1R - 427-87

REPORTS

DATE:

8-20-07

RICE *Operating Company*
122 West Taylor • Hobbs, NM 88240
Phone: (505) 393-9174 • Fax: (505) 397-1471

August 20, 2007

CERTIFIED MAIL RETURN RECEIPT NO. 7005 1820 0001 6804 4776

Mr. Edward Hansen
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

RE: **EXCAVATION COMPLETION REPORT**
H-20 SWD site
Eunice-Monument-Eumont (EME) SWD System
Unit 'H', Sec. 20, T20S, R37E

Mr. Hansen:

Rice Operating Company (ROC) respectfully submits the excavation completion report by Ocotillo Environmental for the emergency pit and redwood tanks at the referenced site. Conditional approval to backfill this excavation was granted by Oil Conservation Division (OCD) on May 7, 2007. Upon completion of backfill activates, the disturbed surface was seeded with a blend of native vegetation and is being monitored for growth.

One four-inch monitoring well was installed at this site on April 23, 2007. This well is sampled on a quarterly basis for laboratory analysis. To further address groundwater concerns at this site, consultant L. Peter Galusky, Jr., will submit an Investigation and Characterization Plan for OCD approval by September 1, 2007.

ROC is the service provider (agent) for the EME Salt Water Disposal System and has no ownership of any portion of the pipelines, wells, or facilities. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Environmental remediation projects of this magnitude require System Partner AFE approval and work begins as funds are received.

RICE OPERATING COMPANY

Kristin Farris Pope

Kristin Farris Pope
Project Scientist

Enclosure as stated

cc: SC, CDH, LPG, file, Mr. Chris Williams (OCD, District I Office)

Rice Operating Company

EME SWD System, Well No. H-20

Index

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AUG 2 2 2007

Environmental Bureau
Oil Conservation Division

Ocotillo
ENVIRONMENTAL
Dirt Work • On-Site Remediation • Soil Testing • Excavation

August 14, 2007

Mr. Ed Hansen
Environmental Bureau – New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RECEIVED
AUG 22 2007
Environmental Bureau
Oil Conservation Division

Re: Backfilling Completion Report
Rice Operating Company
H-20 SWD Site
Eunice-Monument-Eumont (EME) SWD System
Unit Letter H, Section 20, Township 20 South, Range 37 East,
Lea County, New Mexico

Dear Mr. Hansen:

Rice Operating Company (ROC) has retained Ocotillo Environmental, LLC (Ocotillo) to conduct excavation and backfill activities at the above referenced site. The delineation and remediation activities were conducted under the New Mexico Oil Conservation Division (NMOCD) approved "Closure Plan for Below-Ground Redwood Tanks" and "Closure Plan for Permitted Emergency Pits". A C-103 form was submitted to the NMOCD on March 7, 2007. Figure 1 (Section 4) shows the site location. A copy of the complete C-103 package is included in Section 2.

From April 9 to April 13, 2007, excavation was conducted to a depth of approximately 27 feet below ground surface (bgs), and a Request for Approval to Backfill Excavation was submitted to the NMOCD on April 23, 2007. Approval was granted on May 7, 2007, with the conditions:

1. The proposed backfilling shall be initiated by June 1, 2007,
2. The 1 foot clay layer shall be compacted to at least 95% standard Proctor density. The top 5 feet of soil shall be compacted from 80% to 90% standard Proctor density.
3. Rice Operating Company must submit a monthly summary report(s) for the site, including a backfilling completion report, a proposal for additional groundwater monitoring wells, analytical results from any samples taken at the site, etc.

Backfilling Completion

Excavation began on April 9, 2007, with clean sand from the upper eight (8) feet of the excavation stockpiled to the northwest. Soil removed from the excavation at a depth of approximately eight (8) feet bgs to approximately 22 feet bgs was stockpiled to the northeast, and blended to achieve total petroleum hydrocarbon (TPH) concentrations below the recommended NMOCD remediation action level (RRAL). As excavation continued, groundwater was observed at a depth of approximately 24 feet bgs. Excavation continued to a depth of approximately 27 feet bgs to allow groundwater accumulation and observe the presence of any phase separated hydrocarbons. Approximately 864 cubic yards of soil was disposed at the South Monument Surface Waste Facility. Figure 2 (Section 4) shows the location of the clean and blended soils. The disposal manifests are presented in Section 5.

P.O. Box 1816 • Hobbs, NM 88241
Office (505) 393-6371 • Fax (505) 393-6374

On April 13, 2007, soil samples (SS-1, SS-2 and SS-3) were collected from the bottom of the excavation, at a depth of approximately 27 feet bgs, and composite samples were collected from each side wall. Samples were placed in clean glass sample jars, labeled, chilled in an ice chest, and delivered under chain-of-custody control to Cardinal Laboratories (Cardinal) located in Hobbs, New Mexico. A portion of each sample was also placed in a clean glass sample jar for headspace analysis. The headspace jars were filled approximately ¾ full, and a layer of aluminum foil was placed over the opening of the jar before replacing the cap. The headspace samples were set aside and allