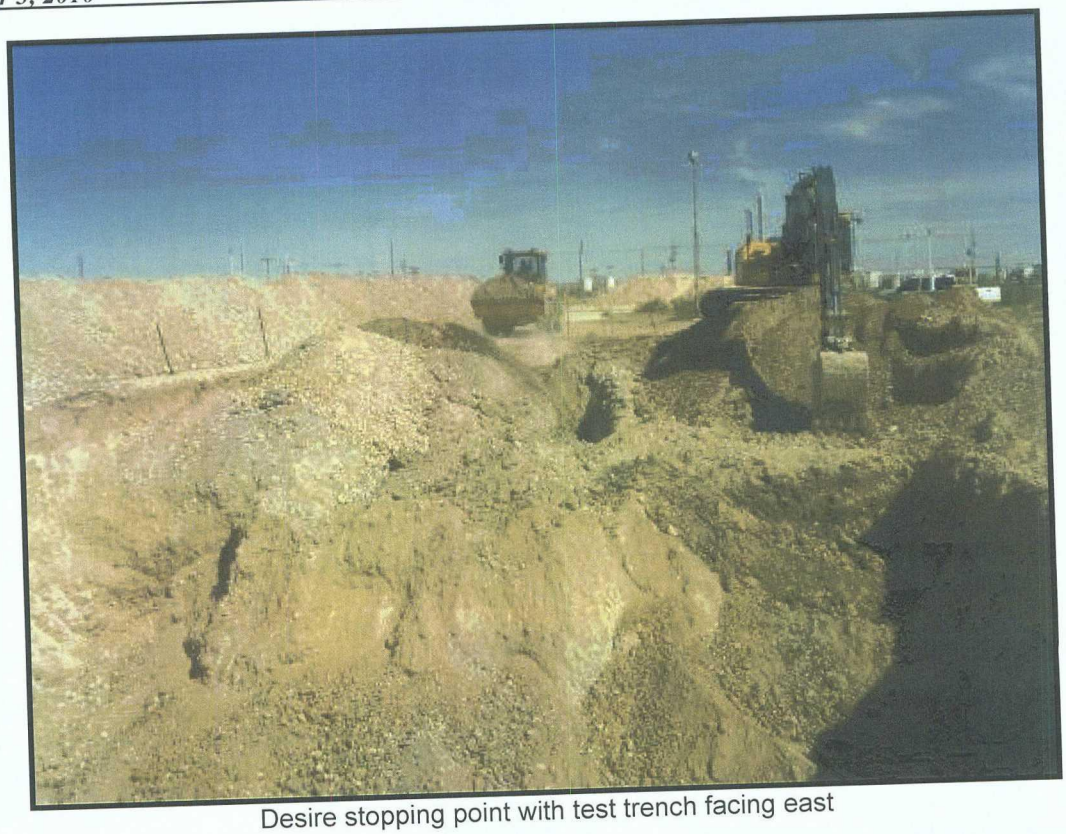
Test trench north wall



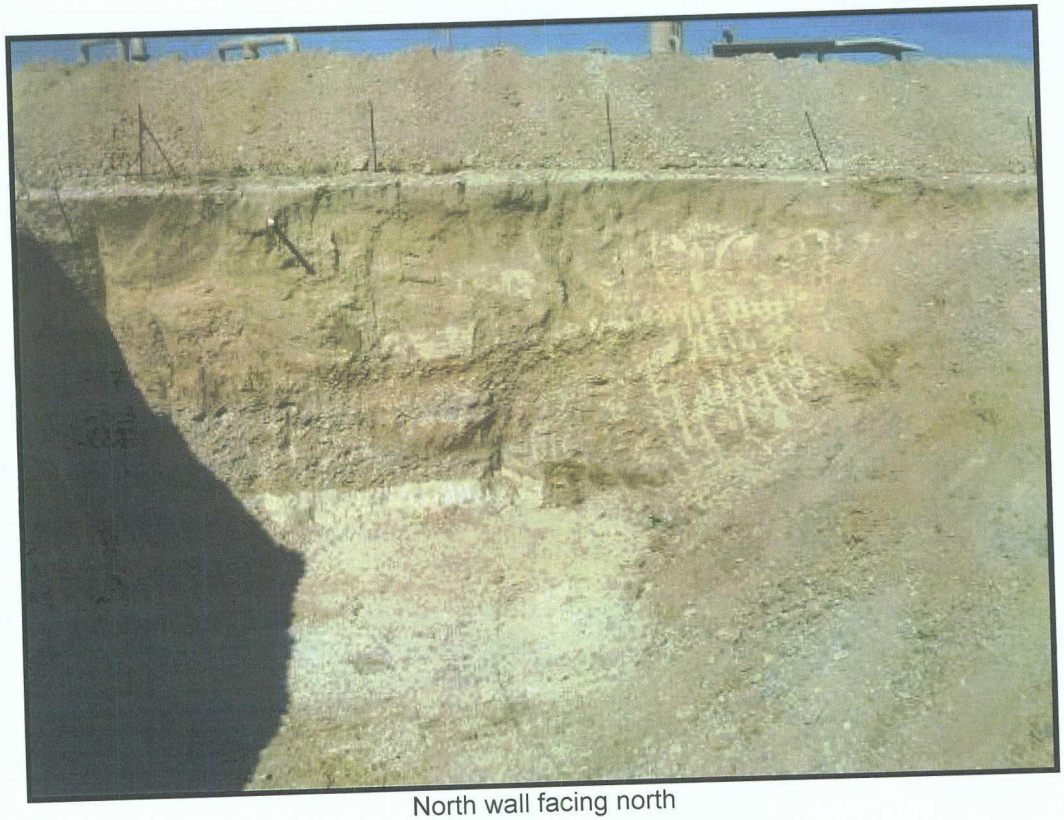
Test trench facing west



Test trench with staining on north wall



Desire stopping point with test trench facing east

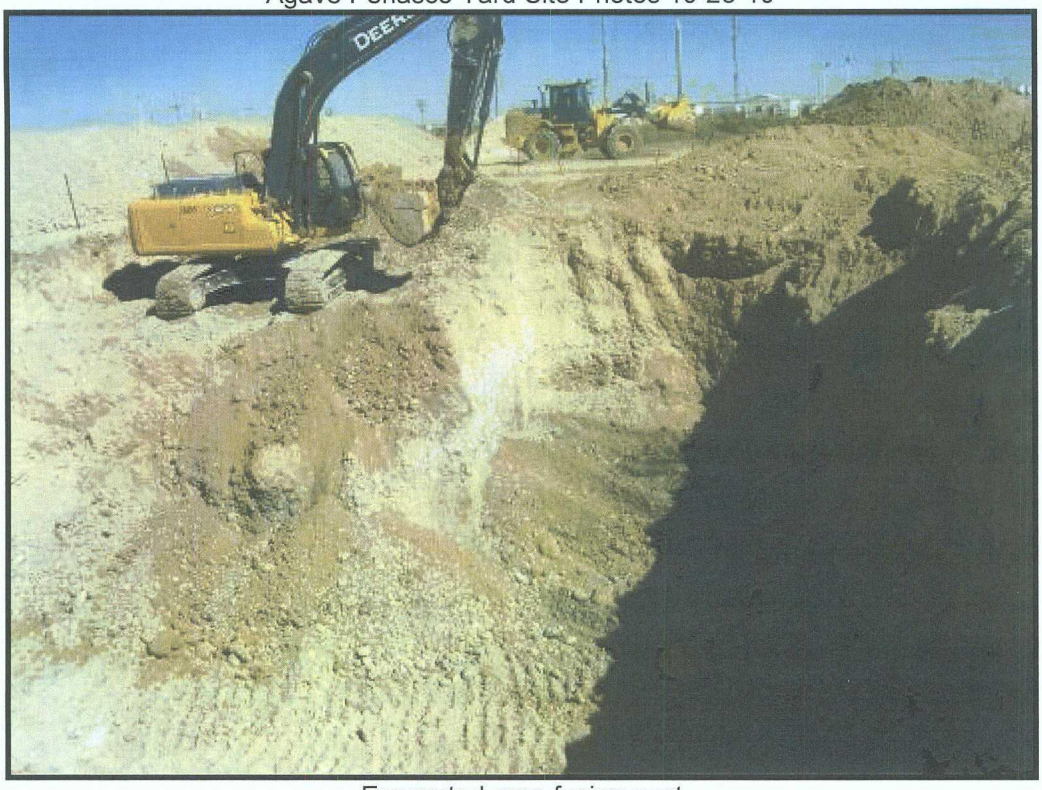


North wall facing north

South wall facing south

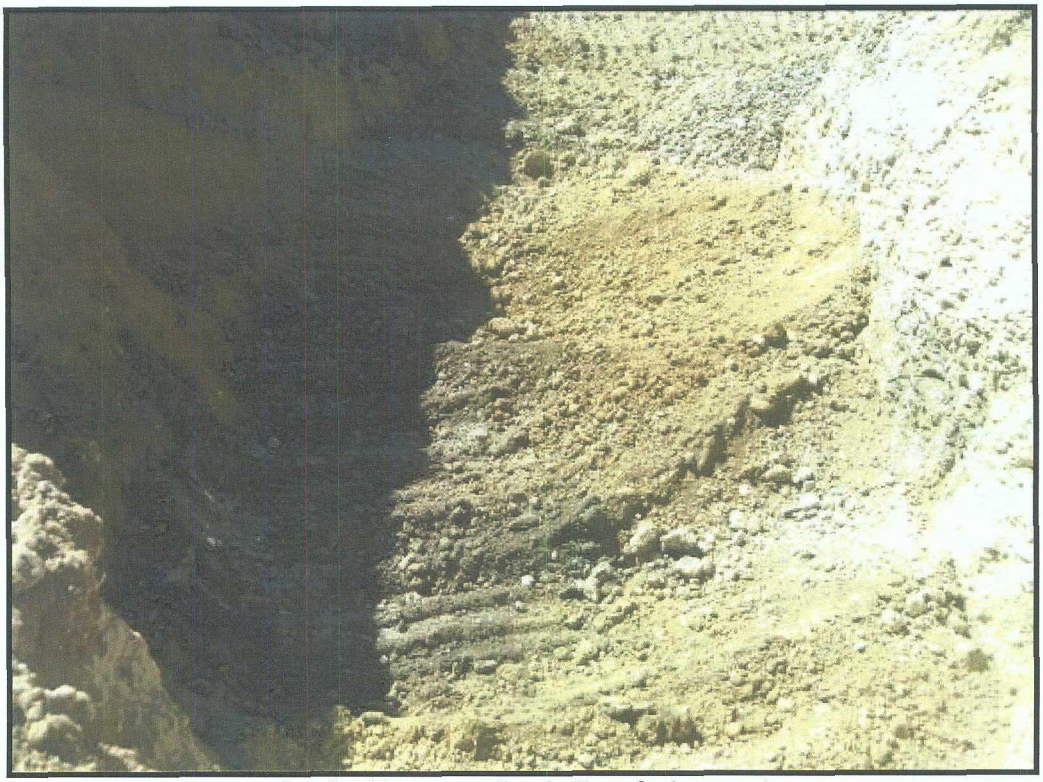
West wall facing southwest

Agave Penasco Yard Site Photos 10-28-10



Excavated area facing east

Excavated area facing northeast



South side excavation bottom facing west

Excavated area facing southwest

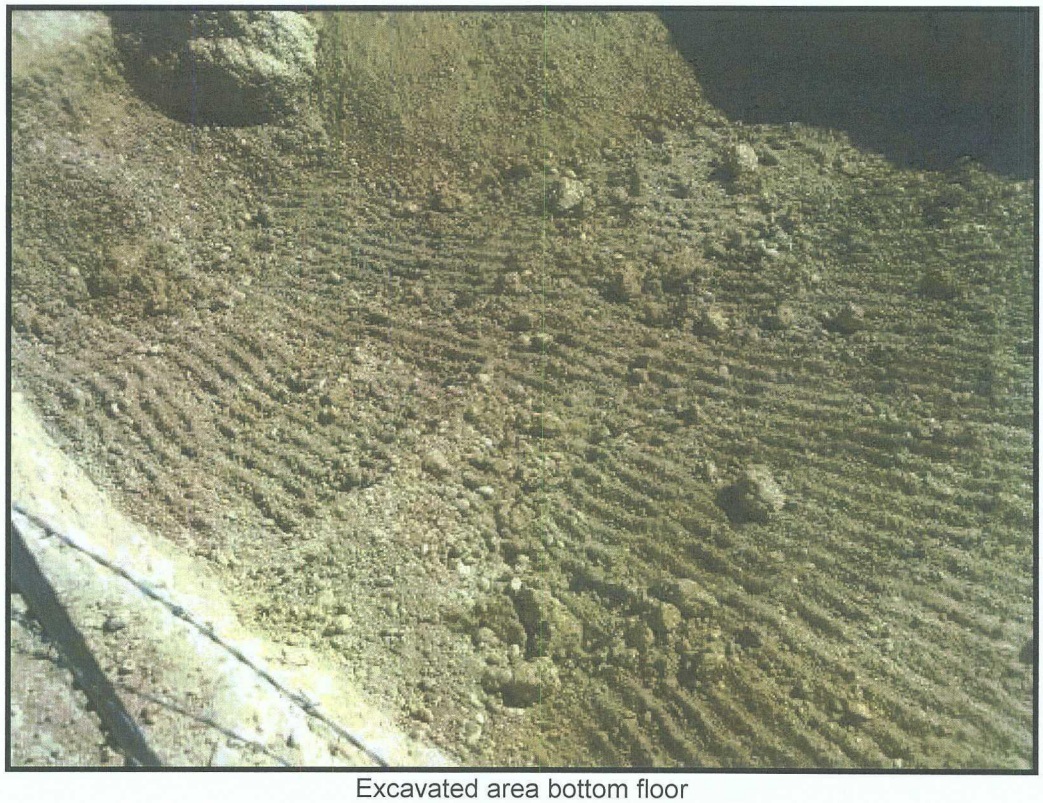
Excavated area facing north

Agave Site Photos 10-29-10

Excavated area facing east

Excavated area facing southeast

Excavated area facing south



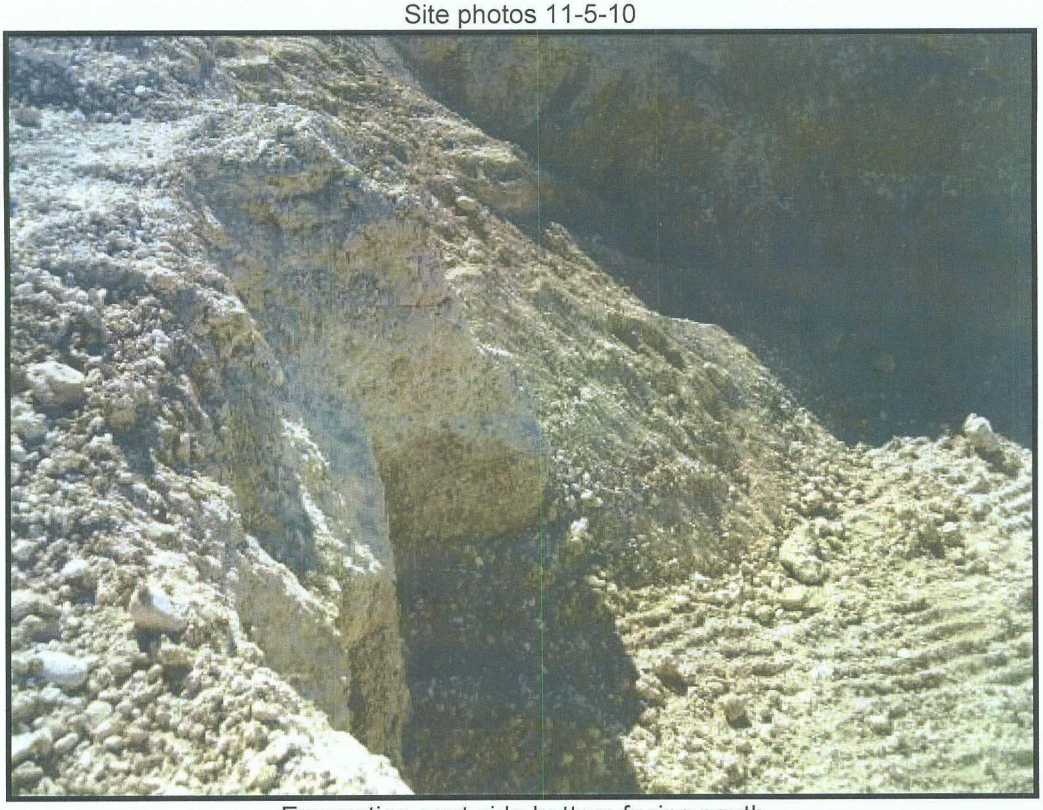
Excavated area bottom floor

Excavated area facing southwest

Excavated area facing north

Excavated area facing northeast

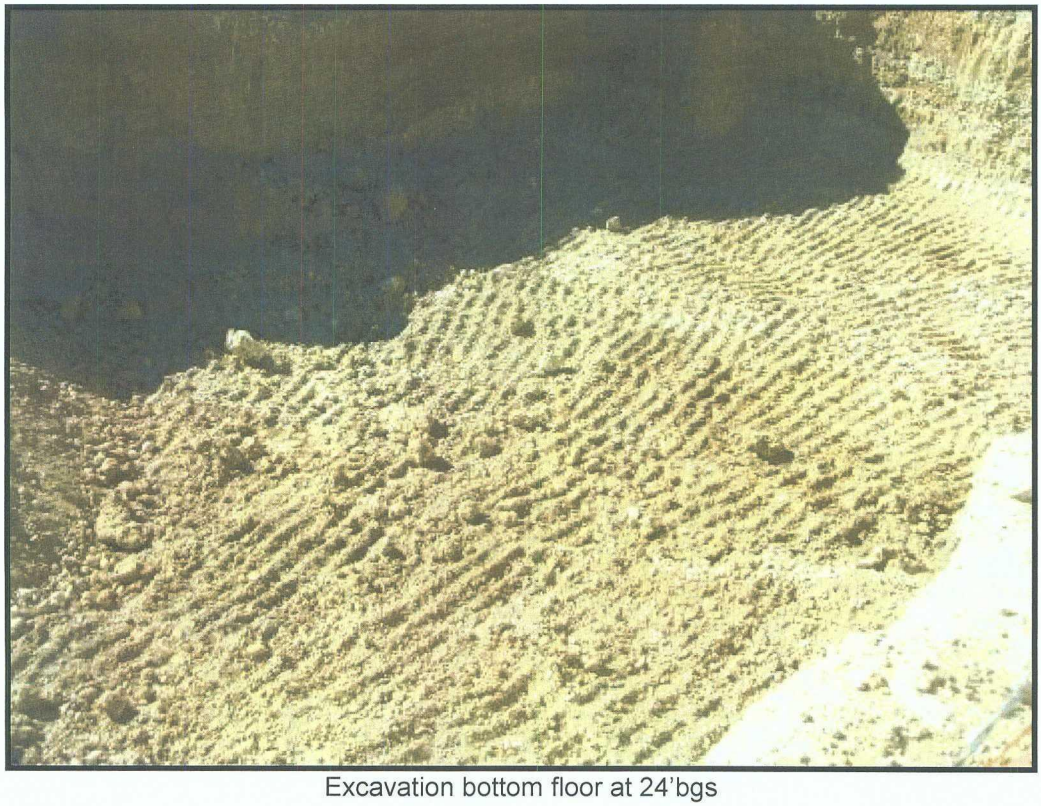
Site photos 11-5-10



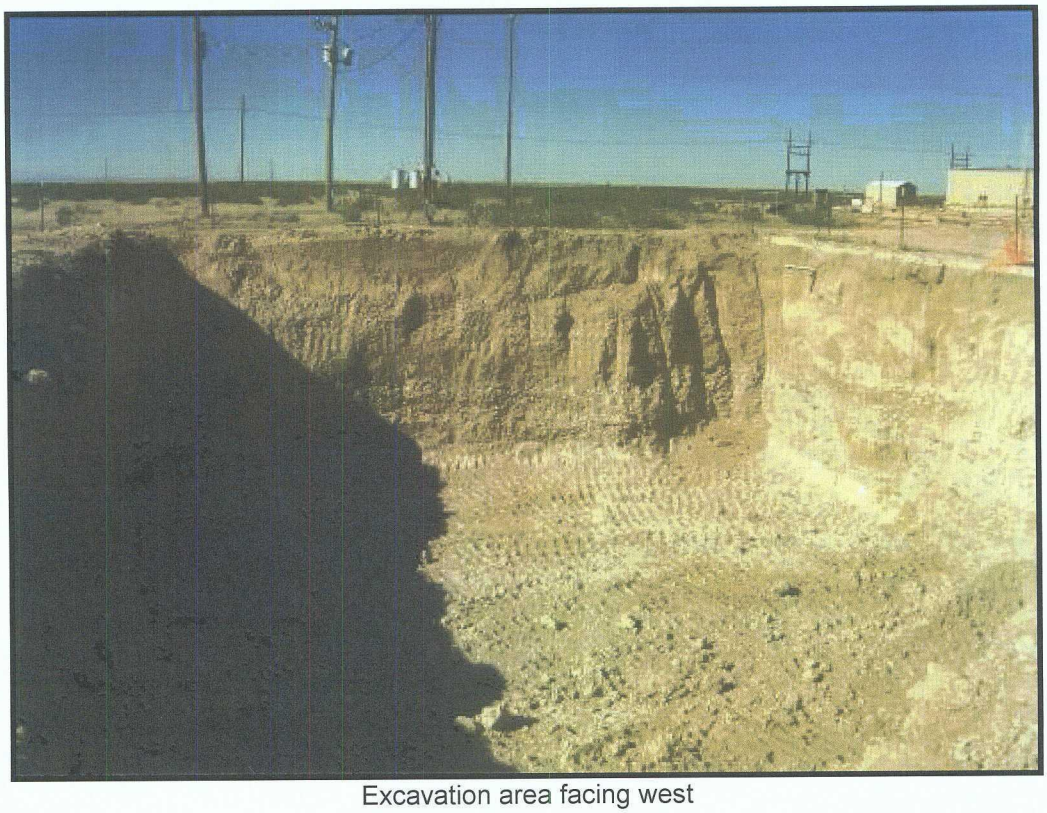
Excavation east side bottom facing south

Excavation south wall facing southwest

Excavation west wall facing west



Excavation bottom floor at 24'bgs

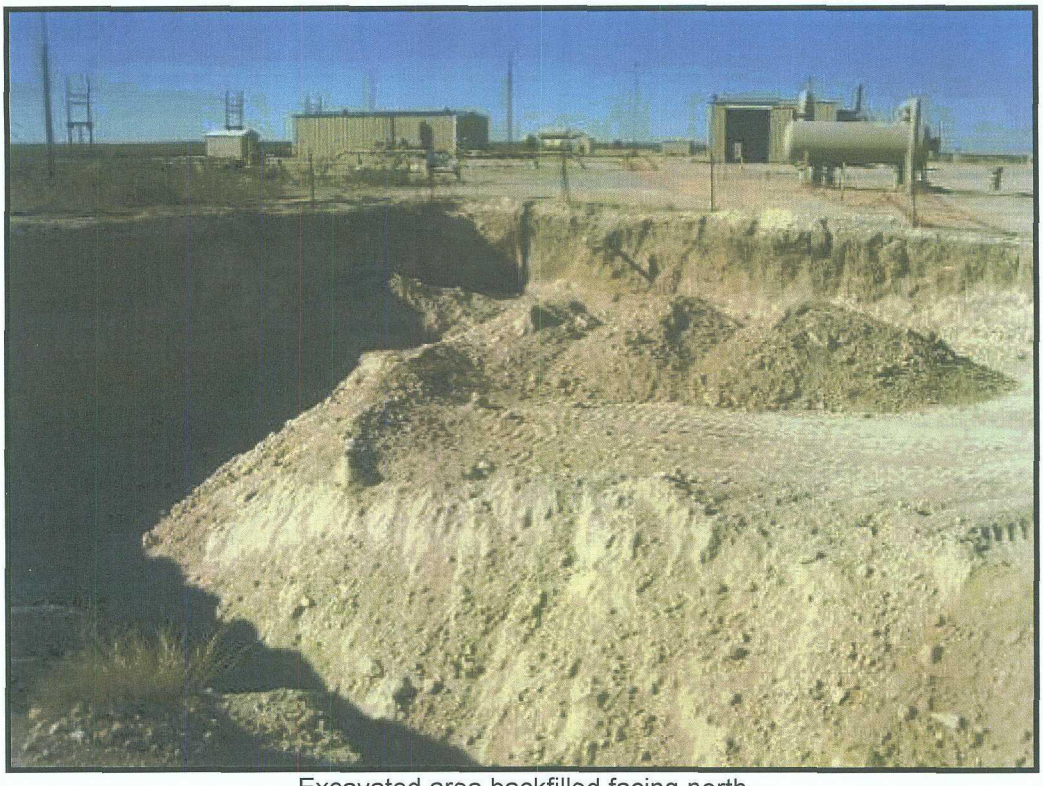


Excavation area facing west

Excavation north wall facing north

Aga-10-001 Site Photos 11-11-10

Excavated area backfilled facing east



Excavated area backfilled facing north

Excavated area backfilled facing north

Excavated area backfilled facing west

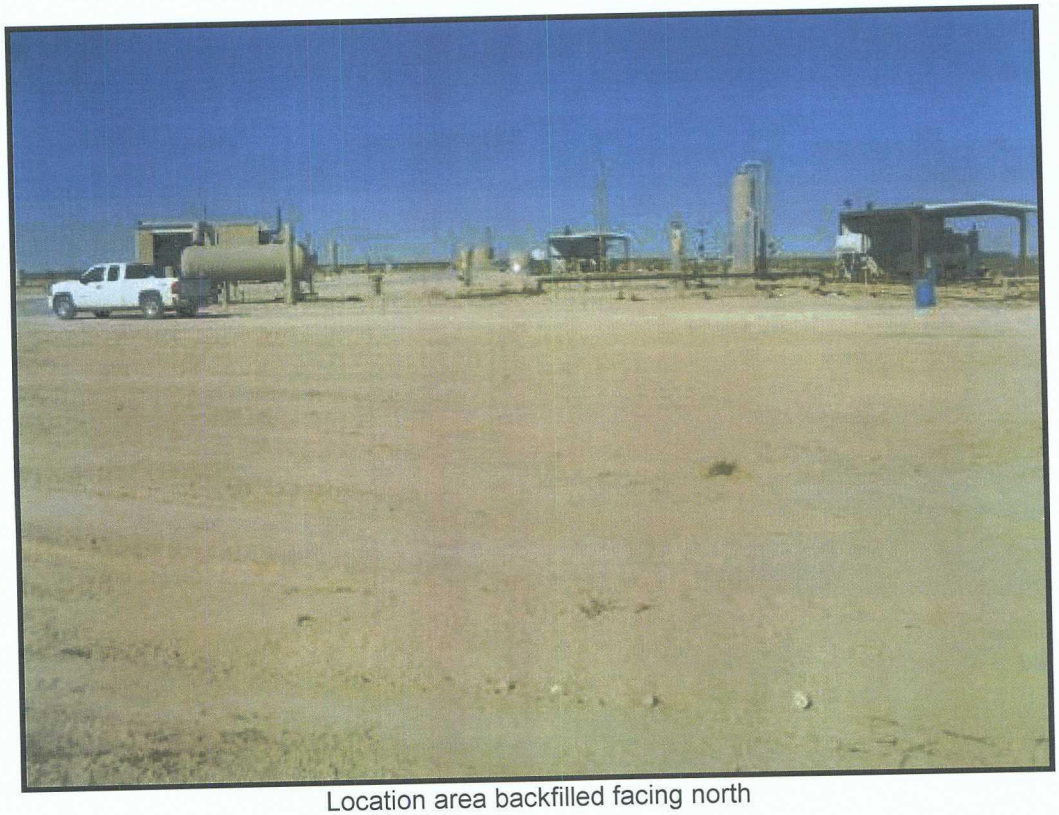
Excavated area backfilled facing northwest

Site Photos 11-16-10

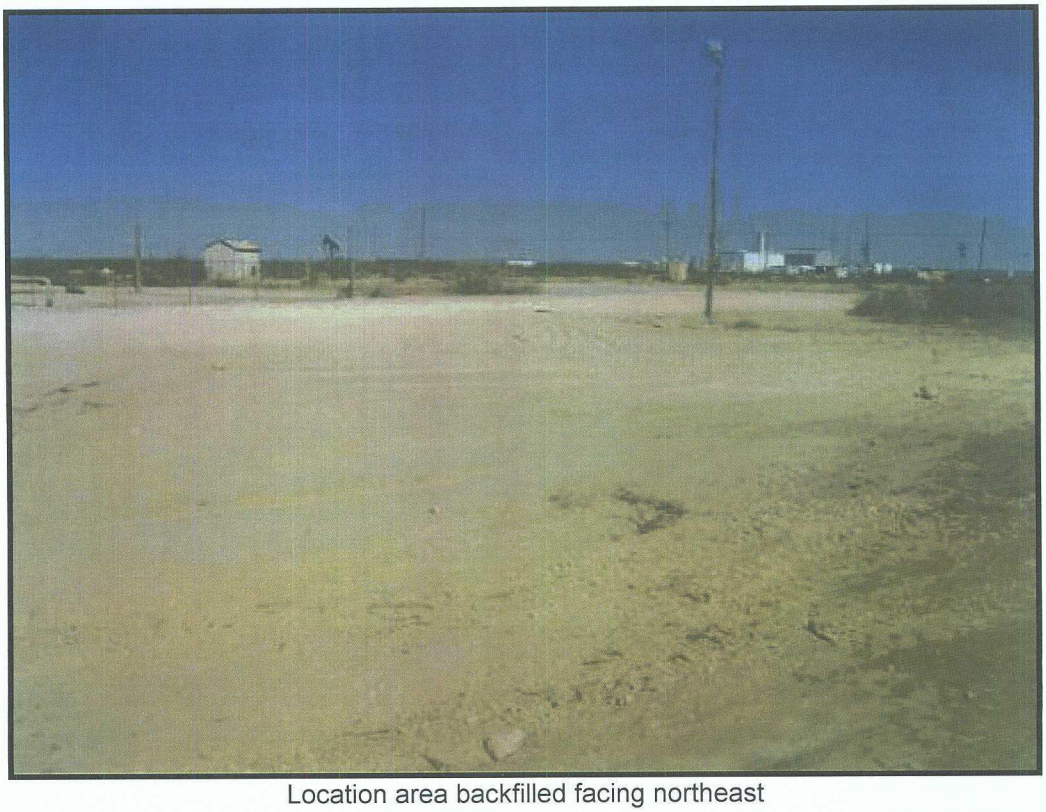
Location area backfilled facing east

Location area backfilled facing east

Location area backfilled facing east



Location area backfilled facing north



Location area backfilled facing northeast

Location area backfilled facing west

Location area backfilled facing northwest

Appendix C- Copy of Laboratory Analytical Results

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 27, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 10/26/10 16:10.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	10/26/2010	Sampling Date:	10/26/2010
Reported:	10/27/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	Cool & Intact
Project Number:	PENASCO YARD EDDY CO.	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: NON-STAINED STOCKPILE (H021147-01)

BTEX 8260B mg/kg **Analyzed By: CMS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	10/27/2010	ND	1.00	100	1.00		
Toluene*	<0.100	0.100	10/27/2010	ND	0.970	97.0	1.00		
Ethylbenzene*	<0.100	0.100	10/27/2010	ND	1.04	104	1.00		
m+p - Xylene	<0.200	0.200	10/27/2010	ND	2.07	103	2.00		
o-Xylene	<0.100	0.100	10/27/2010	ND	1.02	102	1.00		
Total Xylenes*	<0.100	0.100	10/27/2010	ND	3.09	103	3.00		

Surrogate: Dibromofluoromethane	*88.9 %*	*80-120*
Surrogate: Toluene-d8	*94.6 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*100 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**110**	10.0	10/27/2010	ND	120	91.6	131	8.00	SUB-SS

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/27/2010	ND	168	84.1	200	2.09	
DRO >C10-C28	**25.1**	10.0	10/27/2010	ND	221	111	200	0.403	

Surrogate: 1-Chlorooctane	*104 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*99.9 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

SUB-SS	Analysis subcontracted to SunStar Laboratories, Inc.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Company Name: SESE
Project Manager: Bob Allen
Address: 703 E Clinton
City: Hobbs State: NM Zip: 88240
Phone #: 575-397-0510 Fax #:
Project #: AGA 10-001 Project Owner: Agave Energy
Project Name: Penasco Yard
Project Location: Eddy, NM
Sampler Name: Issac Kincaid

BILL TO
P.O. #:
Company:
Attn: Same
Address:
City:
State: Zip:
Phone #:
Fax #:

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV: ACID/BASE:	PRESERV: ICE / COOL	PRESERV: OTHER:	SAMPLING: DATE	SAMPLING: TIME	ANALYSIS REQUEST: BTEX	ANALYSIS REQUEST: TPH 418.1
H21147-1	non-stained stockpile	C	1			✓					✓		10/26/10	1400		

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [signature] Date: 10/26/10 Time: 1610
Received By:

Relinquished By: Date: Time:
Received By: Jade Henson

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

5°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) JH

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: ikincaid@sese-nm.com

Rushed

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 12, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 11/05/10 15:15.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	11/05/2010	Sampling Date:	11/05/2010
Reported:	11/12/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	Cool & Intact
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BOTTOM 24' BGS (H021240-01)

BTEX 8021B mg/kg **Analyzed By: cms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2010	ND	1.65	82.7	2.00	3.82	
Toluene*	**0.181**	0.050	11/11/2010	0.069	1.67	83.7	2.00	24.7	
Ethylbenzene*	<0.050	0.050	11/11/2010	ND	1.51	75.3	2.00	5.21	
Total Xylenes*	<0.150	0.150	11/11/2010	ND	4.70	78.3	6.00	2.84	

Surrogate: 4-Bromofluorobenzene (PIL *85.3 %* *80-120*

TPH 418.1 mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**170**	10.0	11/11/2010	ND	140	107	131	6.90	SUB-SS

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2010	ND	186	93.0	200	4.65	
DRO >C10-C28	**89.4**	10.0	11/11/2010	ND	173	86.4	200	8.04	

Surrogate: 1-Chlorooctane *111 %* *70-130*

Surrogate: 1-Chlorooctadecane *110 %* *70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	11/05/2010	Sampling Date:	11/05/2010
Reported:	11/12/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	Cool & Intact
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: EAST WALL (H021240-02)

BTEX 8021B mg/kg **Analyzed By: cms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2010	ND	1.65	82.7	2.00	3.82	
Toluene*	**0.117**	0.050	11/11/2010	0.069	1.67	83.7	2.00	24.7	
Ethylbenzene*	<0.050	0.050	11/11/2010	ND	1.51	75.3	2.00	5.21	
Total Xylenes*	<0.150	0.150	11/11/2010	ND	4.70	78.3	6.00	2.84	

Surrogate: 4-Bromofluorobenzene (PIL *84.6 %* *80-120*

TPH 418.1 mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**12.0**	10.0	11/11/2010	ND	140	107	131	6.90	SUB-SS

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2010	ND	186	93.0	200	4.65	
DRO >C10-C28	<10.0	10.0	11/11/2010	ND	173	86.4	200	8.04	

Surrogate: 1-Chlorooctane *106 %* *70-130*
Surrogate: 1-Chlorooctadecane *102 %* *70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	11/05/2010	Sampling Date:	11/05/2010
Reported:	11/12/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	Cool & Intact
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: NORTH WALL (H021240-03)

BTEX 8021B mg/kg **Analyzed By: cms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2010	ND	1.65	82.7	2.00	3.82	
Toluene*	**0.070**	0.050	11/11/2010	0.069	1.67	83.7	2.00	24.7	
Ethylbenzene*	<0.050	0.050	11/11/2010	ND	1.51	75.3	2.00	5.21	
Total Xylenes*	<0.150	0.150	11/11/2010	ND	4.70	78.3	6.00	2.84	

Surrogate: 4-Bromofluorobenzene (PIL *85.6 %* *80-120*

TPH 418.1 mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**100**	10.0	11/11/2010	ND	140	107	131	6.90	SUB-SS

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2010	ND	186	93.0	200	4.65	
DRO >C10-C28	**22.9**	10.0	11/11/2010	ND	173	86.4	200	8.04	

Surrogate: 1-Chlorooctane *93.1 %* *70-130*

Surrogate: 1-Chlorooctadecane *90.0 %* *70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	11/05/2010	Sampling Date:	11/05/2010
Reported:	11/12/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	Cool & Intact
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: WEST WALL (H021240-04)

BTEX 8021B mg/kg Analyzed By: cms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/11/2010	ND	1.65	82.7	2.00	3.82	
Toluene*	**0.054**	0.050	11/11/2010	0.069	1.67	83.7	2.00	24.7	
Ethylbenzene*	<0.050	0.050	11/11/2010	ND	1.51	75.3	2.00	5.21	
Total Xylenes*	<0.150	0.150	11/11/2010	ND	4.70	78.3	6.00	2.84	

Surrogate: 4-Bromofluorobenzene (PIL *90.0 %* *80-120*

TPH 418.1 mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<10.0	10.0	11/11/2010	ND	140	107	131	6.90	SUB-SS

TPH 8015M mg/kg Analyzed By: AB

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2010	ND	186	93.0	200	4.65	
DRO >C10-C28	<10.0	10.0	11/11/2010	ND	173	86.4	200	8.04	

Surrogate: 1-Chlorooctane *92.6 %* *70-130*
Surrogate: 1-Chlorooctadecane *91.4 %* *70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	11/05/2010	Sampling Date:	11/05/2010
Reported:	11/12/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	Cool & Intact
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: SOUTH WALL (H021240-05)

BTEX 8021B mg/kg **Analyzed By: cms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/12/2010	ND	1.65	82.7	2.00	3.82	
Toluene*	**0.155**	0.050	11/12/2010	0.069	1.67	83.7	2.00	24.7	
Ethylbenzene*	<0.050	0.050	11/12/2010	ND	1.51	75.3	2.00	5.21	
Total Xylenes*	<0.150	0.150	11/12/2010	ND	4.70	78.3	6.00	2.84	

Surrogate: 4-Bromofluorobenzene (PIL *86.7 %* *80-120*

TPH 418.1 mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**10.0**	10.0	11/11/2010	ND	140	107	131	6.90	SUB-SS

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/11/2010	ND	186	93.0	200	4.65	
DRO >C10-C28	<10.0	10.0	11/11/2010	ND	173	86.4	200	8.04	

Surrogate: 1-Chlorooctane *98.2 %* *70-130*

Surrogate: 1-Chlorooctadecane *97.2 %* *70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

SUB-SS	Analysis subcontracted to SunStar Laboratories, Inc.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ____ of ____

Company Name:	Safety & Environmental Solutions, Inc.	**BILL TO**	
Project Manager:	Bob Allen	P.O. #:	
Address:	703 East Clinton	Company:	Same
City:	Hobbs State: NM Zip: 88240	Attn:	
Phone #:	575-397-0510 Fax #: 575-393-4388	Address:	
Project #:	Project Owner:	City:	
Project Name:	AGA-10-001	State: Zip:	
Project Location:		Phone #:	
Sampler Name:		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	BRO	GRO	TPH 418.1								
H21240-1	Bottom 24' bgs	C	1			✓					✓		11/5/10	1010	✓	✓	✓	✓								
2	East wall													1015												
3	North wall													1020												
4	West wall													1025												
5	South wall													1030												

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 11/5/10 Time: 1515	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
			Fax Result: ☐ Yes ☐ No Add'l Fax #:
			REMARKS:
Relinquished By:	Date: 11/5/10 Time: 1515	Received By: Jodie Henson	
Delivered By: (Circle One) Sampler UPS - Bus - Other:	Temp. 4°C	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

#26

Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Monday, December 06, 2010 10:06 AM
To: 'Jennifer Knowlton'
Cc: Swazo, Sonny, EMNRD
Subject: RE: Penasco CS

I look forward to seeing it.

Jim

From: Jennifer Knowlton [mailto:jenniferk@yatespetroleum.com]
Sent: Monday, December 06, 2010 9:59 AM
To: Griswold, Jim, EMNRD
Cc: 'Bob Allen'
Subject: RE: Penasco CS

I have an additional report that I am going to send to you this week regarding the removal of additional soil, etc. I suggest you review that second report and then we can arrange for a conference call next week. I will get you that report as soon as I can!

Jennifer Knowlton, PE

Agave Energy Company

105 South Fourth Street

Artesia, NM 88210

575-748-4471 (work)

505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

-----Original Message-----
From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Monday, December 06, 2010 9:56 AM
To: Jennifer Knowlton
Subject: Penasco CS

Jennifer,

I finally got around to reviewing the investigation report for the Penasco station. It didn't take long. When can we get together (phone or otherwise) with SESI to talk about the future? Thanks.

Jim Griswold
Senior Hydrologist
Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Griswold, Jim, EMNRD

From: Jennifer Knowlton [jenniferk@yatespetroleum.com]
Sent: Thursday, November 04, 2010 9:02 AM
To: Griswold, Jim, EMNRD
Cc: 'David Boyer'; 'Bob Allen'
Subject: RE: Update on Penasco

Thanks, Jim. As soon as we have lab results and the manifests, we will send in an updated report with additional (or not) recommendations for the site!

Jennifer Knowlton, PE

Agave Energy Company

105 South Fourth Street

Artesia, NM 88210

575-748-4471 (work)

505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

-----Original Message-----
From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Thursday, November 04, 2010 8:59 AM
To: Jennifer Knowlton
Subject: RE: Update on Penasco

Begin the backfilling as you see fit.

Jim

From: Jennifer Knowlton [mailto:jenniferk@yatespetroleum.com]
Sent: Thursday, November 04, 2010 8:31 AM
To: Griswold, Jim, EMNRD
Cc: Bob Allen; 'David Boyer'; Ivan Villa
Subject: Update on Penasco

Jim,

I just wanted to give you an update on Penasco and what has been done there:

We have a very large hole and have removed a lot of dirt. As soon as we review the manifests, I will have an updated report that includes a more accurate assessment of the total amount of soils that we have removed. However, based on a rough count of the trucks, we have removed approximately 2160 cubic yards.

SESI will be taking samples of the sides and bottom of the excavation on Friday if you or someone else wishes to witness the samples. Just let me know and I will coordinate.

I don't think we can excavate much more but these soil samples will tell us what is left onsite.

We have some backfill on site and can start on that with your permission next week. Please advise.

Jennifer Knowlton, PE
Agave Energy Company
105 South Fourth Street
Artesia, NM 88210
575-748-4471 (work)
505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

Griswold, Jim, EMNRD

From: Jennifer Knowlton [jenniferk@yatespetroleum.com]
Sent: Monday, October 18, 2010 8:53 AM
To: Griswold, Jim, EMNRD
Subject: RE: Penasco CS

Thanks. We are scheduled to have some rain later this week. I am not sure what the exact plans are given that situation but will keep you informed.

Jennifer Knowlton, PE

Agave Energy Company

105 South Fourth Street

Artesia, NM 88210

575-748-4471 (work)

505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

-----Original Message-----
From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Monday, October 18, 2010 8:49 AM
To: Jennifer Knowlton
Subject: Penasco CS

Jennifer,

I received a copy of SESI's 10/8/10 investigation report for the Penasco Compressor Station along with your cover letter late last week and am in the process of reviewing. Your letter requests permission to proceed with additional soil excavation. You may proceed. Please retain a copy of this email for your files as no other confirmation will be sent. Once I have fully reviewed the information, we can discuss additional actions which may be required. Thanks.

Jim Griswold
Senior Hydrologist
Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

direct: 505.476.3465
email: jim.griswold@state.nm.us

Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Monday, October 18, 2010 8:47 AM
To: 'jknowlton@yatespetroelum.com'
Cc: Swazo, Sonny, EMNRD
Subject: Penasco CS

Jennifer,

I received a copy of SESI's 10/8/10 investigation report for the Penasco Compressor Station along with your cover letter late last week and am in the process of reviewing. Your letter requests permission to proceed with additional soil excavation. You may proceed. Please retain a copy of this email for your files as no other confirmation will be sent. Once I have fully reviewed the information, we can discuss additional actions which may be required. Thanks.

Jim Griswold
Senior Hydrologist
Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
direct: 505.476.3465
email: jim.griswold@state.nm.us

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210-2118
TELEPHONE (575) 748-1471

October 12, 2010

Jim Griswold
Senior Hydrologist
Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Penasco Compressor Station

Dear Jim:

Enclosed please find the results of the contamination delineation at the Penasco Compressor Station. Based on the results of the extensive soil sampling that was done, we have two recommendations for proceeding with Phase II of the cleanup:

1) Remove an additional 2200 cubic yards (approximate) of highly contaminated soil from the south and west sides of the south tank battery. Field samples will be taken to ensure that the most highly contaminated areas are removed.
2) The installation of four passive wind vents. These would be located in the center of Sump 2, the center of Sump 23, the west side of the south tank battery and the south side of the south tank battery. We recommend testing the passive vents on a monthly basis. When the vents show three consecutive months of adequate samples, a whole air sample will be sent to the lab. At this time, the results of the monthly analysis and the lab analysis will be submitted to the OCD.

We are ready to proceed with the soil excavation as soon as possible. Once the highly contaminated soil has been removed, the south tank battery area will need to be back filled in preparation for the installation of the passive wind vents. Agave is requesting permission to proceed with the additional evacuation. We can discuss the installation location and numbers of the passive vents while this work in on going if necessary.

If you have any questions or comments on this information, please contact me via email at jknowlton@yatespetroelum.com.

Sincerely,

Jennifer Knowlton

Jennifer Knowlton
Environmental Engineer

P.O. Box 1613
703 E. Clinton
Hobbs, New Mexico 88240
575/397-0510
Fax 575/393-4388
www.sesi-nm.com

Safety & Environmental Solutions, Inc.

October 11, 2010

Ms. Jennifer Knowlton
Agave Energy Company
105 S 4th Street
Artesia, NM 88210

Re: Penasco Yard Subsurface Investigation

Dear Ms. Knowlton:

Attached with this letter is our investigation report conducted at the above location. We investigated hydrocarbon releases at three locations at the site which were at a former tank battery and locations identified as sump S2 and sump S23.

The investigation established vertical and horizontal extent of the releases at all three locations with the exception of two borings at the tank battery site where auger refusal prevented deeper drilling. The hydrocarbon concentrations at total depth at these two borings are relatively low compared to those higher up in the boring (see report Table 3).

Groundwater within 1.5 miles of the site averages 182 feet below the surface. The closest well is the Penasco yard water well several hundred feet to the north of sump 2. The depth to water reported by the NM State Engineer for this well was 200 feet below ground surface. The proximity of water wells within 1,000 feet of the yard requires a TPH cleanup goal of 100 mg/Kg for impacted soils.

As a result of our work we are providing the below recommendations for remediation at the location:

1. Additional soil removal in the tank battery excavation is recommended, specifically in the area of BSB-1 and BSB-4. BSB-1 has highly elevated values of Total BTEX, GRO and TPH at a depth 20 feet below land surface. BSB-4 has highly elevated values of Total BTEX and GRO at depth from 10.5 feet to 35 feet. However, due to practicality, excavation to a depth of just 25.5 feet (20.5 feet below the current bottom) is suggested for the highly contaminated soils. We suggest that the excavation be left open for at least a few days for natural aeration.
2. Provided that air quality issues and/or permitting are not a restrictive consideration, installation of a grid of passive wind ventilation turbines is recommended with a grid pattern defined by battery soil boring locations BSB-1, BSB-2, BSB-4 and the sides of the existing excavation (report Figure 4). Installation would be performed following backfill to the original surface to prevent water ponding in the excavation.
3. Installation of a passive wind ventilation turbine is recommended at the center of sump 2 and the center of sump 23 provided that air quality issues and/or permitting are not a restrictive consideration.

Installation of a protective cover liner is generally not recommended when only hydrocarbons

are present. Unlike chlorides, these can be remediated with active or passive remediation methods and do not require long term isolation to prevent migration.

If you have any questions please call me or Bob Allen at 575 397-0510.

Sincerely,

David Boyer, P.G.

Attachment

Agave Energy Company

Report of Investigation
Penasco Compressor Station

Section 26, Township 18S, Range 25E
Eddy County, New Mexico

October 8, 2010

Prepared for:

Agave Energy
105 South 4th Street
Artesia, New Mexico 88210

Prepared by:

Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240

TABLE OF CONTENTS

I. Contacts

Representative	Company	Telephone	E-mail
Jennifer Knowlton	Agave Energy Company	(575) 748-4471	jknowlton@yatespetroleum.com
Bob Allen	SESI	(575) 397-0510	ballen@sesi-nm.com

II. Background

Safety & Environmental Solutions, Inc. (SESI) was contracted by Agave Energy Company to propose a workplan for the investigation and remediation of three areas located within the Penasco Compressor Station. The site is located in E/2 SE/4 of Section 26, Township 18 South, Range 25 East, Eddy County, New Mexico (Figure 1).

Two areas originally contained sumps that were removed and contamination was found in the soil beneath the sumps. The third area originally contained above ground tanks and contamination was found after the tanks were removed. The locations of the areas investigated are shown in Figure 2.

After sumps #2 and #23 were removed the most highly contaminated soils were removed to a depth of 20' and 13' respectively. On February 10, 2010 and February 12, 2010, the bottoms and sidewalls of the existing excavations were sampled and found to still contain hydrocarbons (TPH) in concentrations ranging from 7,000 ppm to 12,600 ppm in sump # 23, and from 711 ppm to 1,460 ppm in sump #2 (Table 1). BTEX analysis of these samples showed no Benzene and small amounts of Toluene, Ethyl-benzenes and Xylenes. Vertical and horizontal extents of contamination had not yet been determined in either excavation. Chloride concentrations in these samples are less than 50 ppm.

The bermed tank battery area left from the removal of the tanks was sampled on December 10, 2009 and found to also contain hydrocarbons (TPH) in concentrations ranging from 593 ppm to 881 ppm with small amounts of BTEX (Table 1). The vertical and horizontal extent of contamination had not yet been determined to date. Chloride concentrations in these samples are less than 120 ppm.

III. Surface and Groundwater

The closest surface water is the Pecos River approximately 7 miles east from the subject site. The Rio Peñasco, an ephemeral watercourse, is approximately 1,560 feet north of the location.

According to information obtained from the New Mexico State Engineer online database, the closet groundwater well of record in the area (permit number RA 05344) is located 285 feet northeast of sump 2 in the Peñasco yard. The well owner is Yates Petroleum Corporation. In May 1967 the reported depth to water was 200 feet.

There are 32 water wells of record within a five-mile radius of the Penasco yard (Figure 3). The reported depth of water in these wells range from 42 feet in a well 1.5 miles southwest of the facility to 270 feet less than one mile southeast from the subject site (Table 2). The well with a water level of 42 feet is within 0.1 miles of a well with a depth to water of 204 feet. The average depth to water for the 32 wells was 134 feet. Further to the east, water wells closer to the Pecos River have more shallow water levels, generally

less than 100 feet, as would be expected. The five wells located within 1.4 miles from the subject site all have depths to water in excess of 100 feet.

It is the opinion of Agave Energy and SESI that this information is an adequate indication of the depth to water in the immediate vicinity of the subject site and no further investigation into the depth of the water is necessary.

IV. Soils

The surface soils in the area are classified by the USDA Soil Conservation Service as part of the Reagan-Upton complex (Soil Survey, Eddy County). These soils are well drained, moderately dark colored, calcareous loams that are shallow to moderately deep.

V. Characterization

The cleanup level reached by the application of the **"Guidelines for Remediation of Leaks, Spills and Releases"** *New Mexico Oil Conservation Division* – August 13, 1993 (Guidelines) to this site are 10 mg/Kg benzene, 50 mg/Kg total BTEX and 100 ppm TPH. Application of the NMOCD's ranking criteria for contaminated soils at this site is presented below.

Depth to Ground Water:			
Vertical distance from contaminants to seasonal high water elevation of groundwater	*Less than 50 feet*	*20 points*	
	50 feet to 99 feet	*10 points*	
	>100 feet	*0 points*	***X***
Wellhead Protection Area:			
Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources	*Yes*	*20 points*	***X***
	No	*0 points*	
Distance to Surface Water:			
Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches	*Less than 200 feet*	*20 points*	
	200 feet to 1000 feet	*10 points*	
	>1000 feet	*0 points*	***X***
	RANKING SCORE (TOTAL POINTS)		***20***

VI. Work Performed

An investigation work plan was proposed by SESI and accepted by Agave. It recommended a minimum of five (5) boreholes be installed to determine vertical and horizontal extent for each area. Each of the sump excavations would be backfilled to allow the installation of a borehole in approximately the center of each existing excavation. The borehole would be advanced to the depth where TPH concentrations are at or below 100 ppm. Then the borehole would be advanced another 5 feet and sampled again to insure that the vertical extent has been determined. The bore holes were to be installed using a hollow stem auger with a 5-foot core barrel or split-spoon sampler. Samples would be collected in five (5) foot intervals sufficient to determine the vertical extent of contamination beneath the site.

The area would then be delineated horizontally in 20 ft. radius from the midpoint of each area or as buried lines allow, until TPH concentrations are at or below <100 ppm. Samples would be submitted under Chain of Custody to Cardinal Laboratories, Hobbs,

New Mexico, for TPH EPA Method 418.1, TPH EPA Method 8015, and BTEX EPA Method 8260 analyses. Upon completion of sampling, all boreholes would be sealed from total depth to surface with a bentonite/cement grout. The locations of the boreholes for each area are shown in Figures 4, 5 and 6.

The plan to delineate the bermed area left from the tank removal would be the same plan described above with the exception of the bermed area would be delineated horizontally from the midpoint of the berm area. The depth of the boreholes will be determined by the concentrations of contamination encountered but will stop where the TPH concentrations are at or below 100 ppm.

A one-call was initiated prior to arrival on site and prior to drilling Badger Daylighting services were used to hydrovac locations to locate buried lines at the site of each boring. Drilling was performed by WDC Exploration and Wells of Peralta, New Mexico, using a CME-85 hollow-stem auger with a splitspoon downhole hammer attachment for sample collection.

The work proceeded as proposed in the plan with the exception that total depth of the borings was limited in some instances by large cobbles and boulders which resulted in some intervals not being sampled and with auger refusal in most boreholes. Also, heavy rainfall on June 29, 2010 resulted in the tank battery excavation being flooded and the other excavation locations being to wet for heavy equipment setup. This necessitated postponement of additional work until July 26-30. Finally, because BSB-2 and BSB-4 were adjacent to the excavation walls, two additional borings were drilled to the south and west of the tank battery to determine horizontal extent of hydrocarbon impacts;

VII. Summary and Conclusions

A soil boring investigation was conducted in June and July 2010 to determine horizontal and vertical extent of contamination at three locations at the Agave Penasco yard south of Artesia, NM. At each location borings were advanced to either auger refusal or until hydrocarbon impacted material was no longer encountered. Borings outside the center of each excavation were advanced to determine if horizontal migration had occurred. Samples were collected from auger splitspoons for laboratory analysis of benzene, toluene, ethylbenzene and total xylene volatiles (BTEX), gasoline and diesel range organics (GRO and DRO, EPA method 8015B) and Total Petroleum Hydrocarbons (EPA method 418.1)

Results of the review were compared with NM Oil Conservation Division "Guidelines for Remediation of Leaks, Spills and Releases" (1993) to determine the relative threat to public health, fresh waters and the environment, and to provide guidance for remediation. The OCD uses a ranking system with depth to groundwater, wellhead protection area and distance to a surface water body to determine possible remediation scenarios.

Depth to groundwater at the site was determined from state engineer records. 32 water wells were found within a five mile radius of the Penasco yard. Depth to water averages 134 feet with values ranging from 42 feet to 270 feet. Depth to water for the five wells closest to the Peñasco yard averages 182 feet. The closest private well is used by Agave and its distance is 285 feet from the location of sump 2. The depth to water in that well was reported as 200 feet. The distance to the nearest surface water body (ephemeral Peñasco Draw) is approximately 1,560 feet.

Comparing values of depth to water, wellhead protection area and distance to a surface water body with the ranking criteria results in a ranking score of 20 and establishes recommended remediation levels of benzene at 10 ppm (mg/Kg), total BTEX of 50 ppm and TPH of 100 ppm.

Based on the above ranking criteria, four of the soil borings from the tank battery location, two borings from the sump 2 location and one boring from sump 23 exceed the ranking criteria in one or more samples from each boring (Table 3).

Of those, only two borings from the tank battery (center excavation, BSB-1, 40 feet; and S-side excavation, BSB-2, 42 feet) exceeded the 100 mg/Kg standard at boring total depth. At those depths, minimal levels of benzene, total BTEX and TPH remain in these two boreholes. Auger refusal in boulders and cobbles prevented further sampling below 40-42 feet from the surface.

Vertical extent of contamination was established in all other borings other than those two shown above.

VIII. Recommendations

The following recommendations for additional work are made for the Penasco yard:

1. Additional soil removal in the tank battery excavation is recommended, specifically in the area of BSB-1 and BSB-4. BSB-1 has highly elevated values of Total BTEX, GRO and TPH at a depth 20 feet below land surface. BSB-4 has highly elevated values of Total BTEX and GRO at depth from 10.5 feet to 35 feet. However, due to practicality excavation to a depth of just 25.5 feet (20.5 feet below the current bottom) is suggested for highly contaminated soils.
2. Provided that air quality issues and/or permitting are not a restrictive consideration, installation of a grid of passive wind ventilation turbines is recommended with a grid pattern defined by battery soil boring locations BSB-1, BSB-2, BSB-4 and the sides of the existing excavation.
3. Installation of a passive wind ventilation turbine is recommended at the center of sump 2 and the center of sump 3 provided that air quality issues and/or permitting are not a restrictive consideration.
4. Installation of a protective cover liner is generally not recommended when only hydrocarbons are present. Unlike chlorides, these can be remediated with active or passive remediation methods and do not require long term isolation to prevent migration.

Following discussion of these recommendations with Agave and determination that air quality issues are not a constraint for use of passive ventilation, an appropriate final closure plan proposal will be submitted to the New Mexico Oil Conservation Division for approval.

IX. Figures, Tables & Appendices

Table 1- December 2009 – February 2010 Soil Analytical Summary Table

Tank Battery Certificate of Analysis Summary 355624								
Sample ID	**Cl- (mg/kg)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethyl-benzene (mg/kg)**	**Total Xylenes (mg/kg)**	**GRO C6-C10 (mg/kg)**	**DRO C10-C28 (mg/kg)**	**TPH: GRO+DRO (mg/kg)**
355624-001 GS/Comp-Surface NW 4-4 In SOIL Dec-10-09	119	0.0075	0.2035	0.1651	1.0373	280	325	605
355624-002 GS/Comp-001 NW 1-1 ft. SOIL Dec-10-09	97.3	BRL	0.1979	0.4970	5.143	374	507	881
355624-003 GS/Comp-Surface NE 4-4 In. SOIL Dec-10-09	103	BRL	BRL	0.0085	0.0923	219	572	791
355624-004 GS/Comp-001 NE 1-1 ft. SOIL Dec-10-09	103	BRL	0.0124	0.0394	0.4068	360	411	771
355624-005 G/S Comp-001 SW 4-4 In. SOIL Dec-10-09	118	BRL	0.3387	0.6881	4.559	331	431	762
355624-006 GS/Comp-001 SW 1-1 ft. SOIL Dec-10-09	53.4	BRL	0.1405	0.3408	4.632	336	257	593

*Chloride EPA 300.0
*BTEX-EPA 8021
*TPH by SW 8015B

Tank Battery Certificate of Analysis Summary 362277						
Sample ID	**Cl- (mg/kg)**	**Total TPH (mg/kg)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethyl-benzene (mg/kg)**	**Total Xylenes (mg/kg)**
362277-001 GS/Comp-Bottom 6-6 ft. SOIL Feb-12-10	6.73	1,960	<0.0012	<0.0024	0.0116	0.0042
362277-002 GS/Comp-Sidewall 5-5 ft. SOIL Feb-12-10	176	628	<0.0012	<0.0024	<0.0012	<0.0012

*Chloride EPA 300.0
*BTEX-EPA 8021
*TPH by Spectrophoto Ir

Sump Unit #2 Certificate of Analysis Summary 356167								
Sample ID	**Cl- (mg/kg)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethyl-benzene (mg/kg)**	**Total Xylenes (mg/kg)**	**GRO C6-C10 (mg/kg)**	**DRO C10-C28 (mg/kg)**	**TPH: GRO+DRO (mg/kg)**
356167-001 GS/Unit #2 Bottom 20-20 ft. SOIL Dec-17-09	76.8	<0.0011	<0.0022	<0.0011	0.0082	31.0	163	194
356167-002 GS/Unit #2 Sidewall 15-15 ft. SOIL Dec-17-09	103	<0.0011	<0.0022	<0.0011	<0.0011	<16.6	21.0	21.0
356167-003 GS/Unit #23 Bottom 15-15 ft. SOIL Dec-17-09	<16.8	0.1865	5.368	2.397	15.40	422	1,,060	1,482
356167-004 GS/Unit #23-010 Sidewall 10-10 ft. SOIL Dec-17-09	22.4	<0.0011	<0.0022	<0.0011	0.0184	<16.2	51.2	51.2
356167-005 GS/Unit #23-012 Sidewall 12-12 ft. SOIL Dec-17-09	11.2	<0.2765	0.6911	0.4949	8.705	703	1,530	2,233

*Chloride EPA 300.0
*BTEX-EPA 8021
*TPH by SW 8015B

Sump Unit #2 (Below Grade Tank) Certificate of Analysis Summary 362844						
Sample ID	**Cl- (mg/kg)**	**Total TPH (mg/kg)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethyl-benzene (mg/kg)**	**Total Xylenes (mg/kg)**
362844-001 GS/Comp-Bottom 20-20 ft. SOIL Feb-17-10	13.3	1,460	<0.0011	<0.0022	0.0128	0.2105
362844-002 GS/Comp-Sidewall 15-15 ft. SOIL Feb-17-10	45.3	711	<0.0011	<0.0022	<0.0011	<0.0011

*Chloride EPA 300.0
*BTEX-EPA 8021
*TPH by EPA 418.1

Sump Unit #23 Certificate of Analysis Summary 352340								
Sample ID	**Cl- (mg/kg)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethyl-benzene (mg/kg)**	**Total Xylenes (mg/kg)**	**GRO C6-C10 (mg/kg)**	**DRO C10-C28 (mg/kg)**	**TPH: GRO+DRO (mg/kg)**
352340-001 GS/Comp-#4 Bottom 13-13 ft. SOIL Nov-12-09	15.5	<0.0227	0.6254	0.5829	0.8593	121	208	329
352340-002 GS/Comp-#4 Sidewall/10' 10-10 ft. SOIL Nov-12-09	9.98	0.3304	3.043	3.765	23.95	873	1,500	2,373
352340-003 GS/Comp-#4/12' 12-12ft. SOIL Nov-12-09	10.6	0.0606	1.771	1.147	6.740	278	388	666

*Chloride EPA 300.0
*BTEX-EPA 8021
*TPH by SW 8015B

Sump Unit #23 Certificate of Analysis Summary 362274						
Sample ID	**Cl- (mg/kg)**	**Total TPH (mg/kg)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethyl-benzene (mg/kg)**	**Total Xylenes (mg/kg)**
362274-001 GS/Comp-Bottom 13-13 ft. SOIL Feb-12-10	21.6	7,000	<0.0012	0.0063	0.0030	0.0292
362274-002 GS/Comp-Sidewall 12-12 ft. SOIL Feb-12-10	25.9	12,600	<0.0011	0.0447	0.0471	0.3041

*Chloride EPA 300.0
*BTEX-EPA 8021
*TPH by EPA 418.1

Table 2- Office of State Engineer Water Well Information

Office of State Engineer Water Well Information			
Well #	**Depth of Water**	**Distance**	**Direction**
RA 05344	200	0.054 miles	NE
RA 04068	168	0.452 miles	SW
RA 03975	270	0.728 miles	SE
RA 04128	100	1.249 miles	S
RA 07639	172	1.393 miles	SE
RA 04722	42	1.521 miles	SW
RA 05620	158	1.602 miles	NE
RA 04236	204	1.625 miles	SW
RA 04784	190	1.697 miles	NE
RA 03983	100	1.943 miles	SE
RA 04136	90	2.216 miles	E
RA 04160	100	2.502 miles	NE
RA 04283	125	2.694 miles	NE
RA 07066	100	2.806 miles	SE
RA 05333	260	2.929 miles	SW
RA 07260	100	2.947 miles	SE
RA 08812 REPAR	150	2.989 miles	E
RA 07954	175	2.989 miles	SE
RA 10133	138	3.038 miles	SE
RA 08875	150	3.101 miles	SE
RA 08097	120	3.143 miles	SE
RA 08557	100	3.173 miles	SE
RA 06986	165	3.191 miles	SE
RA 11036 POD 1	110	3.298 miles	SE
RA 09276 POD2	100	3.312 miles	SE
RA 07124	94	3.396 miles	SE
RA 06129	190	3.436 miles	SE
RA 04272	58	3.465 miles	SE
RA 03168	70	3.550 miles	SE
RA 06813	97	3.866 miles	SE
RA 08999	80	4.554 miles	E
RA 08098 RA08315	100	5.230 miles	SE

Table 3- Soil Boring Analytical Results

Table 3. Soil Boring Analytical Results, June-July 2010, Agave Penasco Yard Investigation.

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Tank Battery										
Center excavation	BSB-1, 10 ft.*	06/29/10	<0.050	<0.050	<0.050	<0.300	<0.050	13.3	104	**1,580**
Center excavation	BSB-1, 15 ft.*	06/29/10	<0.050	<0.050	5.61	17.5	23.1	305	424	**1,500**
Center excavation	BSB-1, 20 ft.*	06/29/10	1.68	5.02	24.2	87.2	**118**	1,420	1,240	**7,030**
Center excavation	BSB-1, 25 ft.*	06/29/10	0.234	0.667	3.21	11.9	16.0	13.0	<10.0	<100
Center excavation	BSB-1, 30 ft.*	06/29/10	0.134	0.132	1.05	3.69	5.01	<10.0	<10.0	<100
Center excavation	BSB-1, 35 ft.*	06/29/10	0.081	0.071	1.76	7.66	9.57	238	301	**1,290**
Center excavation	BSB-1, 40 ft.*	06/29/10	0.084	<0.050	0.964	4.00	5.05	60.4	11.9	**332**
* Five feet added to lab sample ID depth to account for depth of excavation.										
S-side excavation	BSB-2, 10 ft.*	06/29/10	<0.050	<0.050	0.845	6.36	7.21	33.5	28.3	**1,690**
S-side excavation	BSB-2, 15 ft.*	06/29/10	<0.050	<0.050	0.66	3.66	4.32	47.6	10.7	<100
S-side excavation	BSB-2, 20 ft.*	06/29/10	<0.050	<0.050	0.106	0.598	0.704	<10.0	<10.0	<100
S-side excavation	BSB-2, 25 ft.*	06/29/10	<0.050	<0.050	<0.050	<0.300	<0.050	80.8	57.1	**255**
S-side excavation	BSB-2, 30 ft.*	06/29/10	<0.050	0.104	0.201	1.35	1.66	41.0	56.2	<100
S-side excavation	BSB-2, 35 ft.*	06/29/10	0.156	0.326	2.30	19.0	21.8	479	387	**1,470**
S-side excavation	BSB-2, 40 ft.*	06/29/10	0.235	0.758	2.17	14.1	17.3	180	124	**530**
S-side excavation	BSB-2, 42 ft.*	06/29/10	<0.050	<0.050	0.128	0.788	0.916	33.6	71.7	**163**
* Five feet added to lab sample ID depth to account for depth of excavation.										
E-side excavation	BSB-3, 3-8 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 13 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 18 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 23 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 28 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
E-side excavation	BSB-3, 33 ft.	07/26/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
W-side excavation	BSB-4, 10.5 ft.	07/27/10	1.92	31.6	20.0	69.9	**123**	1,140	994	**3,240**
W-side excavation	BSB-4, 15.5 ft.	07/27/10	3.84	39.8	23.5	80.9	**148**	445	743	**3,070**
W-side excavation	BSB-4, 20.5 ft.	07/27/10	1.67	28.0	16.6	77.9	**124**	306	619	**2,870**
W-side excavation	BSB-4, 25.5 ft.	07/27/10	4.24	9.87	16.5	69.0	**100**	440	351	**1,620**
W-side excavation	BSB-4, 30.5 ft.	07/27/10	2.71	24.9	19.9	84.4	**132**	608	570	**2,740**
W-side excavation	BSB-4, 35.5 ft.	07/27/10	0.278	7.05	7.40	48.0	62.7	295	388	**1,430**
W-side excavation	BSB-4, 40.5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
W-side excavation	BSB-4, 45.5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

Table 3. Soil Boring Analytical Results, June-July 2010, Agave Penasco Yard Investigation.

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Tank Battery (continued)										
N-side excavation	BSB-5, 10.5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	**580**
N-side excavation	BSB-5, 20.5 ft.	07/27/10	<0.100	<0.100	0.258	1.11	1.37	<10.0	<10.0	<100
N-side excavation	BSB-5, 25.5 ft.	07/27/10	<0.100	<0.100	<0.100	1.96	1.96	<10.0	<10.0	<100
N-side excavation	BSB-5, 30.5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 25 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' S. of excavation	BSB-6, 30 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	11.1	<100
20' W. of excavation	BSB-7, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 33 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 35 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 40 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' W. of excavation	BSB-7, 45 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
Sump 2										
21' NW. of center S2	S2SB-1, 5 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 10 ft.	07/27/10	<0.100	<0.100	<0.100	0.255	0.255	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 20 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 25 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 30 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 35 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
21' NW. of center S2	S2SB-1, 40 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
Center sump 2	S2SB-2, 20 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	**855**
Center sump 2	S2SB-2, 25 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	**182**
Center sump 2	S2SB-2, 30 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	55.2	**357**
Center sump 2	S2SB-2, 40 ft.	07/27/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

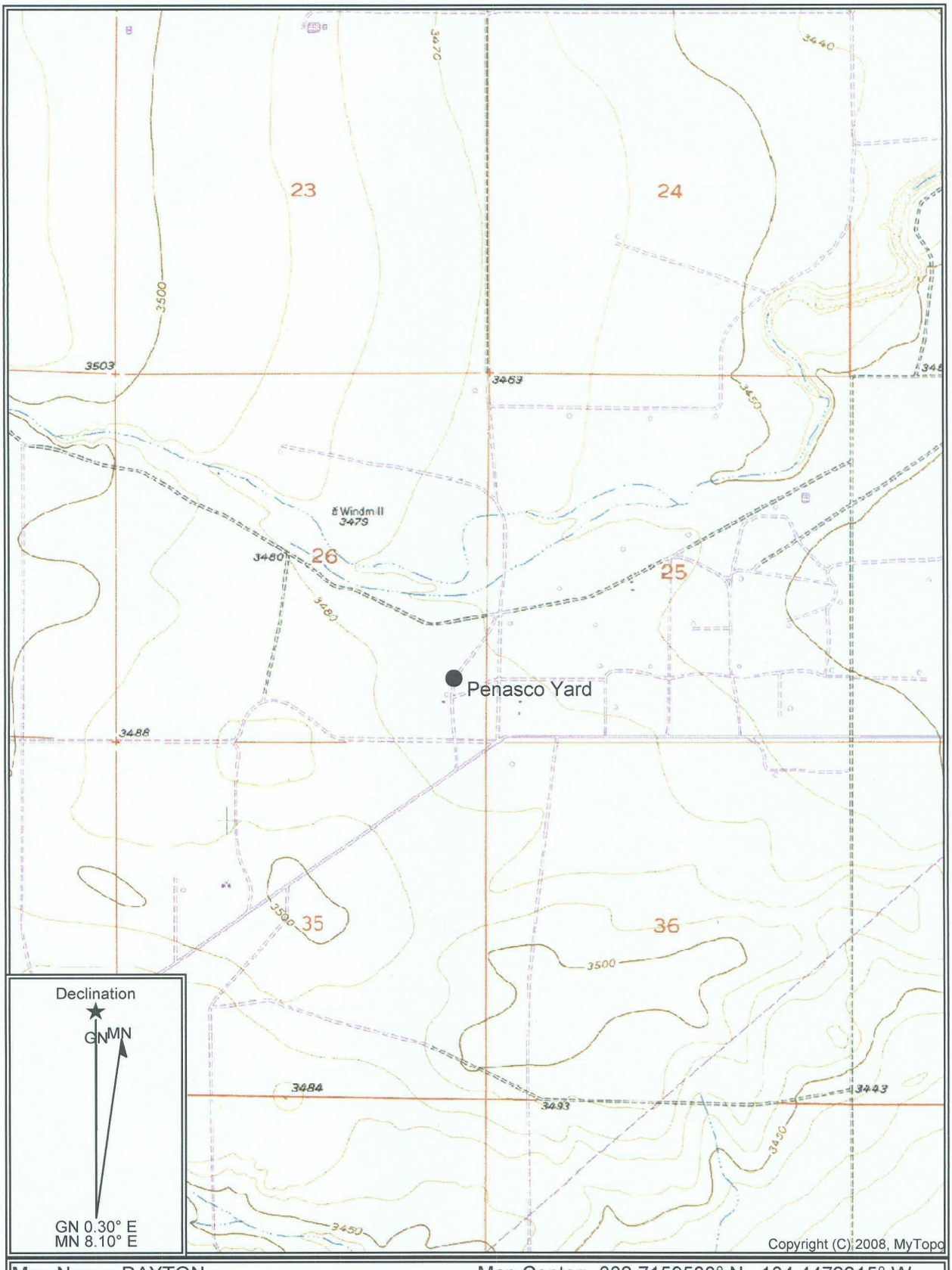
Table 3. Soil Boring Analytical Results, June-July 2010, Agave Penasco Yard Investigation.

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Sump 2 (continued)										
19.5' SE. of center S2	S2SB-3, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SE. of center S2	S2SB-3, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SE. of center S2	S2SB-3, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SE. of center S2	S2SB-3, 32 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SW. of center S2	S2SB-4, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	64.5	**937**
19.5' SW. of center S2	S2SB-4, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SW. of center S2	S2SB-4, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SW. of center S2	S2SB-4, 25 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
19.5' SW. of center S2	S2SB-4, 35 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 5 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 10 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 15 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 20 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 30 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
18' NE. of center S2	S2SB-5, 34 ft.	07/28/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
Sump 23										
20' NE. of center S23	S23SB-1,15 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,20 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,25 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,30 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,40 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
20' NE. of center S23	S23SB-1,45 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
Center sump 23	S23SB-2, 15 ft.	07/29/10	<0.100	0.683	0.572	3.67	4.93	36.2	47.5	**4,870**
Center sump 23	S23SB-2, 20 ft.	07/29/10	<0.100	0.101	0.105	0.597	0.803	17.9	27.1	**9,040**
Center sump 23	S23SB-2, 25 ft.	07/29/10	<0.100	0.247	0.18	0.968	1.40	15.5	20.9	**9,500**
Center sump 23	S23SB-2, 40 ft.	07/29/10	<0.100	0.27	0.217	1.41	1.90	25.8	51.7	**9,450**
Center sump 23	S23SB-2, 45.5 - 46.5 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

Table 3. Soil Boring Analytical Results, June-July 2010, Agave Penasco Yard Investigation.

Location	Boring ID and Corrected Depth (feet below land surface)	Sample Date	Benzene (<10 mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (<50/mg/Kg)	GRO (C6-C10) (mg/Kg)	DRO (>C10-C28) (mg/Kg)	TPH (418.1) (<100 mg/Kg)
Sump 23 (continued)										
24' SW. of center S23	S23SB-3, 10 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 15 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 20 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 25 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
24' SW. of center S23	S23SB-3, 30 ft.	07/29/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 10 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 15 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 20 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 25 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 30 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 35 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 40 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
41' NW. of center S23	S23SB-4, 44 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
40' SE. of center S23	S23SB-5, 15 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
40' SE. of center S23	S23SB-5, 20 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100
40' SE. of center S23	S23SB-5, 25 ft.	07/30/10	<0.100	<0.100	<0.100	<0.300	<0.100	<10.0	<10.0	<100

Figure 1- Vicinity Map

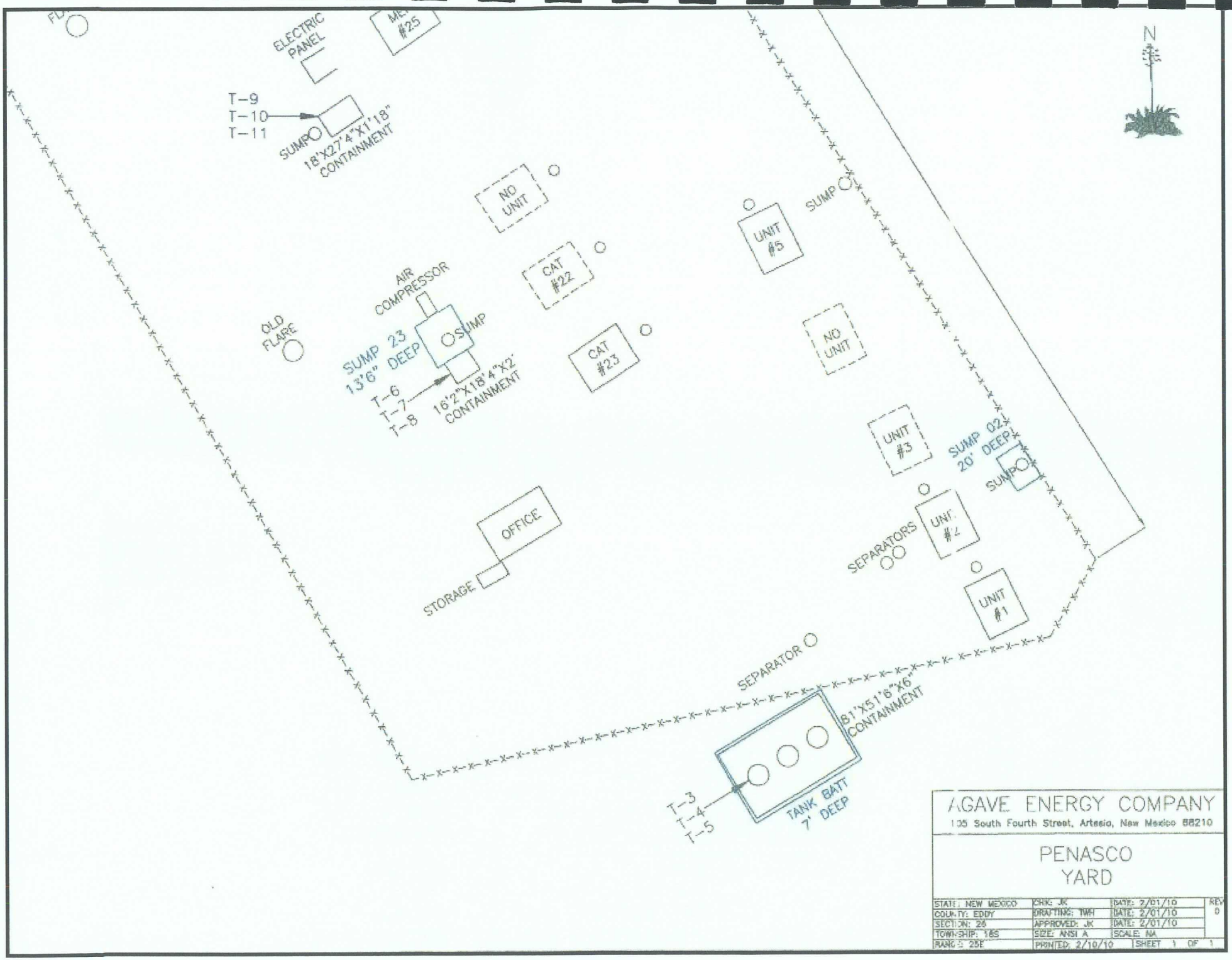


Map Name: DAYTON,
Scale: 1 inch = 2,083 ft.

Map Center: 032.7159533° N 104.4472215° W
Horizontal Datum: WGS84

FIGURE 1: VICINITY MAP

Figure 2- Site Plan



AGAVE ENERGY COMPANY

105 South Fourth Street, Artesia, New Mexico 88210

PENASCO YARD

STATE: NEW MEXICO	CHK: JK	DATE: 2/01/10	REV 0
COUNTY: EDDY	DRAFTING: TWH	DATE: 2/01/10	
SECTION: 26	APPROVED: JK	DATE: 2/01/10	
TOWNSHIP: 18S	SIZE: ANSI A	SCALE: NA	
RANGE: 25E	PRINTED: 2/10/10	SHEET 1 OF 1	


RA05344 200' OSE
Sump #23
13'6" Deep
Sump #2
20' Deep
Tank Battery
7' Deep
Image NMRGIS
© 2010 Google
404 ft
Imagery Date: Jun 30, 2005
32°42'50.59" N
104°26'59.55" W
elev 3478 ft
Eye alt 4884 ft
Google

Figure 3- State Engineer Water Well Locations

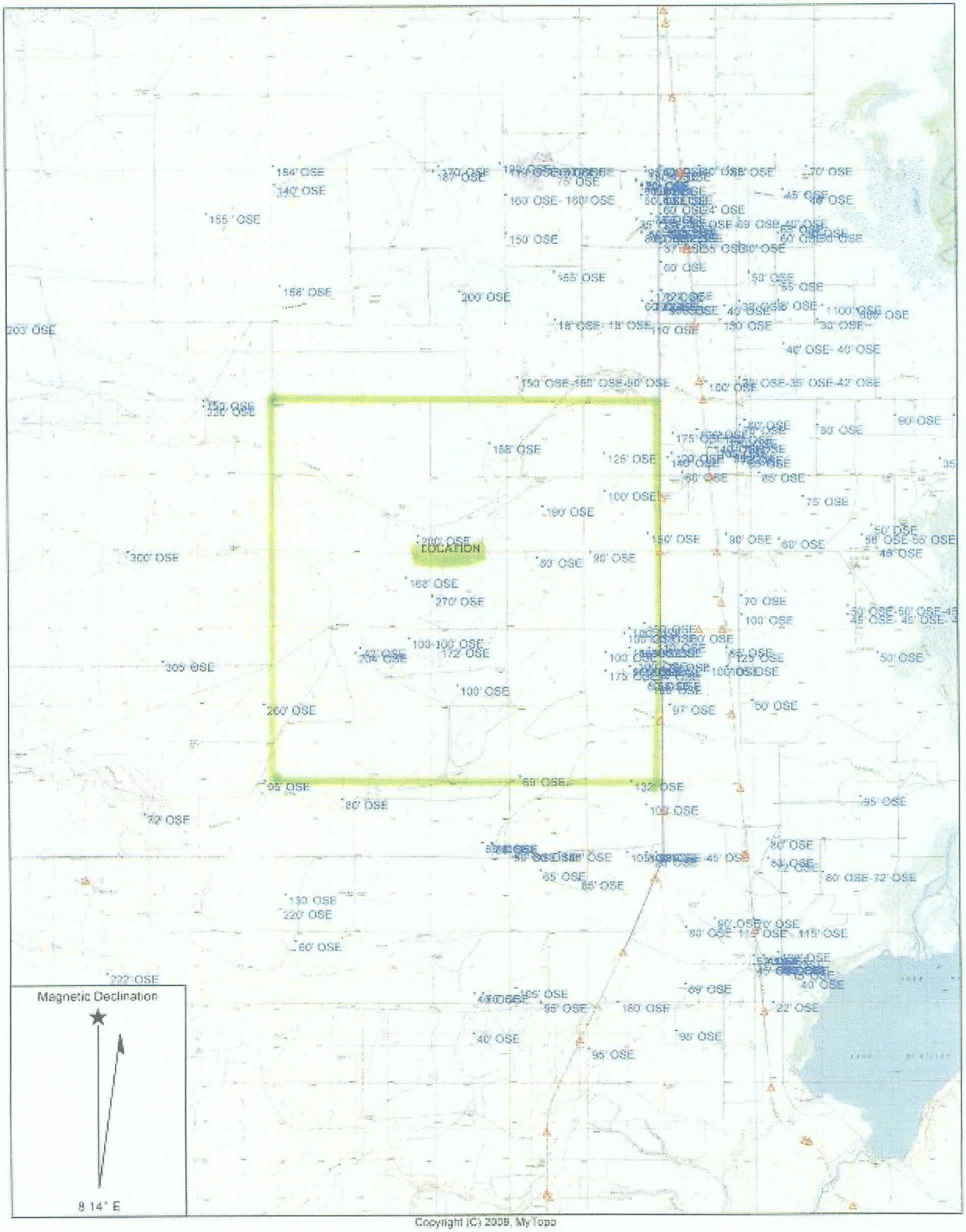
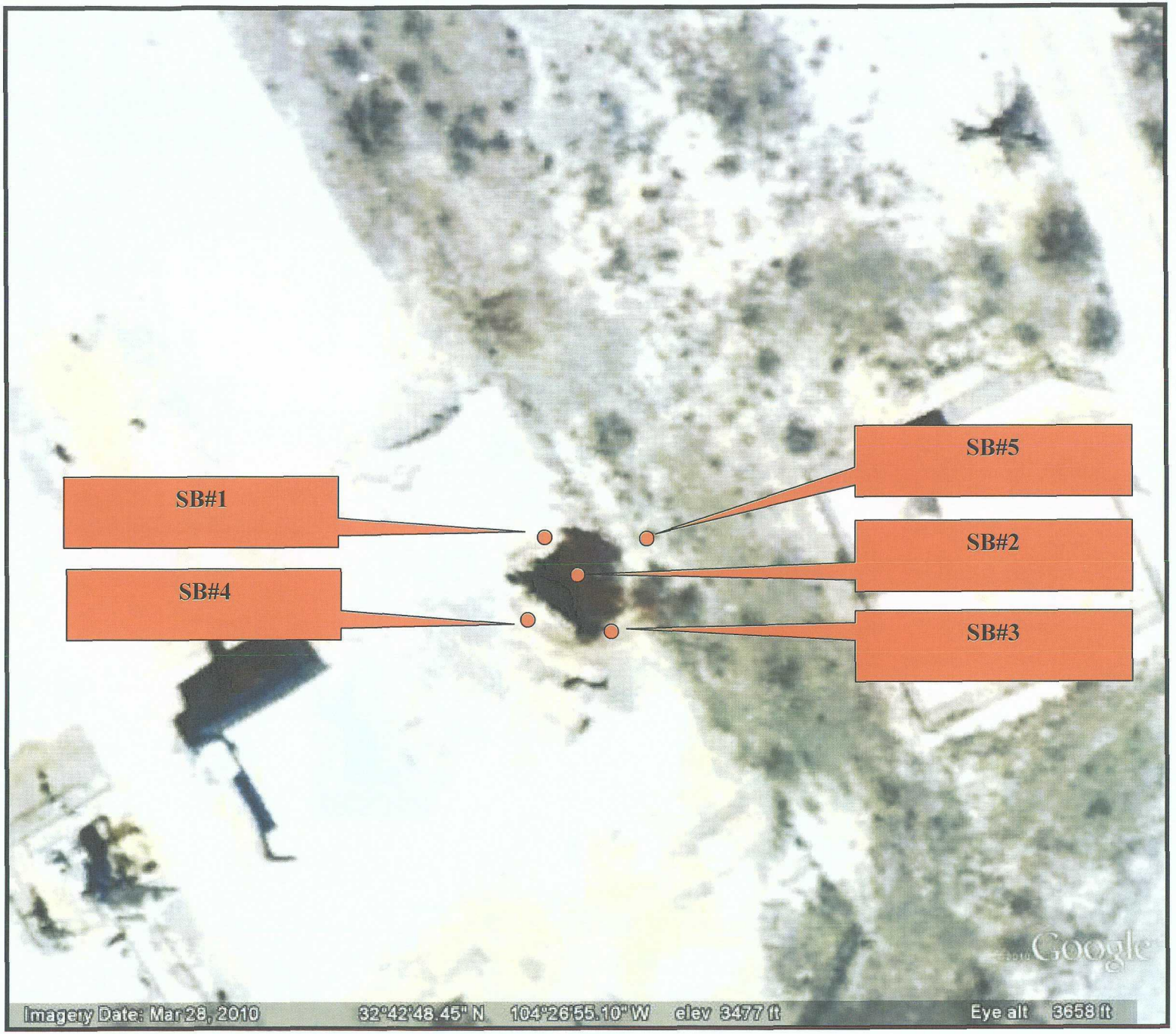

LOCATION
Magnetic Declination
8 14° E
Copyright (C) 2009, MyTopo

Figure 4- Location of Tank Battery Soil Borings

Tank Battery Soil Boring Locations

Figure 5- Location of Sump 2 Soil Borings



Sump 2 Soil Boring Locations

Figure 6- Location of Sump 23 Soil Borings

Sump 23 Soil Boring Locations

Appendix A- Copy of Laboratory Analytical Results

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

July 9, 2010

Bob Allen
Safety & Environmental Solutions, Inc.
703 East Clinton, #103
Hobbs, NM 88240

Re: Pencesco Yard (AGA-10-001)

Enclosed are the results of analyses for sample number H20253, received by the laboratory on 06/30/10 at 5:04 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 7 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, #102
HOBBS, NM 88240
FAX TO: (575) 393-4388

Receiving Date: 06/30/10
Reporting Date: 07/06/10
Project Owner: AGAVE ENERGY (AGA-10-001)
Project Name: PENCESCO YARD
Project Location: SW ARTESIA, NM

Sampling Date: 06/29/10
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: JH
Analyzed By: ZL

LAB NO.	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE:		07/02/10	07/02/10	07/02/10	07/02/10
H20253-1	BSB-1 5'	<0.050	<0.050	<0.050	<0.300
H20253-2	(CENTER PIT) 10'	<0.050	<0.050	5.61	17.5
H20253-3	BSB-1 15'	1.68	5.02	24.2	87.2
H20253-4	BSB-1 20'	0.234	0.667	3.21	11.9
H20253-5	BSB-1 25'	0.134	0.132	1.05	3.69
H20253-6	BSB-1 30'	0.081	0.071	1.76	7.66
H20253-7	BSB-1 35'	0.084	<0.050	0.964	4.00
Quality Control		0.011	0.010	0.010	0.031
True Value QC		0.010	0.010	0.010	0.030
% Recovery		110	100	100	103
Relative Percent Difference		<1.0	4.8	3.7	<1.0

METHODS: BTEX - SW-846 8260

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES. Reported on wet weight.

Lab Director

07/09/10
Date

H20253 BTEX SESI

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: SERGIO CONTRERAS
703 E. CLINTON, #102
HOBBS, NM 88240
FAX TO: (575) 393-4388

Receiving Date: 06/30/10
Reporting Date: 07/06/10
Project Owner: AGAVE ENERGY (AGA-10-001)
Project Name: PENCESCO YARD
Project Location: SW ARTESIA, NM

Sampling Date: 06/29/10
Sample Type: SOIL
Sample Condition: INTACT @ 18^{0}C
Sample Received By: JH
Analyzed By: ZL

LAB NO.	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE:		07/02/10	07/02/10	07/02/10	07/02/10
H20253-8	BSB-2 5'	<0.050	<0.050	0.845	6.36
H20253-9	(S.S. EXCAVATION) 10'	<0.050	<0.050	0.660	3.66
H20253-10	BSB-2 15'	<0.050	<0.050	0.106	0.598
H20253-11	BSB-2 20'	<0.050	<0.050	<0.050	<0.300
H20253-12	BSB-2 25'	<0.050	0.104	0.201	1.35
H20253-13	BSB-2 30'	0.156	0.326	2.30	19.0
H20253-14	BSB-2 35'	0.235	0.758	2.17	14.1
H20253-15	BSB-2 37'	<0.050	<0.050	0.128	0.788
Quality Control		0.011	0.010	0.010	0.031
True Value QC		0.010	0.010	0.010	0.030
% Recovery		110	100	100	103
Relative Percent Difference		<1.0	4.8	3.7	<1.0

METHODS: BTEX - SW-846 8260

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES. Reported on wet weight.

Lab Director

07/09/10
Date

H20253 BTEX SESI

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS
ATTN: BOB ALLEN
703 E. CLINTON, #102
HOBBS, NM 88240
FAX TO: (575) 393-4388

Receiving Date: 06/30/10
Reporting Date: 07/06/10
Project Owner: AGAVE ENERGY (AGA-10-001)
Project Name: PENCESCO YARD
Project Location: SW ARTESIA, NM

Sampling Date: 06/29/10
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: JH
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	418.1 TOTAL TPH (mg/kg)
ANALYSIS DATE		07/03/10	07/03/10	07/01/10
H20253-1	BSB-1 5'	13.3	104	1,580
H20253-2	(CENTER PIT) 10'	305	424	1,500
H20253-3	BSB-1 15'	1,420	1,240	7,030
H20253-4	BSB-1 20'	13.0	<10.0	<100
H20253-5	BSB-1 25'	<10.0	<10.0	<100
H20253-6	BSB-1 30'	238	301	1,290
H20253-7	BSB-1 35'	60.4	11.9	332
H20253-8	BSB-2 5'	33.5	28.3	1,690
H20253-9	(S.S. EXCAVATION) 10'	47.6	10.7	<100
H20253-10	BSB-2 15'	<10.0	<10.0	<100
Quality Control		439	507	294
True Value QC		500	500	300
% Recovery		87.8	101	98.0
Relative Percent Difference		0.6	1.6	9.8

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; EPA 418.1
Not accredited for GRO/DRO or 418.1. Reported on wet weight.

Chemist

07/09/10
Date

H20253 TPH2 SESI

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS
ATTN: BOB ALLEN
703 E. CLINTON, #102
HOBBS, NM 88240
FAX TO: (575) 393-4388

Receiving Date: 06/30/10
Reporting Date: 07/06/10
Project Owner: AGAVE ENERGY (AGA-10-001)
Project Name: PENCESCO YARD
Project Location: SW ARTESIA, NM

Sampling Date: 06/29/10
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: JH
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	418.1 TOTAL TPH (mg/kg)
ANALYSIS DATE		07/03/10	07/03/10	07/01/10
H20253-11	BSB-2 20'	80.8	57.1	255
H20253-12	BSB-2 25'	41.0	56.2	<100
H20253-13	BSB-2 30'	479	387	1,470
H20253-14	BSB-2 35'	180	124	530
H20253-15	BSB-2 37'	33.6	71.7	163
Quality Control		439	507	294
True Value QC		500	500	300
% Recovery		87.8	101	98.0
Relative Percent Difference		0.6	1.6	9.2

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; EPA 418.1
Not accredited for GRO/DRO or 418.1. Reported on wet weight.

Chemist

07/09/10
Date

H20253 TPH2 SESI

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 2

Company Name:	SAFETY & ENVIRONMENTAL SOLUTIONS	BILL TO	
Project Manager:	Bob Allen	P.O. #:	
Address:	703 E. CLINTON, #102	Company:	SAME
City:	HOBBS State: NM Zip: 88240	Attn:	Brenda
Phone #:	(505) 397-0510 Fax #: (505) 393-4388	Address:	
Project #:	AGA-10-001 Project Owner: AGAVE Energy	City:	
Project Name:	Pancho Yard	State: Zip:	
Project Location:	500 Atoka	Phone #:	
Sampler Name:	D. Boyer	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20253-1	BSB-1 5'	G	1			X					X		6/25	1040	X	X	X
2	(Center B.T.) 10'													1050			
3	BSB-1 15'													1055			
4	" 20'													1100			
5	" 25'													1115			
6	BSB-1 30'													1130			
7	BSB-1 35'	G	1			X					X		6/28	1145			
8	BSB-2 5'													1355			
9	(S.S Excavation) 10'													1405			
10	BSB-2 15'	G	1			X					X		6/28	1410	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: D. Boyer	Date: 6/30/10 Time:	Received By:	Phone Result: ☐ Yes ☐ No
Relinquished By:	Date: 6/30/10 Time: 5:04	Received By: (Lab Staff) Jodi Henson	Fax Result: ☐ Yes ☐ No
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Temp °C: 8.0 Intact? ☑ Yes ☐ No	Checked By: (Initials)	REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to (915) 673-7020.

#26

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name:	SAFETY & ENVIRONMENTAL SOLUTIONS	BILL TO	
Project Manager:	Bob Allen	P.O. #:	
Address:	703 E. CLINTON, #102	Company:	SAME
City:	HOBBS State: NM Zip: 88240	Attn:	Brad Li
Phone #:	(505) 397-0510 Fax #: (505) 393-4388	Address:	
Project #:	AGA-10-001 Project Owner: Active Energy	City:	
Project Name:	Penasco Yard	State:	Zip:
Project Location:	SW Artesia	Phone #:	
Sampler Name:	J. Boyer	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20253-11	BSB-2 20'	G	1			X					X		6/25	1420	X	X	X
12	" 25'													1430			
13	" 30'													1440			
14	" 35'													1450			
15	BSB-2 37'	G	1			X					X		6/25	1502	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: J. Boyer	Date: 6/30/10 Time:	Received By:	Phone Result: ☐ Yes ☐ No
Relinquished By:	Date: Time:	Received By: (Lab Staff) Jodi Henson	Fax Result: ☐ Yes ☐ No REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	18° C	Sample Condition Temp. °C: Intact? ☑ Yes ☐ No	Checked By: (Initials) GA

† Cardinal cannot accept verbal changes. Please fax written changes to (915) 673-7020.

#26

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 06, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 07/30/10 17:00.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/26/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-3, 3-8' (H020482-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*89.7 %*	*80-120*
Surrogate: Toluene-d8	*108 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*114 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*76.1 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*84.1 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/26/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-3, 13' (H020482-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*119 %*	*80-120*
Surrogate: Toluene-d8	*110 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*116 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*72.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*78.3 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/26/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-3, 18' (H020482-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*105 %*	*80-120*
Surrogate: Toluene-d8	*113 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*116 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*75.5 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*86.1 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/26/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-3, 23' (H020482-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*81.7 %*	*80-120*
Surrogate: Toluene-d8	*110 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*119 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*75.4 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*89.5 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/26/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-3, 28' (H020482-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*89.9 %*	*80-120*
Surrogate: Toluene-d8	*111 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*113 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*75.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*88.4 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/26/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-3, 33' (H020482-06)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*99.1 %*	*80-120*
Surrogate: Toluene-d8	*108 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*114 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*78.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*90.8 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QL-01	Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name:	SESI	BILL TO	PO #:
Project Manager:	Bob Aiken / B. Boyett	Company:	SAME
Address:	703 E. CLINTON, #103	Attn:	Brandi
City:	HOBBS State: NM Zip: 88240	Address:	
Phone #:	(505) 397-0510	City:	
Fax #:	(505) 393-4388	State:	Zip:
Project #:	06A-10-001 Project Owner: Agua De Energy	Phone #:	
Project Name:	Penasco	Fax #:	
Project Location:	South of Artesia		

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20482-1	BSB-3, 3-2'	G	1			X					X		7/26	1440	X	X	X
2	BSB-3, 13'	"	"			"					"		"	1495	"	"	"
3	BSB-3, 18'	"	"			"					"		"	1450	"	"	"
4	BSB-3, 23'	"	"			"					"		"	1455	"	"	"
5	BSB-3, 28'	"	"			"					"		"	1515	"	"	"
6	BSB-3, 33'	G	1			X					X		7/26	1532	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:	Date: 7/30/10	Received By:	Phone Result ☐ Yes ☒ No Additional Fax #:
	Time: 1500		Fax Result: ☐ Yes ☒ No
Relinquished By:	Date:	Received By: (Lab Staff)	REMARKS: email results Bob & Sesona
	Time:	Jodi Henson	Depths below land surface
Delivered By: (Circle One)	Sample Condition: Cool ☐ Yes ☒ No; Intact ☒ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: 13° C			

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 07, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 07/30/10 17:00.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-4, 10.5 (H020483-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**1.92**	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	**31.6**	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	**20.0**	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	**47.7**	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	**22.2**	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	**69.9**	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*93.0 %*	*80-120*
Surrogate: Toluene-d8	*104 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*96.7 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**3240**	100	08/04/2010	ND	1050	102	1020	1.51	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**1140**	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	**994**	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*88.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*102 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-4, 15.5 (H020483-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**3.84**	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	**39.8**	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	**23.5**	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	**54.7**	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	**26.2**	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	**80.9**	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*80.7 %*	*80-120*
Surrogate: Toluene-d8	*100 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**3070**	100	08/04/2010	ND	1050	102	1020	1.51	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**445**	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	**743**	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*85.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*94.0 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-4, 20.5 (H020483-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**1.67**	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	**28.0**	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	**16.6**	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	**55.0**	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	**22.9**	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	**77.9**	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*84.2 %*	*80-120*
Surrogate: Toluene-d8	*105 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**2870**	100	08/04/2010	ND	1050	102	1020	1.51	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**306**	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	**619**	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*84.0 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*92.6 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-4, 25.5 (H020483-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**4.24**	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	**9.87**	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	**16.5**	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	**53.5**	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	**15.5**	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	**69.0**	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*81.3 %*	*80-120*
Surrogate: Toluene-d8	*111 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*88.3 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**1620**	100	08/04/2010	ND	1050	102	1020	1.51	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**440**	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	**351**	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*75.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*87.6 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-4, 30.5 (H020483-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**2.71**	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	**24.9**	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	**19.9**	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	**59.3**	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	**25.1**	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	**84.4**	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*84.3 %*	*80-120*
Surrogate: Toluene-d8	*116 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*109 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**2740**	100	08/04/2010	ND	1050	102	1020	1.51	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**608**	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	**570**	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*89.1 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*96.1 %*	*70-130*

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Analytical Results For:

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Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-4, 35.5 (H020483-06)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.278**	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	**7.05**	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	**7.40**	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	**36.0**	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	**12.0**	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	**48.0**	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*109 %*	*80-120*
Surrogate: Toluene-d8	*120 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*95.4 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**1430**	100	08/04/2010	ND	1050	102	1020	1.51	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**295**	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	**388**	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*85.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*87.7 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-4, 40.5 (H020483-07)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/07/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/07/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*91.3 %*	*80-120*
Surrogate: Toluene-d8	*93.0 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*91.8 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1050	102	1020	1.51	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*80.0 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*90.6 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-4, 45.5 (H020483-08)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/07/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/07/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*93.2 %*	*80-120*
Surrogate: Toluene-d8	*96.6 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*90.4 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1050	102	1020	1.51	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*72.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*81.5 %*	*70-130*

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Notes and Definitions

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QL-01	Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	SESI	BILL TO	PO #:
Project Manager:	Bob Allen / D. Boyer	Company:	SAME
Address:	703 E. CLINTON, #103	Attn:	Brandi
City:	HOBBS	State: NM Zip: 88240	Address:
Phone #:	(505) 397-0510	City:	
Fax #:	(505) 393-4388	State:	Zip:
Project #:	NGA-10-001 Project Owner: Agua Verde Energy	Phone #:	
Project Name:	Penasco	Fax #:	
Project Location:	South of Artesia		

ANALYSIS REQUEST

FOR LAB USE ONLY		MATRIX								PRES.			SAMPLING		TPH (418.1)	TPH (8015)	BTEX (8260)											
LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE / COOL	OTHER:	DATE	TIME														
H20463-1	BSB-4, 10.5	G	1			X					X		7/20	0830	X	X	X											
2	BSB-4, 15.5													0835														
3	BSB-4, 20.5													0840														
4	BSB-4, 25.5													0850														
5	BSB-4, 30.5													0855														
6	BSB-4, 35.5	G	1			X					X		7/20	0903	X	X	X											
7	BSB-4, 40.5	G	1			X					X		7/20	0910	X	X	X											
8	BSB-4, 45.5	G	1			X					X		7/20	0920	X	X	X											

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 7/20/10	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
	Time: 1700		Fax Result: ☐ Yes ☐ No
Relinquished By:	Date:	Received By: (Lab Staff)	REMARKS: email results Bob & Susana depths below land surface
	Time:	Jodi Henson	
Delivered By: (Circle One)	Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: 13°C			

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 06, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 07/30/10 17:00.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-5, 10.5 (H020484-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*93.4 %*	*80-120*
Surrogate: Toluene-d8	*104 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*107 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**580**	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*72.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*85.0 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-5, 20.5 (H020484-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	**0.258**	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	**0.840**	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	**0.270**	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	**1.11**	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*104 %*	*80-120*
Surrogate: Toluene-d8	*100 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*107 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*78.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*85.7 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-5, 25.5 (H020484-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	**1.32**	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	**0.639**	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	**1.96**	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*96.1 %*	*80-120*
Surrogate: Toluene-d8	*115 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	185	92.4	200	4.17	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	188	93.8	200	3.81	

Surrogate: 1-Chlorooctane	*74.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*82.7 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-5, 30.5 (H020484-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/03/2010	ND	0.862	86.2	1.00	9.57	
Toluene*	<0.100	0.100	08/03/2010	ND	0.853	85.3	1.00	11.9	
Ethylbenzene*	<0.100	0.100	08/03/2010	ND	0.921	92.1	1.00	11.4	
m+p - Xylene	<0.200	0.200	08/03/2010	ND	1.85	92.6	2.00	12.6	
o-Xylene	<0.100	0.100	08/03/2010	ND	0.889	88.9	1.00	11.8	
Total Xylenes*	<0.300	0.300	08/03/2010	ND	2.74	91.3	3.00	12.3	

Surrogate: Dibromofluoromethane	*89.7 %*	*80-120*
Surrogate: Toluene-d8	*116 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*110 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1070	105	1020	0.858	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/04/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/04/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*65.5 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*62.6 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QL-01	Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: SESI	BILL TO PO #:
Project Manager: Bob Aiken / D. Boyd	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Brandi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: NGA-18-001 Project Owner: Agave Energy	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID:	ICE / COOL	OTHER:	SAMPLING DATE	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20484-1	BSB-5 10.5	G	1			X					X		7/20	1035	X	X	X
2	BSB-5 30.5	1	1			1					1		1	1045	1	1	1
3	BSB-5 55.5	1	1			1					1		1	1058	1	1	1
4	BSB-5 30.5	G	1			X					X		7/20	1110	X	X	X

*PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: D. Boyd	Date: 7/30/20	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
	Time: 1:28		Fax Result: ☐ Yes ☐ No
Relinquished By:	Date:	Received By: (Lab Staff) Jodi Henson	REMARKS: email Results to Bob & Susana Depths below land surface
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	390-7067

† Cardinal cannot accept verbal changes. Please fax written changes to 575-673-7020.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 10, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-6, 10' (H020513-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*114 %*	*80-120*
Surrogate: Toluene-d8	*104 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*116 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/08/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*86.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*103 %*	*70-130*

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*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-6, 15' (H020513-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*102 %*	*80-120*
Surrogate: Toluene-d8	*107 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*117 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/08/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*86.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*98.2 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-6, 20' (H020513-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*97.3 %*	*80-120*
Surrogate: Toluene-d8	*109 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*116 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/08/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*88.4 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-6, 25' (H020513-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*103 %*	*80-120*
Surrogate: Toluene-d8	*104 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*117 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/08/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*82.5 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*95.8 %*	*70-130*

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Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-6, 30' (H020513-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*106 %*	*80-120*
Surrogate: Toluene-d8	*104 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*116 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/08/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*88.3 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Page 1 of 1

Company Name:	SESI	BILL TO	PO #:
Project Manager:	Rob Aiken / D. Boyer	Company:	SAME
Address:	703 E. CLINTON, #103	Attn:	Brandi
City:	HOBBS State: NM Zip: 88240	Address:	
Phone #:	(505) 397-0510	City:	
Fax #:	(505) 393-4388	State:	Zip:
Project #:	NEA-10-001 Project Owner: Agua De Energy	Phone #:	
Project Name:	Penasco	Fax #:	
Project Location:	South of Artesia		

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20513-1	BSB-6, 10'	G	1			X					X		7/28/10	1315	X	X	X
2	BSB-6, 15'	"	"			"					"		"	1330	X	X	X
3	BSB-6, 20'	"	"			"					"		"	1335	X	X	X
4	BSB-6, 25'	"	"			"					"		"	1330	X	X	X
5	BSB-6, 30'	G	1			X					X		7/28/10	1340	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the services. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:	Date: 08/02/10 Time: 0730	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #: Fax Result: ☐ Yes ☒ No REMARKS: email Bob & Susana Results
Relinquished By:	Date: 8/02/10 Time: 0730	Received By: (Lab Staff)	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool ☐ Yes ☐ No, Intact ☒ Yes ☐ No	CHECKED BY: (Initials)	

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 10, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-7, 10' (H020514-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*115 %*	*80-120*
Surrogate: Toluene-d8	*89.5 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*115 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*90.5 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*105 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-7, 15' (H020514-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*105 %*	*80-120*
Surrogate: Toluene-d8	*104 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*116 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	**11.1**	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*87.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*87.9 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-7, 20' (H020514-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*99.6 %*	*80-120*
Surrogate: Toluene-d8	*106 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*112 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*83.0 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*90.0 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-7, 33' (H020514-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*115 %*	*80-120*
Surrogate: Toluene-d8	*104 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*118 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*83.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*102 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-7, 35' (H020514-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*114 %*	*80-120*
Surrogate: Toluene-d8	*104 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*117 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*86.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*104 %*	*70-130*

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Analytical Results For:

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Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-7, 40' (H020514-06)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*97.2 %*	*80-120*
Surrogate: Toluene-d8	*93.0 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*90.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*108 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: BSB-7, 45' (H020514-07)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	1.06	106	1.00	2.18	
Toluene*	<0.100	0.100	08/07/2010	ND	0.936	93.6	1.00	5.49	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	2.49	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.15	108	2.00	4.58	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.10	110	1.00	4.86	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.25	108	3.00	4.68	

Surrogate: Dibromofluoromethane	*102 %*	*80-120*
Surrogate: Toluene-d8	*93.0 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*84.4 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*104 %*	*70-130*

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name: SESI		BILL TO	PO #:
Project Manager: Bob Allen / D. Boyer		Company: SAME	
Address: 703 E. CLINTON, #103		Attn: Brandi	
City: HOBBS State: NM Zip: 88240		Address:	
Phone #: (505) 397-0510		City:	
Fax #: (505) 393-4388		State: Zip:	
Project #: 06A-10-001 Project Owner: Agua De Energy		Phone #:	
Project Name: Penasco		Fax #:	
Project Location: South of Artesia			

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID	ICE / COOL	OTHER:	SAMPLING DATE (2010)	SAMPLING TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20514-1	BSR-7, 10'	G	1			X					X		7/28	1500	X	X	X
2	BSR-7, 15												7/28	1515	X	X	X
3	BSR-7, 20												7/28	1520	X	X	X
4	BSR-7, 33												7/28	1540	X	X	X
5	BSR-7, 35												7/29	1515	X	X	X
6	BSR-7, 40												7/29	1525	X	X	X
7	BSR-7, 45	G	1			X					X		7/29	1550	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the services. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 08/02/10	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
	Time: 8730		Fax Result: ☐ Yes ☐ No
Relinquished By:	Date: 08/02/10	Received By: (Lab Staff)	REMARKS: Copy Results to Bob & Susana
	Time: 8730	Jodi Henson	
Delivered By: (Circle One)	Sample Condition: Cool ☐ Yes ☐ No; Intact ☒ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: 8°C			

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

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August 07, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 07/30/10 17:00.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

Safety & Environmental Solutions
Bob Allen
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Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-1, 5' (H020485-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/07/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/07/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*80.1 %*	*80-120*
Surrogate: Toluene-d8	*94.4 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*80.3 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*64.0 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*53.5 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-1, 10 (H020485-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	**0.255**	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*87.1 %*	*80-120*
Surrogate: Toluene-d8	*111 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*62.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*66.1 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-1, 20 (H020485-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*87.6 %*	*80-120*
Surrogate: Toluene-d8	*107 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*109 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*70.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*77.7 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-1, 30 (H020485-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*98.2 %*	*80-120*
Surrogate: Toluene-d8	*113 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*111 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*72.5 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*70.1 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-1, 35 (H020485-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*84.5 %*	*80-120*
Surrogate: Toluene-d8	*117 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*100 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*69.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*71.7 %*	*70-130*

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-1, 40 (H020485-06)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*83.4 %*	*80-120*
Surrogate: Toluene-d8	*116 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*71.1 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*82.1 %*	*70-130*

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Analytical Results For:

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Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/07/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-1, 25 (H020485-07)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*82.8 %*	*80-120*
Surrogate: Toluene-d8	*116 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*109 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*76.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*81.4 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES, INC.
2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Company Name: SESI	BILL TO PO #:
Project Manager: Bob Aiken / D. Boyer	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Brandi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: 06A-18-001 Project Owner: Agua De Energy	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID	ICE / COOL	OTHER:	SAMPLING: DATE 2012	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20485-1	S2SR-1, 5'	G	1			X					X		7/27	1250	X	X	X
2	S2SR-1, 10													1300	X	X	X
3	S2SR-1, 20													1310	X	X	X
4	S2SR-1, 30													1320	X	X	X
5	S2SR-1, 35'													1325	X	X	X
6	S2SR-1, 40	G	1			X					X		7/27	1340	X	X	X
7	S2SR-1, 25'	G	1			X					X		7/27	1315	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:	Date: 7/30/12	Received By:	Phone Result ☐ Yes ☒ No Additional Fax #:
	Time: 1:30		Fax Result: ☐ Yes ☐ No
Relinquished By:	Date:	Received By: (Lab Staff)	REMARKS: email results Bob & Susana
	Time:	Jodi Henson	
Delivered By: (Circle One)	Sample Condition: Cool ☐ Yes ☐ No, Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: 13° C			

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 06, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 07/30/10 17:00.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-2, 20' (H020486-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*112 %*	*80-120*
Surrogate: Toluene-d8	*116 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*114 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**855**	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*65.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*67.3 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-2, 25' (H020486-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*108 %*	*80-120*
Surrogate: Toluene-d8	*116 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*113 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**182**	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*74.1 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*65.6 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-2, 30' (H020486-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/04/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/04/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/04/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/04/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/04/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/04/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*119 %*	*80-120*
Surrogate: Toluene-d8	*118 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*112 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**357**	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	**55.2**	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*77.3 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*78.5 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	07/30/2010	Sampling Date:	07/27/2010
Reported:	08/06/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-2, 40' (H020486-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*84.7 %*	*80-120*
Surrogate: Toluene-d8	*106 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: CK**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	197	98.4	200	4.11	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	171	85.5	200	11.3	

Surrogate: 1-Chlorooctane	*78.4 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*76.4 %*	*70-130*

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*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

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101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ___ of ___

Company Name:	SESI	BILL TO	PO #:
Project Manager:	Bob Aiken / D. Boyer	Company:	SAME
Address:	703 E. CLINTON, #103	Attn:	Brandi
City:	HOBBS State: NM Zip: 88240	Address:	
Phone #:	(505) 397-0510	City:	
Fax #:	(505) 393-4388	State:	Zip:
Project #:	168A-10-001 Project Owner: Agave Energy	Phone #:	
Project Name:	Penasco	Fax #:	
Project Location:	South of Artesia		

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID:	ICE / COOL	OTHER:	SAMPLING: DATE 2010	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20486-1	SESI-2,20'	G	1			X					X		7/27		X	X	X
2	SESI-2,25'														X	X	X
3	SESI-2,30														X	X	X
4	SESI-2,40	G	1			X					X		7/27		X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts over thirty 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:	Date: 7/30/10	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
	Time: 1708		Fax Result: ☐ Yes ☐ No
Relinquished By:	Date:	Received By: (Lab Staff)	REMARKS: email Results To Bob & Jerona
	Time:	Jodi Henson	
Delivered By: (Circle One)	Sample Condition: Cool ☐ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: 13c		JH	

Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

#26

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 09, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-3, 10' (H020508-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*83.8 %*	*80-120*
Surrogate: Toluene-d8	*100 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*92.3 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*87.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*103 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-3, 15' (H020508-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*88.4 %*	*80-120*
Surrogate: Toluene-d8	*88.4 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*92.5 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*93.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*111 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-3, 20' (H020508-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*101 %*	*80-120*
Surrogate: Toluene-d8	*93.9 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*91.1 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*97.5 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*115 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-3, 32' (H020508-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*104 %*	*80-120*
Surrogate: Toluene-d8	*95.5 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*95.5 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*84.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*103 %*	*70-130*

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Page 1 of 1

Company Name: SESI	BILL TO PO #:
Project Manager: Bob Aiken / D. Boyer	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Randi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: NGA-10-001 Project Owner: Regency	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID:	ICE / COOL	OTHER:	SAMPLING: DATE 2010	TIME	ANALYSIS REQUEST: TPH (418.1)	TPH (8015)	BTEX (8260)
H4508-1	SESB-3, 10'	G	1			X					X		7/28	0800	X	X	X
2	SESB-3, 15'		1											0810	X	X	X
3	SESB-3, 20'		1											0815	X	X	X
4	SESB-3, 32'	G	1			X					X		7/28	0895	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:	Date: 07/02/10 Time: 0730	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #: Fax Result: ☐ Yes ☒ No REMARKS: email Bob & Susana Results
Relinquished By:	Date: 07/02/10 Time: 0735	Received By: (Lab Staff) Jodi Henson	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 80		Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

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August 09, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-4, 15' (H020509-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*102 %*	*80-120*
Surrogate: Toluene-d8	*91.9 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*93.3 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*79.4 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*87.7 %*	*70-130*

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Analytical Results For:

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Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-4, 20' (H020509-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*104 %*	*80-120*
Surrogate: Toluene-d8	*98.8 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*94.5 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*82.1 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*92.9 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-4, 25' (H020509-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*109 %*	*80-120*
Surrogate: Toluene-d8	*96.3 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*94.9 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*93.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*112 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-4, 35' (H020509-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*110 %*	*80-120*
Surrogate: Toluene-d8	*102 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*92.5 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*83.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*102 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-4, 10' (H020509-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*106 %*	*80-120*
Surrogate: Toluene-d8	*97.4 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*98.1 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**937**	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	**64.5**	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*83.0 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*72.2 %*	*70-130*

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Page 1 of 1

Company Name:	SEST	BILL TO	PO #:
Project Manager:	Bob Aiken / D. Boyett	Company:	SAME
Address:	703 E. CLINTON, #103	Attn:	Brandi
City:	HOBBS State: NM Zip: 88240	Address:	
Phone #:	(505) 397-0510	City:	
Fax #:	(505) 393-4388	State:	Zip:
Project #:	NGA-10-001 Project Owner: Agua Verde Energy	Phone #:	
Project Name:	Penasco	Fax #:	
Project Location:	South of Artesia		

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID	ICE / COOL	OTHER:	SAMPLING DATE	SAMPLING TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20509-1	S25B-4,15'	G	1			X					X		7/28	0840	X	X	X
2	S25B-4,20'	"	"			"					"		"	0845	X	X	X
3	S25B-4,25'	"	"			"					"		"	0850	X	X	X
4	S25B-4,35'	G	1			X					X		7/28	1010	X	X	X
5	S25B-4,10'	G	1			X					X		7/28	0930	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 08/02/10 Time: 8730	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
Relinquished By:	Date: 08/02/10 Time: 0730	Received By: (Lab Staff) Jodi Henson	Fax Result: ☐ Yes ☒ No
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 8°C		Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)

REMARKS: email Bob & Susana Results

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 10, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-5, 5' (H020512-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/07/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*95.8 %*	*80-120*
Surrogate: Toluene-d8	*96.6 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*96.7 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05, S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*83.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*69.9 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-5, 10' (H020512-02)

TEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/07/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*92.3 %*	*80-120*
Surrogate: Toluene-d8	*89.0 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*88.5 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*89.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*93.0 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-5, 15' (H020512-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/07/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*104 %*	*80-120*
Surrogate: Toluene-d8	*87.8 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*89.7 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*81.4 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*83.1 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-5, 20' (H020512-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/07/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*110 %*	*80-120*
Surrogate: Toluene-d8	*99.5 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*99.6 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*85.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

Cardinal Laboratories

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-5, 30' (H020512-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/07/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*101 %*	*80-120*
Surrogate: Toluene-d8	*103 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*96.6 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/08/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*86.0 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*99.1 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/28/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S2SB-5, 34' (H020512-06)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/07/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*107 %*	*80-120*
Surrogate: Toluene-d8	*102 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*98.7 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/06/2010	ND	971	95.2	1020	2.18	

TPH 8015M mg/kg **Analyzed By: AB** **QM-05**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/08/2010	ND	157	78.7	200	0.202	
DRO >C10-C28	<10.0	10.0	08/08/2010	ND	152	76.2	200	0.648	

Surrogate: 1-Chlorooctane	*87.1 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: SESI	BILL TO PO #:
Project Manager: Bob Aikin / D. Boyer	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Brandi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: NGA-10-001 Project Owner: Big Ves Energy	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

ANALYSIS REQUEST: TPH (418.1) | TPH (8015) | BTEX (8260)

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID:	ICE / COOL	OTHER:	SAMPLING: DATE 2010	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20512-1	S25B-5, 5'	G	1			X					X		7/28	11:15	X	X	X
2	S20B-5, 10													11:20	X	X	X
3	S25B-5, 15													11:25	X	X	X
4	S25B-5, 20													11:30	X	X	X
5	S25B-5, 30													11:45	X	X	X
6	S25B-5, 34	G	1			X					X		7/28	11:55	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:	Date: 08/02/10	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
	Time: 0730		Fax Result: ☐ Yes ☒ No
Relinquished By:	Date: 08/02/10	Received By: (Lab Staff) Jodi Henson	REMARKS: email Bob & Jesse Results
	Time: 0730		
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 8°C	Sample Condition: Cool: ☐ Yes ☒ No; Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) JH	

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 09, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-1, 15' (H020505-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*107 %*	*80-120*
Surrogate: Toluene-d8	*111 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*85.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*103 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-1, 20' (H020505-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*113 %*	*80-120*
Surrogate: Toluene-d8	*107 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*103 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*84.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-1, 25' (H020505-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*115 %*	*80-120*
Surrogate: Toluene-d8	*108 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*105 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*85.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*102 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-1, 30' (H020505-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	**0.117**	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	**0.302**	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*108 %*	*80-120*
Surrogate: Toluene-d8	*110 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*86.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*104 %*	*70-130*

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Safety & Environmental Solutions
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Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-1, 40' (H020505-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*112 %*	*80-120*
Surrogate: Toluene-d8	*110 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*85.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

Safety & Environmental Solutions
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Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-1, 45' (H020505-06)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*118 %*	*80-120*
Surrogate: Toluene-d8	*110 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*107 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*86.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*104 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Page 1 of 1

Company Name: SESI	BILL TO: PO #:
Project Manager: Bob Aiken / D. Boyer	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Brandi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: NGA-10-001 Project Owner: Agave Energy	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

ANALYSIS REQUEST

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID:	ICE / COOL	OTHER:	SAMPLING: DATE (2010)	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20505-1	S235R-1, 15'	G	1			X					X		7/29	0820	X	X	X
2	" 20'													0825	X	X	X
3	" 25'													0830	X	X	X
4	" 30'													0835	X	X	X
5	" 40'													0900	X	X	X
6	S235R-1, 45'	G	1			X					X		7/29	0915	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:	Date: 08/02/10	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
	Time: 0730		Fax Result: ☐ Yes ☒ No
Relinquished By:	Date: 08/02/10	Received By: (Lab Staff)	REMARKS: Copy Results to Bob & Jessica
	Time: 0730		
Delivered By: (Circle One)	Sample Condition: Cool ☐ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: 80			

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 09, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

Safety & Environmental Solutions
Bob Allen
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Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-2, 15' (H020506-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	**0.683**	0.100	08/05/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	**0.572**	0.100	08/05/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	**2.85**	0.200	08/05/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	**0.823**	0.100	08/05/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	**3.67**	0.300	08/05/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*91.7 %*	*80-120*
Surrogate: Toluene-d8	*113 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**4870**	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**36.2**	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	**47.5**	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*91.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*103 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-2, 20' (H020506-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	**0.101**	0.100	08/05/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	**0.105**	0.100	08/05/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	**0.387**	0.200	08/05/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	**0.210**	0.100	08/05/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	**0.597**	0.300	08/05/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*92.0 %*	*80-120*
Surrogate: Toluene-d8	*113 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*119 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**9040**	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**17.9**	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	**27.1**	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*83.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*100 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-2, 25' (H020506-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	**0.247**	0.100	08/05/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	**0.180**	0.100	08/05/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	**0.968**	0.200	08/05/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	**0.293**	0.100	08/05/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	**1.26**	0.300	08/05/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*102 %*	*80-120*
Surrogate: Toluene-d8	*113 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*109 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**9500**	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**15.5**	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	**20.9**	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*83.3 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-2, 40' (H020506-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	**0.270**	0.100	08/05/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	**0.217**	0.100	08/05/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	**1.10**	0.200	08/05/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	**0.308**	0.100	08/05/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	**1.41**	0.300	08/05/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*90.2 %*	*80-120*
Surrogate: Toluene-d8	*110 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**9450**	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**25.8**	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	**51.7**	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*85.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*97.1 %*	*70-130*

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703 East Clinton
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Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-2, 45.5-46.5' (H020506-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/05/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*93.0 %*	*80-120*
Surrogate: Toluene-d8	*111 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*110 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*84.1 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*102 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES, INC.
2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Company Name: SESI	BILL TO PO #:
Project Manager: Bob Aiken / D. Boyer	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Randi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: 06A-10-001 Project Owner: Apache Energy	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

FOR LAB USE ONLY				MATRIX						PRES.			SAMPLING		ANALYSIS REQUEST		
LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE / COOL	OTHER:	DATE	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20506-1	5235B-2, 15'	G	1			X					X		2/9	1040	X	X	X
2	" , 20	"	"			"					"		"	1045	X	X	X
3	" , 25	"	"			"					"		"	1050	X	X	X
4	" , 40	"	"			"					"		"	1105	X	X	X
5	5235B-2, 45.5-46.5	G	1			X					X		2/9	1115	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 02-02-10	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
	Time: 0730		Fax Result: ☐ Yes ☒ No
Relinquished By:	Date: 02-02-10	Received By: (Lab Staff)	REMARKS: Copy Results to Bob & Susana
	Time: 0730		
Delivered By: (Circle One)	Sample Condition: Cool ☐ Yes ☐ No, Intact ☒ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: 8c			

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 09, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-3, 10 (H020507-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*116 %*	*80-120*
Surrogate: Toluene-d8	*102 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*109 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*85.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*103 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

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Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-3, 15 (H020507-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*85.6 %*	*80-120*
Surrogate: Toluene-d8	*111 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*82.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-3, 20 (H020507-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*94.2 %*	*80-120*
Surrogate: Toluene-d8	*113 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*99.9 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*85.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-3, 25 (H020507-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*89.5 %*	*80-120*
Surrogate: Toluene-d8	*108 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*107 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*87.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*98.6 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

Safety & Environmental Solutions
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703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/29/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-3, 30 (H020507-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.900	90.0	1.00	12.2	
Toluene*	<0.100	0.100	08/06/2010	ND	1.06	106	1.00	4.94	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.971	97.1	1.00	0.847	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	1.83	91.7	2.00	6.02	
o-Xylene	<0.100	0.100	08/06/2010	ND	0.893	89.3	1.00	7.99	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	2.73	90.9	3.00	6.67	

Surrogate: Dibromofluoromethane	*103 %*	*80-120*
Surrogate: Toluene-d8	*108 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	881	86.3	1020	17.8	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/06/2010	ND	169	84.4	200	0.963	
DRO >C10-C28	<10.0	10.0	08/06/2010	ND	167	83.6	200	0.293	

Surrogate: 1-Chlorooctane	*88.4 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: SESI	BILL TO PO #:
Project Manager: Bob Aikm / D. Boyer	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Brandi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: AGA-10-001 Project Owner: Agg De Energy	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

FOR LAB USE ONLY				MATRIX						PRES.			SAMPLING		ANALYSIS REQUEST		
LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE / COOL	OTHER:	DATE	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20507-1	S25SR-3, 10	G	1			X					X		7/29	1255	X	X	X
2	" , 15	"	"			"					"		"	1300	X	X	X
3	" , 20	"	"			"					"		"	1305	X	X	X
4	" , 25	"	"			"					"		"	1410	X	X	X
5	S23SR-3, 30	G	1			X					X		7/29	1425	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the services. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 08/02/10	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
	Time: 0730		Fax Result: ☐ Yes ☒ No
Relinquished By:	Date: 08/02/10	Received By: (Lab Staff)	REMARKS: Copy Results to Bob & Susana
	Time: 0730		
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other: 80	Cool: ☐ Yes ☐ No	Intact: ☑ Yes ☐ No	(Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

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August 10, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-4, 10' (H020510-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/06/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/06/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*110 %*	*80-120*
Surrogate: Toluene-d8	*98.7 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*98.2 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*89.3 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*106 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-4, 15' (H020510-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/06/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/06/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*106 %*	*80-120*
Surrogate: Toluene-d8	*97.3 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*97.3 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*88.2 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*100 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-4, 20' (H020510-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/07/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/07/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/07/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/07/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/07/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/07/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*84.9 %*	*80-120*
Surrogate: Toluene-d8	*94.4 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*97.6 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*88.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-4, 25' (H020510-04)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/06/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/06/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*89.3 %*	*80-120*
Surrogate: Toluene-d8	*96.1 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*95.6 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*91.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*105 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-4, 30' (H020510-05)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/06/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/06/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*89.4 %*	*80-120*
Surrogate: Toluene-d8	*97.4 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*91.0 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*94.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*100 %*	*70-130*

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Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-4, 35' (H020510-06)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/06/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/06/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*105 %*	*80-120*
Surrogate: Toluene-d8	*94.6 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*93.9 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*80.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*96.9 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

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Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-4, 40 (H020510-07)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/06/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/06/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*112 %*	*80-120*
Surrogate: Toluene-d8	*116 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*117 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*87.8 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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Safety & Environmental Solutions
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Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/10/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-4, 44 (H020510-08)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/06/2010	ND	0.910	91.0	1.00	16.2	
Toluene*	<0.100	0.100	08/06/2010	ND	0.917	91.7	1.00	3.13	
Ethylbenzene*	<0.100	0.100	08/06/2010	ND	0.946	94.6	1.00	1.64	
m+p - Xylene	<0.200	0.200	08/06/2010	ND	2.04	102	2.00	2.98	
o-Xylene	<0.100	0.100	08/06/2010	ND	1.03	103	1.00	1.44	
Total Xylenes*	<0.300	0.300	08/06/2010	ND	3.06	102	3.00	2.46	

Surrogate: Dibromofluoromethane	*116 %*	*80-120*
Surrogate: Toluene-d8	*116 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*115 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/05/2010	ND	990	97.1	1020	5.86	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/07/2010	ND	169	84.6	200	1.17	
DRO >C10-C28	<10.0	10.0	08/07/2010	ND	166	83.1	200	0.818	

Surrogate: 1-Chlorooctane	*86.3 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*103 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

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(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name: SESI	BILL TO PO #:
Project Manager: Bob Allen/D. Boyer	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Brandi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: AGA-10-001 Project Owner: Rog Vo Energy	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

LAB I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRES.: ACID:	PRES.: ICE / COOL	PRES.: OTHER:	SAMPLING: DATE 2010	SAMPLING: TIME	ANALYSIS REQUEST: TPH (418.1)	TPH (8015)	BTEX (8260)
H20510-1	523SB-4, 10'	G	1			X					X		7/30	0745	X	X	X
2	15													0755			
3	20													0805			
4	25													0815			
5	30													0820			
6	35													0830			
7	523SB-4, 40													0842			
8	523SB-4, 44	G	1			X					X		7/30	0852	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: [signature]	Date: 08/02/10 Time: 0730	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #:
Relinquished By: [signature]	Date: 08/02/10 Time: 0730	Received By: (Lab Staff) Jodi Henson	Fax Result: ☐ Yes ☒ No
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	8°C	Sample Condition: Cool ☐ Yes ☒ No; Intact ☒ Yes ☐ No	CHECKED BY: (Initials) [initials]

REMARKS: Copy Results to Bob & Susana

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

CARDINAL Laboratories

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August 09, 2010

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: AGA-10-001

Enclosed are the results of analyses for samples received by the laboratory on 08/02/10 7:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-5, 15 (H020511-01)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*108 %*	*80-120*
Surrogate: Toluene-d8	*115 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*108 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	166	83.0	200	0.157	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	163	81.4	200	2.94	

Surrogate: 1-Chlorooctane	*87.6 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*106 %*	*70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-5, 20 (H020511-02)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*88.9 %*	*80-120*
Surrogate: Toluene-d8	*114 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*105 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	166	83.0	200	0.157	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	163	81.4	200	2.94	

Surrogate: 1-Chlorooctane	*81.7 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*88.0 %*	*70-130*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	08/02/2010	Sampling Date:	07/30/2010
Reported:	08/09/2010	Sampling Type:	Soil
Project Name:	AGA-10-001	Sampling Condition:	** (See Notes)
Project Number:	AGA-10-001	Sample Received By:	Jodi Henson
Project Location:	PENASCO S OF ARTESIA		

Sample ID: S23SB-5, 25 (H020511-03)

BTEX 8260B mg/kg **Analyzed By: ZL**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	08/05/2010	ND	0.921	92.1	1.00	4.41	
Toluene*	<0.100	0.100	08/05/2010	ND	0.881	88.1	1.00	5.88	
Ethylbenzene*	<0.100	0.100	08/05/2010	ND	0.977	97.7	1.00	6.64	
m+p - Xylene	<0.200	0.200	08/05/2010	ND	1.96	98.2	2.00	13.4	
o-Xylene	<0.100	0.100	08/05/2010	ND	0.962	96.2	1.00	8.87	
Total Xylenes*	<0.300	0.300	08/05/2010	ND	2.93	97.5	3.00	11.9	

Surrogate: Dibromofluoromethane	*80.1 %*	*80-120*
Surrogate: Toluene-d8	*110 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*101 %*	*80-120*

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	<100	100	08/04/2010	ND	1030	101	1020	4.74	

TPH 8015M mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/05/2010	ND	166	83.0	200	0.157	
DRO >C10-C28	<10.0	10.0	08/05/2010	ND	163	81.4	200	2.94	

Surrogate: 1-Chlorooctane	*83.9 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*101 %*	*70-130*

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*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES, INC.

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name: SESI	BILL TO PO #:
Project Manager: Bob Aiken / D. Boyer	Company: SAME
Address: 703 E. CLINTON, #103	Attn: Brandi
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: NGA-10-001 Project Owner: Agg. De Energy	Phone #:
Project Name: Penasco	Fax #:
Project Location: South of Artesia	

ANALYSIS REQUEST: TPH (418.1) | TPH (8015) | BTEX (8260)

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID	ICE / COOL	OTHER:	SAMPLING: 2012 DATE	TIME	TPH (418.1)	TPH (8015)	BTEX (8260)
H20511-1	S23513-5, 15	G	1			X					X		7/30	0745	X	X	X
2	S2350-5, 20	G	1			X					X		7/30	0755	X	X	X
3	S2352-5, 25	G	1			X					X		7/30	1000	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished:	Date: 08/02/10 Time: 0730	Received By:	Phone Result: ☐ Yes ☒ No Additional Fax #: Fax Result: ☐ Yes ☒ No REMARKS: Copy Results to Bob & Jerkoma
Relinquished By:	Date: 08/02/10 Time: 0730	Received By: (Lab Staff) Jodi Henson	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool: Yes Intact: Yes / No: No	CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

Appendix B- Site Photographs

Sump #23

Sump #23

Sump #23

Sump #23

Tank Battery

Tank Battery

Tank Battery

Tank Battery

Sump #2

Appendix C- Soil Boring Logs

Safety & Environmental Solutions, Inc.

LOG OF BORING BSB-1

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Tank Battery Excavation BSB-1
N32° 42' 46.3", W104° 26' 55.9"

Date, Time Started	: 06/29/10, 1030	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 06/29/30, 1200	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5 feet. Excavated. Depth is from surface.						
5	SS	ML		5-10 ft. SILT, clayey, gravelly, light brown, H/C odor 10 ft. no H/C staining						
10	SS			Strong H/C odor, gray	H20253-1	<0.050	<0.050	13.3	104	1,580
15	SS	GC		CLAYEY GRAVEL, light brown to gray, gravels are limestone fragments, clay mixed in fractures, strong H/C odor and staining.	H20253-2	<0.050	23.1	305	424	1,500
20	SS	CL		19-25 feet GRAVELLY CLAY 20 feet. GRAVELLY CLAY, mottled, light brown to gray, strong H/C odor	H20253-3	1.68	118	1,420	1,240	7,030
25	SS			GRAVELLY CLAY, with caliche clay, grayish brown. Gravels varying from 1/8-3/4 in. H/C saturated at top of core.	H20253-4	0.234	16.0	13.0	<10.0	<100
30	SS	CL		CLAY with some gravel, brown with grayish and white streaks, strong H/C odor	H20253-5	0.134	5.01	<10.0	<10.0	<100
35	SS	GC CL		CLAYEY GRAVEL, brown with grayish zones, H2O saturated (perched zone), strong H/C odor CLAY, cuttings wet	H20253-6	0.081	9.57	238	301	1,290
40	SS	GC		40 ft. CLAYEY GRAVEL, H2O saturated, H/C staining at base, dry material in shoe, no sample.	H20253-7	0.084	5.05	60.4	11.9	332
45				42 ft. Auger refusal, some clay, dry material in core, saturated H2O outside of SS, sample wet.						

Notes:
Location: Center of excavated battery
Pulling augers - H/C product at 25 ft. and on deeper augers.
Backfilled with 3 bags QuikGrout
H/C - hydrocarbon

Z:\Company Files\Agave Energy\AGA-10-001 Penasco Yard\Boring logs\BSB-1.bor

Safety & Environmental Solutions, Inc.

LOG OF BORING BSB-2

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Tank Battery Excavation BSB-2
N32° 42' 46.0", W104° 26' 55.8"

Date, Time Started	: 06/29/10, 1300	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 06/29/30, 1500	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5 feet. Excavated. Depth is from surface.						
5	SS			5-10 ft. GRAVELLY CLAY, staining and odor in shoe, possible fill material above. Sample at 10 ft.						
10	SS				H20253-8	<0.050	7.21	33.5	28.3	1,690
15	SS			15 ft. GRAVELLY CLAY/CLAYEY GRAVEL, clay dry, hard, stiff. Gravels limestone 1/4 in. rounded, up to 2 in. broken and angular. Some caliche, soft, white. H/C staining and odor	H20253-9	<0.050	4.32	47.6	10.7	<100
20	SS	CL		17-20 ft. Dark gray, charcoal, clay cuttings 20 ft. Same as above, limited sample, rock in spoon.	H20253-10	<0.050	0.704	<10.0	<10.0	<100
25	SS			25 ft. top of core - gray clay, wet, heavily stained, very strong H/C odor. Bottom 1/2 - GRAVELLY CLAY, light brown to creme, gravels 1/4-3/4 in., limestone, rounded and weathered, strong odor of hydrocarbons.	H20253-11	<0.050	<0.050	80.8	57.1	255
30	SS			25-30 ft. Soft drilling, cuttings light brown, dry 30 ft. GRAVELLY CLAY, light brown, soft, limestone gravels to 1/2 in., coarse sand, dry, strong odor, softer drilling at 31 ft.	H20253-12	<0.050	1.66	41.0	56.2	<100
35	SS	ML		CLAYEY SILT/SILTY CLAY, very light brown, soft, dry, strong H/C odor	H20253-13	0.156	21.8	479	387	1,470
40	SS	ML		40 ft. CLAYEY SILT, soft, with small gravels, strong odor 42 ft. Auger refusal. Field TPH 395 from borehole sample	H20253-14	0.235	17.3	180	124	530
45					H20253-15	<0.050	0.916	33.6	71.7	163

Notes:
Location: South side of excavated battery, 25 ft. south of BSB-1
Backfilled with QuikGrout
H/C - hydrocarbon

Z:\Company Files\Agave Energy\AGA-10-001 Penasco Yard\Boring logs\BSB-2.bor

Safety & Environmental Solutions, Inc.

LOG OF BORING BSB-3

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Tank Battery Excavation BSB-3
N32° 42' 46.0", W104° 26' 55.7"

Date, Time Started	: 07/26/10, 1400	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/26/10, 1545	Sampling Method	: 24-in. Splitspoon with
Hole Diameter	: 9 1/2 in.		: downhole hammer
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-3 feet. Excavated. Depth is from surface.						
5	SS	CL		3-8 ft. GRAVELLY CLAY/CLAYEY GRAVEL, brown, limestone gravels, gray (natural color), H/C odor, likely fill at top.	H20482-1	<0.100	<0.100	<10.0	<10.0	<100
10	SS	LS/CL		8-13 ft. LIMESTONE with clay, brown, slight H/C odor	H20253-2	<0.100	<0.100	<10.0	<10.0	<100
15	SS	CL		13-18 ft. GRAVELLY CLAY, brown, with limestone gravels, moist at 17 ft., slight H/C odor	H20253-3	<0.100	<0.100	<10.0	<10.0	<100
20	CT	CL		18-23 ft. Cuttings, CLAY, plastic, damp, slight H/C odor						
	SS			23 ft. CLAY, brown, plastic, moist, H/C staining and odor	H20253-4	<0.100	<0.100	<10.0	<10.0	<100
25	SS	LS/CA		25 ft. Very hard driling, limestone rock or caliche						
		LS/CL		28 ft. LIMESTONE with CLAY, very hard drilling, slight H/C odor,	H20253-5	<0.100	<0.100	<10.0	<10.0	<100
30	SS	LS/SM		28-33 ft. Bedrock with silt and sand, very fine grained, dry, no staining, possible odor. Lost shoe on splitspoon, could not recover, abandoned hole, sample from cuttings.	H20253-6	<0.100	<0.100	<10.0	<10.0	<100
35										
40										
45										

Notes:
Location: East side of excavated battery, 35 ft. east of BSB-1
Backfilled with 4 bags QuikGrout
H/C - hydrocarbon

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Safety & Environmental Solutions, Inc.

LOG OF BORING BSB-4

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Tank Battery Excavation BSB-4
N32° 42' 46.1", W104° 26' 56.2"

Date, Time Started	: 07/27/10, 0800	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/27/10, 0930	Sampling Method	: 24-in. Splitspoon with
Hole Diameter	: 9 1/2 in.		: downhole hammer
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5.5 feet. Excavated. Depth is from surface.						
5	SS	CL		10.5 ft. SILTY CLAY with gravel, brown, very strong H/C odor	H20483-1	1.92	123	1,140	994	3,240
10	SS	CL/CA		15.5 ft. SILTY CLAY with hard caliche or limestone	H20483-2	3.84	148	445	743	3,070
15	SS			16.5 ft. SILTY CLAY, dark gray, strong H/C odor						
20	SS	CL		CLAY with limestone gravels, light gray to chalk white, very stiff, strong H/C odor	H20483-3	1.67	124	306	619	2,870
25	SS			CLAY, brown with gray and white streaks very stiff. Some small limestone/caliche fragments, strong H/C odor	H20483-4	4.24	100	440	351	1,620
30	SS	CL		GRAVELLY CLAY, brown with gray streaks, strong H/C odor	H20483-5	2.71	132	608	570	2,740
35	CT	GW		35.5 ft. No recovery, cuttings gravel, chalk white, sample from cuttings.	H20483-6	0.278	62.7	295	388	1,430
40	SS	CL		CLAY, brown with gray streaks, plastic, small gravel fragments, water saturated in gravel fragment zone, strong H/C odor	H20483-7	<0.100	<0.100	<10.0	<10.0	<100
45	SS			45.5 ft. CLAY, brown, soft, slightly moist, little or no H/C odor	H20483-8	<0.100	<0.100	<10.0	<10.0	<100
50				47.5 ft. Bedrock, auger refusal.						

Notes:
Location: West side of excavated battery, 31 ft. east of BSB-1
Backfilled with 5 bags QuikGrout
H/C - hydrocarbon

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Safety & Environmental Solutions, Inc.

LOG OF BORING BSB-5

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Tank Battery Excavation BSB-5
N32° 42' 46.5", W104° 26' 55.9"

Date, Time Started	: 07/27/10, 1030	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/27/10, 1130	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5.5 feet. Excavated. Depth is from surface.						
5	SS	CL		10.5 ft. GRAVELLY CLAY, brown to creme color, moist, H/C odor	H20483-1	<0.100	<0.100	<10.0	<10.0	580
10	NR			No sample, fractured limestone in split spoon						
15	SS	GC		20.5 ft.GRAVELLY CLAY/CLAYEY GRAVEL, dry, clay stiff, slight H/C odor	H20483-2	<0.100	1.37	<10.0	<10.0	<100
20	SS	CL/LS		25.5 ft. CLAY, brown/white streaks, dry, stiff, H/C odor, Alternating with fractured limestone broken by bit. Limestone grayish with H/C staining and strong odor	H20483-3	<0.100	1.96	<10.0	<10.0	<100
25	NR			25-30 ft. Hard drilling, rock or large cobbles						
30	SS	CL		30.5 ft. GRAVELLY CLAY alternating between fractured rock. Clay, brown, soft, plastic, with gravels mixed inH/C odor	H20483-4	<0.100	<0.100	<10.0	<10.0	<100
35				31 ft. Auger refusal						
40										

Notes:
Location: North side of excavated battery, 25 ft. north of BSB-1
Backfilled with 3 bags QuikGrout
H/C - hydrocarbon

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LOG OF BORING BSB-6

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Tank Battery Excavation BSB-6
N32° 42' 45.8", W104° 26' 55.9"

Date, Time Started	: 07/28/10, 1300	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/28/10, 1410	Sampling Method	: 24-in. Splitspoon with
Hole Diameter	: 9 1/2 in.		: downhole hammer
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5 feet. No sampling - excavation south sidewall is clean.Knifed hole to 5 ft. for utility check						
5	SS	ML		GRAVELLY CLAYEY SILT, light brown, dry, no H/C staining or odor	H20513-1	<0.100	<0.100	<10.0	<10.0	<100
10	NR			15 ft. Gravel, no returns						
15	SS	CL		Second try at 15 ft. CLAY with minor caliche and small gravels, mottled light brown to creme white, very stiff, dry, no H/C staining or odor	H20513-2	<0.100	<0.100	<10.0	<10.0	<100
20	SS			CLAY, as above with more gravel and caliche, mottled light brown to creme white, very stiff, dry, no H/C staining or odor	H20513-3	<0.100	<0.100	<10.0	<10.0	<100
25	SS	CL/CA		CLAY and CALICHE, clay mottled brown with white streaks, dry, very stiff. Caliche white, soft, friable, no H/C staining or odor 27 ft. Hard drilling, gravels	H20513-4	<0.100	<0.100	<10.0	<10.0	<100
30	SS	CL/GW		CLAY, gravelly, mottled as above, dry, very stiff, some soft caliche, no H/C staining or odor 30-35 ft. Alternating CLAY and GRAVEL, no H/C staining or odor on cuttings,	H20513-5	<0.100	<0.100	<10.0	<10.0	<100
35	SS	GW		35 ft. Fractured limestone gravels in tip, nothing to sample, possible H/C odor on cuttings 35-40 ft. Rock. Tried splitspoon but broke threads. Tried to drill from 40 to a softer spot but auger refusal at 40-41 ft.						
40	SS									
45										

Notes:
Location: South of excavated battery outside fence. 30 ft. south of BSB-2
Backfilled with 6 bags QuikGrout
H/C - hydrocarbon

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Safety & Environmental Solutions, Inc.

LOG OF BORING BSB-7

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Tank Battery Excavation BSB-7
N32° 42' 46.3", W104° 26' 57.0"

Date, Time Started	: 07/28/10, 1430	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/29/10, 1550	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-6 feet. No sampling - knifed to 6 ft. for utility check						
5	SS	CL		10 ft. SILTY CLAY, light brown, soft, no H/C staining or odor	H20514-1	<0.100	<0.100	<10.0	<10.0	<100
10	SS									
15	SS	CL		15 ft. GRAVELLY SILTY CLAY, brown, soft, with soft limestone gravels. No H/C staining or odor in spoon but in cuttings.	H20514-2	<0.100	<0.100	<10.0	11.1	<100
20	SS			20 ft. GRAVELLY SILTY CLAY, clay mottled, dry, plastic. No H/C staining, possible slight odor	H20514-3	<0.100	<0.100	<10.0	<10.0	<100
25	NR	GW		No recovery, gravels						
30	NR			No recovery, gravels Stop drilling at 33 ft. Took sample. Rig down and offsite 1600 due to lightning. Resume 1500 7/29. Water in hole and after drilling out, likely in gravels saturated from rain.	H20514-4	<0.100	<0.100	<10.0	<10.0	<100
35	SS	CL		35 ft. CLAY, light brown with white streaks, dry, very stiff, occasional H/C staining, no H/C odor	H20514-5	<0.100	<0.100	<10.0	<10.0	<100
40	SS	CL		40 ft. SILTY CLAY, brown, soft, slightly damp, no H/C staining or odor	H20514-6	<0.100	<0.100	<10.0	<10.0	<100
45	SS	CL		CLAY, light brown, stiff, plastic, no H/C staining or odor	H20514-7	<0.100	<0.100	<10.0	<10.0	<100
50										

Notes:
Location: West of excavated battery outside fence, 25 ft. south of BSB-4
Backfilled with 7 bags QuikGrout
H/C - hydrocarbon

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LOG OF BORING S2SB-2

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 2 S2SB-2
N32° 42' 48.5", W104° 26' 55.2"

Date. Time Started	: 07/27/10, 1430	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/27/10, 1600	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0		AR		0-20 feet. No sampling May have excavated and backfilled to approx. 23 ft.						
20	SS	CL		20 ft. SILTY CLAY, brown, soft, moist, rock at base, may be backfill, H/C odor	H20486-1	<0.100	<0.100	<10.0	<10.0	855
25	SS	CL		25 ft. GRAVELLY CLAY, brown, dry, slight H/C odor	H20486-2	<0.100	<0.100	<10.0	<10.0	182
		LS		~27-30 ft. Rock, likely LIMESTONE, hard drilling entire length						
30	SS	GC		30 ft. CLAYEY GRAVEL, light brown, strong H/C odor	H20486-3	<0.100	<0.100	<10.0	55.2	357
		GW		~32-35 ft. Very hard drilling, almost auger refusal						
35	SS	GM/CL		35 ft. Cuttings, GRAVELLY SILT with CLAY, llight brown, strong H/C odor, no H/C staining						
		GP		~37-40 ft. Very hard drilling, large rounded 2-4 in. river GRAVEL on auger flights 40 ft. Sample from cuttings. TPH from cuttings 628 ppm, TPH fromspoon 191 ppm	H20486-4	<0.100	<0.100	<10.0	<10.0	<100
40				Auger refusal at 40 ft.						
45										
50										

Notes:
Location: Center of excavated/backfilled sump S2
Backfilled with 5 bags QuikGrout
H/C - hydrocarbon

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Safety & Environmental Solutions, Inc.

LOG OF BORING S2SB-3

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 2 S2SB-3
N32° 42' 48.3", W104° 26' 55.2"

Date, Time Started	: 07/28/10, 0745	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/27/10, 0900	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5 feet. No sampling - Knifed hole to 5 ft. for utility check						
5	SS	GC		10 ft. CLAYEY GRAVEL, light brown, no H/C staining or odor dry	H20508-1	<0.100	<0.100	<10.0	<10.0	<100
10	SS	ML/GM		15 ft. GRAVELLY SANDY SILT, light brown, dry, sand very fine grained, limestone gravels and pieces, possible slight odor, no staining	H20508-2	<0.100	<0.100	<10.0	<10.0	<100
15	SS	CA/CL		20 ft. CALICHE and CLAY, white, soft, dry, no H/C staining or odor	H20508-3	<0.100	<0.100	<10.0	<10.0	<100
20	NR									
25	NR	GW		25 ft. No recovery 26 ft. Rock or cobbles 26-30 ft. 30 ft. No recovery except small clayey silt for TPH test, TPH=32 ppm						
30	SS	CL		32 ft. CLAY, brown, stiff, no H/C staining or odor Stopped at 32 ft. and took sample	H20508-4	<0.100	<0.100	<10.0	<10.0	<100
35										
40										
45										
50										

Notes:
Location: 19.5 ft. southeastof excavated/backfilled sump and S2SB-2
Backfilled with QuikGrout
H/C - hydrocarbon

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Safety & Environmental Solutions, Inc.

LOG OF BORING S2SB-4

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 2 S2SB-4
N32° 42' 48.4", W104° 26' 55.4"

Date, Time Started	: 07/28/10, 0900	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/28/10, 1030	Sampling Method	: 24-in. Splitspoon with
Hole Diameter	: 9 1/2 in.		: downhole hammer
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5 feet. No sampling - Knifed hole to 5 ft. for utility check						
5	SS	GM		10 ft. SILTY CLAYEY GRAVEL, little sample in splitspoon barrel, no H/C staining or odor	H20509-5	<0.100	<0.100	<10.0	64.5	937
10	SS	CL		15 ft. CLAY, with small caliche gravel, light brown with white streaks and mottling, dry, very stiff, no H/C staining or odor	H20509-1	<0.100	<0.100	<10.0	<10.0	<100
15	SS	CA/CL		20 ft. CALICHE and CLAY, chalk white, dry, very stiff, no H/C staining or odor	H20509-2	<0.100	<0.100	<10.0	<10.0	<100
20	SS	CA/CL		20-25 ft. Alternating gravels and clay 25 ft. CALICHE CLAY, with small gravels, very light brown, dry, no H/C staining or odor	H20509-3	<0.100	<0.100	<10.0	<10.0	<100
25	NR	GW		30 ft. GRAVEL frags, limestone grayish, limestone matrix, too little to sample for analysis 30-35 ft. GRAVELs, odor in returned cuttings.						
30	SS									
35	SS	CL		35 ft. CLAY, light brown with some mottling, dry, very stiff (fat clay), no H/C staining or odor	H20509-4	<0.100	<0.100	<10.0	<10.0	<100
40										
45										
50										

Notes:
Location: 19.5 ft. southwest of excavated/backfilled sump and S2SB-2
Backfilled with 4 bags QuikGrout
H/C - hydrocarbon

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LOG OF BORING S2SB-5

(Page 1 of 1)

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 2 S2SB-5
N32° 42' 48.7", W104° 26' 55.4"

Date, Time Started	: 07/28/10, 1100	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/28/10, 1200	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5 feet. No sampling - Knifed hole to 5 ft. for utility check						
5	SS	ML		5 ft. GRAVELLY SILT, light brown, limestone gravel fragments, no H/C staining or odor	H20512-1	<0.100	<0.100	<10.0	<10.0	<100
10	SS	ML		10 ft. GRAVELLY SILT, light brown, limestone gravel fragments, dry, no H/C staining or odor	H20512-2	<0.100	<0.100	<10.0	<10.0	<100
15	SS	ML		15 ft. GRAVELLY SILT, light brown, limestone gravel fragments, dry, no H/C staining or odor	H20512-3	<0.100	<0.100	<10.0	<10.0	<100
20	NR	CL/ML		20 ft. CLAY and GRAVELLY SILT, clay light brown to white, silt light brown, no H/C staining or odor	H20512-4	<0.100	<0.100	<10.0	<10.0	<100
25	NR	GW		22-25 ft. Gravels and cobbles, too little recovery to sample, no H/C staining or odor , 25-27 ft. Cobbles and gravels 27 ft. Soft drilling 27.5-28 ft. 28-30 ft. Gravels						
30	SS	CL		30 ft. CLAY, mottled light brown to chalk color, stiff, dry, occasional small gravel, no H/C staining or odor	H20512-5	<0.100	<0.100	<10.0	<10.0	<100
	SS	GW		31-34 ft. More hard drilling, no H/C staining or odor in cuttings	H20512-6	<0.100	<0.100	<10.0	<10.0	<100
35	SS	CL		34 ft. CLAY, mottled brown and chalk color, very stiff, dry, no H/C staining or odor						
40										

Notes:
Location: East of fence 18 ft. northeast of excavated/backfilled sump and S2SB-2
Backfilled with 5 bags QuikGrout
H/C - hydrocarbon

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Safety & Environmental Solutions, Inc.

LOG OF BORING S23SB-1

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 23 S23SB-1
N32° 42' 49.6", W104° 26' 59.7"

Date, Time Started	: 07/29/10, 0745	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/29/10, 0930	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-6 feet. No sampling - Knifed hole to 6 ft. for utility check						
5										
10	NR	GW		10 ft. No recovery, GRAVEL						
	SS	CL		11 ft. CLAY, soft drilling						
15	SS	CL		15 ft. SILTY CLAY, brown, soft, plastic, slightly damp, no H/C staining or odor	H20505-1	<0.100	<0.100	<10.0	<10.0	<100
20	SS			20 ft. SILTY CLAY with alternating clay/silty clay, brown, no H/C staining or odor	H20505-2	<0.100	<0.100	<10.0	<10.0	<100
		GW		23 ft. Begin gravels						
25	SS	CA/CL		25 ft. CALICHE and CLAY, mixed, white to light brown, crumbly,small gravels, no H/C staining or odor	H20505-3	<0.100	<0.100	<10.0	<10.0	<100
30		CL/CA		30 ft. SILTY CLAY and CALICHE, clay brown, damp, caliche white with pebbles. Clay and top of sample saturated, possible perched water in thn sand layer. Cuttings are dry, no H/C staining or odor	H20505-4	<0.100	<0.100	<10.0	<10.0	<100
	NR	GW		30-35 ft. GRAVELs, no odor on cuttings						
35				35 ft. No recovery						
	SS			35-40 ft. Soft drilling						
40	SS	CL		40 ft. SILTY CLAY, light brown, some mottling, dry, soft, crumbly, no H/C staining or odor	H20505-5	<0.100	<0.100	<10.0	<10.0	<100
45		CA/Cl		45 ft. CALICHE and CLAY, mixed, white to light brown, dry, crumbly, yellowish rust-colored staining, no H/C staining or odor	H20505-6	<0.100	<0.100	<10.0	<10.0	<100
50										

Notes:
Location: 20 ft. northeast of excavated/backfilled sump and S23SB-2
Backfilled with 6 bags QuikGrout
H/C - hydrocarbon

Z:\Company Files\Agave Energy\AGA-10-001 Penasco Yard\Boring logs\S23SB-1.bor

Safety & Environmental Solutions, Inc.

LOG OF BORING S23SB-2

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 23 S23SB-2
N32° 42' 49.3", W104° 26' 59.8"

Date, Time Started	: 07/29/10, 1000	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/29/10, 1130	Sampling Method	: 24-in. Splitspoon with
Hole Diameter	: 9 1/2 in.		: downhole hammer
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-6 feet. No sampling - Knifed hole to 6 ft. for utility check						
5										
	NR	AR		10 ft. Backfill, clean fill						
10	NR									
15	SS	CL		15 ft. SILTY CLAY, brown, some staining, strong odor (not crude petroleum)	H20506-1	<0.100	4.93	36.2	47.5	4,870
20	SS			20 ft. SILTY CLAY, brown with black staining, soft, plastic, strong odor	H20506-2	<0.100	0.803	17.9	27.1	9,040
		GW		24 ft. GRAVELs,						
25	SS	CL/CA		25 ft. SILTY CLAY with CALICHE and limestone gravels. Clay brown, soft, some staining, strong odor	H20506-3	<0.100	1.40	15.5	20.9	9,500
30	NR			30 ft. CALICHE and GRAVELs, no recovery for sample						
35	NR	CA/GW		35 ft. CALICHE and GRAVEL as above, too little to sample, strong odor in gravel fragments						
40	SS	CL/CA		40 ft. CLAY with CALICHE, mottled, soft, some limestone fragments, no staining, strong odor	H20506-4	<0.100	1.90	25.8	51.7	9,450
45	SS	GW CL GW		45 ft. Gravels 45.5 ft. Soft drilling. CLAY, brown, mottled with white streaks and yellowish rust streaks, dry, stiff, some odor, no staining. Took sample 45.5-46.5 ft. Field TPH 34 ppm.	H20506-5	<0.100	<0.100	<10.0	<10.0	<100
50				47-50 ft. GRAVELs, increasingly hard drilling. Auger refusal at 50 ft.						
55										

Notes:
Location: Center of excavated/backfilled sump 23
Backfilled with 5 bags QuikGrout
H/C - hydrocarbon

Z:\Company Files\Agave Energy\AGA-10-001 Penasco Yard\Boring logs\S23SB-2.bor

Safety & Environmental Solutions, Inc.

LOG OF BORING S23SB-3

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 23 S23SB-3
N32° 42' 49.1", W104° 27' 00.2"

Date, Time Started	: 07/29/10, 1245	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/29/10, 1445	Sampling Method	: 24-in. Splitspoon with
Hole Diameter	: 9 1/2 in.		: downhole hammer
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0	SS			0-6 feet. No sampling - Knifed hole to 6 ft. for utility check						
5										
10	NR	CL		10 ft. CLAY, light brown, soft, plastic, damp, no H/C staining or odor	H20507-1	<0.100	<0.100	<10.0	<10.0	<100
	SS									
15	SS			15 ft. CLAY, light brown, soft, plastic, damp, no H/C staining or odor	H20507-2	<0.100	<0.100	<10.0	<10.0	<100
20	SS			20 ft. CLAY, light brown, dry, stiff, with white calice flakes in matrix, caliche in core also. no H/C staining or odor	H20507-3	<0.100	<0.100	<10.0	<10.0	<100
25	SS	CA		25 ft. CLAYEY CALICHE, white to light brown, old H/C staining, dry, crumbly,no H/C odor	H20507-4	<0.100	<0.100	<10.0	<10.0	<100
		LS		27-29 ft. Rock						
30	SS	CA		30 ft. CALICHE, white, dry, crumbly, some clay, no H/C staining or odor	H20507-5	<0.100	<0.100	<10.0	<10.0	<100
35	NR	GW/LS		36 ft. Heavy GRAVEL or LIMESTONE Rock, auger refusal						
40										
45										
50										

Notes:
Location: 24 ft. southwest of excavated/backfilled sump and S23SB-2
Backfilled with 4 bags QuikGrout
H/C - hydrocarbon

Z:\Company Files\Agave Energy\AGA-10-001 Penasco Yard\Boring logs\S23SB-3.bor

Safety & Environmental Solutions, Inc.

LOG OF BORING S23SB-4

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 23 S23SB-4
N32° 42' 49.5", W104° 26' 59.8"

Date, Time Started	: 07/30/10, 0730	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/30/10, 0900	Sampling Method	: 24-in. Splitspoon with downhole hammer
Hole Diameter	: 9 1/2 in.		
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-6 feet. No sampling - Knifed hole to 6 ft. for utility check, pumped rain water out of hole						
5										
10	SS	CL		10 ft. SILTY CLAY, with small gravels/coarse sand. Clay brown, soft, no H/C staining or odor	H20510-1	<0.100	<0.100	<10.0	<10.0	<100
15	SS	CL/CA		15 ft. CLAY mixed with CALICHE, Caliche white, soft. Clay brown, dry, very stiff, no H/C staining or odor	H20510-2	<0.100	<0.100	<10.0	<10.0	<100
20	SS	CL		20 ft. CLAY, brown with white streaks and speckling, very stiff, no H/C staining or odor	H20510-3	<0.100	<0.100	<10.0	<10.0	<100
25	SS	CA		25 ft. CLAYEY CALICHE, dry, crumbly, white, no H/C staining or odor	H20510-4	<0.100	<0.100	<10.0	<10.0	<100
30	SS	GC/CA		30 ft. GRAVELLY CLAYEY CALICHE, light brown to white, stiff, crumbly, no H/C staining or odor	H20510-5	<0.100	<0.100	<10.0	<10.0	<100
35	SS	CA		35 ft. CLAYEY CALICHE, white, gravelly, no H/C staining or odor. Partial sample due to hard drilling in gravels	H20510-6	<0.100	<0.100	<10.0	<10.0	<100
40	SS	GC/CA		40 ft. GRAVELLY CLAYEY CALICHE, light brown to white. no H/C staining or odor. Hard drilling as above, partial sample.	H20510-7	<0.100	<0.100	<10.0	<10.0	<100
45		CL		SILTY CLAY, light brown, soft, with limestone gravels and some soft caliche. No H/C staining or odor	H20510-8	<0.100	<0.100	<10.0	<10.0	<100
50										

Notes:
Location: 41 ft. northwest of excavated/backfilled sump and S23SB-2
Backfilled with 6 bags QuikGrout
H/C - hydrocarbon

Z:\Company Files\Agave Energy\AGA-10-001 Penasco Yard\Boring logs\S23SB-4.bor

Safety & Environmental Solutions, Inc.

LOG OF BORING S23SB-5

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 23 S23SB-5
N32° 42' 48.8", W104° 26' 59.6"

Date, Time Started	: 07/30/10, 0730	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/30/10, 0900	Sampling Method	: 24-in. Splitspoon with
Hole Diameter	: 9 1/2 in.		: downhole hammer
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-6 feet. No sampling - Knifed hole to 6 ft. for utility check, pumped rain water out of hole						
5										
	NR	GW		10 ft. GRAVELs, no recovery						
10	SS									
15	SS	CL		15 ft. SILTY CLAY, brown, soft, plastic, slightly damp, no H/C staining or odor	H20511-1	<0.100	<0.100	<10.0	<10.0	<100
20	SS	CL/CA		20 ft. SILTY CLAY with CALICHE, chalk color, small limestone fragments, some minor clay, dry, no H/C staining or odor	H20511-2	<0.100	<0.100	<10.0	<10.0	<100
25	NR	GW		CLAY and CALICHE, mixed, very light brown to chalk white, some small limestone fragments, dry, crumbly, no H/C staining or odor	H20511-3	<0.100	<0.100	<10.0	<10.0	<100
				26 ft. Heavy GRAVELS						
30	NR			30 ft. No recovery, gravels, very hard drilling						
				32 ft. Auger refusal						
35										

Notes:
Location: 40 ft. southeast of excavated/backfilled sump and S23SB-2
Backfilled with 4 bags QuikGrout
H/C - hydrocarbon

Z:\Company Files\Agave Energy\AGA-10-001 Penasco Yard\Boring logs\S23SB-5.bor

Safety & Environmental Solutions, Inc.

LOG OF BORING S2SB-1

Penasco Compressor Station Investigation
Agave Energy
Sec 26, T18S R25E, Eddy County, NM

Sump 2 S2SB-1
N32° 42' 48.7", W104° 26' 55.6"

Date, Time Started	: 07/27/10, 1250	Drilled By	: WDC Drilling and Wells
Date, Time Complete	: 07/27/10, 1400	Sampling Method	: 24-in. Splitspoon with
Hole Diameter	: 9 1/2 in.		: downhole hammer
Drilling Method	: Hollow Stem Auger	Logged By	: David Boyer, PG
Drilling Equipment	: CME-85	Company Rep.	: Jennifer Knowlton, Agave

Sample Type
SS Split Spoon (18" or 24")
CB Core Barrel (2.5' or 5')
CT Auger Cuttings
NR No recovery

Depth in Feet	Sample Type	USCS	GRAPHIC	DESCRIPTION	Lab No.	Benzene (mg/Kg)	Total BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	TPH 418.1 (mg/Kg)
0				0-5 feet. No sampling - Knifed hole to 5 ft. for utility check						
5	SS	CL		5 ft. GRAVELLY CLAY, light brown to brown, moist, soft, no H/C staining or odor	H20485-1	<0.100	<0.100	<10.0	<10.0	<100
10	SS			10 ft. GRAVELLY CLAY, brown, slightly moist, small limestone fragments	H20485-2	<0.100	0.255	<10.0	<10.0	<100
	SS	LS		Approx 12 ft. LIMESTONE zone with very hard rock						
15				LIMESTONE rock with minimal clay,						
	NR	CL		16-17 ft. Clay then rock						
		LS		17 ft. LIMESTONE rock						
20	SS	CL/CA		20 ft. CLAY and soft CALICHE. Clay, brown, mottled, stiff, dry. Caliche white, no H/C staining or odor	H20485-3	<0.100	<0.100	<10.0	<10.0	<100
25	SS			25 ft. LIMESTONE fragments with some CLAY, no H/C staining or odor	H20485-7	<0.100	<0.100	<10.0	<10.0	<100
30	SS	LS/CL		30 ft. As above, LIMESTONE fragments with some CLAY, no H/C staining or odor	H20485-4	<0.100	<0.100	<10.0	<10.0	<100
35		CL		35 ft. CLAY, brown, soft, plastic, no H/C staining or odor	H20485-5	<0.100	<0.100	<10.0	<10.0	<100
	SS	LS		37 ft. LIMESTONE rock						
40	SS	CL		40 ft. SILTY CLAY, brown, crumbly, yellowish-rust colored spots, slight H/C odor	H20485-6	<0.100	<0.100	<10.0	<10.0	<100
45		LS		45 ft. Rock fragments with clay, too little to sample 45-47 ft. Rock, very hard drilling. At 47 ft. auger refusal. Cuttings light brown, dry, no discoloration, slight odor						
50										

Notes:
Location: 21 ft. northwest of excavated/backfilled sump and S2SB-2
Backfilled with 6 bags QuikGrout
H/C - hydrocarbon

Z:\Company Files\Agave Energy\AGA-10-001 Penasco Yard\Boring logs\S2SB-1.bor

Griswold, Jim, EMNRD

From: Jennifer Knowlton [jenniferk@yatespetroleum.com]
Sent: Thursday, August 05, 2010 8:13 AM
To: Griswold, Jim, EMNRD
Subject: RE: Penasco CS

We completed the sampling last week. As soon as we have official results back from the lab, we will have a report to give to you.

Jennifer Knowlton, PE

Agave Energy Company

105 South Fourth Street

Artesia, NM 88210

575-748-4471 (work)

505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

-----Original Message-----
From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Thursday, August 05, 2010 8:04 AM
To: Jennifer Knowlton
Subject: Penasco CS

Hi Jennifer,

Any progress to report regarding the investigation at the Penasco compressor station? I know y'all are still getting a fair bit of rain. Thanks.

Jim Griswold
Senior Hydrologist
Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

direct: 505.476.3465
email: jim.griswold@state.nm.us

Griswold, Jim, EMNRD

From: Jennifer Knowlton [jenniferk@yatespetroleum.com]
Sent: Friday, July 02, 2010 2:57 PM
To: Griswold, Jim, EMNRD
Cc: 'ballen@sesi-nm.com'; Bratcher, Mike, EMNRD; 'Matt Joy'; Swazo, Sonny, EMNRD
Subject: RE:

The forecast is calling for over a 30%-60% chance for rain until July 8. They have changed the fireworks schedule three times now, trying to outsmart the weather man! The rain isn't so bad, but the mushrooms growing in my yard are kind of gross!

Even if it quits raining, it is so muddy that the drill rig can't get to some of the places within the site. They got two holes done on Tuesday. Because we had to release the rig, they went to another job. Put those together and it will be two weeks before they return. I have to admit we aren't happy, but what can you do? As soon as they return, I will let you know.

I am in Farmington on Tuesday and Wednesday next week and scheduled to be in the field on Friday. Hopefully, you can stop by on Thursday since that is the only day I am in the office.

Jennifer Knowlton, PE

Agave Energy Company

105 South Fourth Street

Artesia, NM 88210

575-748-4471 (work)

505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

-----Original Message-----
From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Friday, July 02, 2010 2:30 PM
To: Jennifer Knowlton
Cc: ballen@sesi-nm.com; Bratcher, Mike, EMNRD; Matt Joy; jknowlton@yatespetroelum.com; Swazo, Sonny, EMNRD
Subject: RE:

2 weeks? I don't think its rained that much in SE NM since Noah and the Great Flood. How far along did they get on Tuesday? I was hoping SESI could get this investigation wrapped up with a report before the end of the month. I will be in Carlsbad next week, maybe I'll catch up with you then.

Jim

From: Jennifer Knowlton [mailto:jenniferk@yatespetroleum.com]
Sent: Friday, July 02, 2010 2:19 PM
To: Griswold, Jim, EMNRD
Cc: 'ballen@sesi-nm.com'; Bratcher, Mike, EMNRD; 'Matt Joy'; 'jknowlton@yatespetroelum.com'
Subject: RE:

Mr. Griswold,

We closed down the drilling portion of this project on Wednesday, June 30 due to weather conditions. We are forecasted to have continuing rains for two weeks due to Hurricane Alex. We are tentatively looking at restarting the drilling around July 12. If that changes, I will let you know.

Jennifer Knowlton, PE

Agave Energy Company

105 South Fourth Street

Artesia, NM 88210

575-748-4471 (work)

505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

-----Original Message-----
From: Jennifer Knowlton
Sent: Wednesday, June 23, 2010 10:59 AM
To: 'Griswold, Jim, EMNRD'
Cc: 'ballen@sesi-nm.com'; 'Bratcher, Mike, EMNRD'; 'Matt Joy'; 'jknowlton@yatespetroelum.com'
Subject: RE:
Importance: High

Mr. Griswold,

Agave will be starting the drilling as per the work plan referenced below on Tuesday, June 29, 2010. I left a voice message for Mr. Bratcher on Wednesday morning at about 10:55am. If you require any further information from me at this time, please do not hesitate to email or call me.

Jennifer Knowlton, PE

Agave Energy Company

105 South Fourth Street

Artesia, NM 88210

575-748-4471 (work)

505-238-3588 (cell)

Note NEW EMAIL: jknowlton@yatespetroleum.com
Please change your address book!

-----Original Message-----
From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Monday, June 14, 2010 8:59 AM
To: Jennifer Knowlton
Cc: ballen@sesi-nm.com; Bratcher, Mike, EMNRD
Subject:

Ms. Knowlton,

I have reviewed SESI's *Penasco Compressor Station Work Plan* dated 6/3/10 with respect to further investigation of soil contamination associated with sumps #2 and #23 along with the tank battery on behalf of Agave Energy at your Penasco CS (GW-125) south of Artesia. The workplan is approved. Please notify myself and Mike Bratcher in our District 2 office (575.748.1283 x108) at least 72 hours before beginning fieldwork. Retain this email in your files as no hardcopy approval letter will be sent. Thank you.

Jim Griswold
Senior Hydrologist
Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

direct: 505.476.3465
email: jim.griswold@state.nm.us

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Griswold, Jim, EMNRD

From: Griswold, Jim, EMNRD
Sent: Monday, June 14, 2010 8:59 AM
To: 'jknowlton@yatespetroleum.com'
Cc: 'ballen@sesi-nm.com'; Bratcher, Mike, EMNRD

Ms. Knowlton,

I have reviewed SESI's *Penasco Compressor Station Work Plan* dated 6/3/10 with respect to further investigation of soil contamination associated with sumps #2 and #23 along with the tank battery on behalf of Agave Energy at your Penasco CS (GW-125) south of Artesia. The workplan is approved. Please notify myself and Mike Bratcher in our District 2 office (575.748.1283 x108) at least 72 hours before beginning fieldwork. Retain this email in your files as no hardcopy approval letter will be sent. Thank you.

Jim Griswold
Senior Hydrologist
Environmental Bureau
ENMRD/Oil Conservation Division
1220 South St. Francis Drive
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direct: 505.476.3465
email: jim.griswold@state.nm.us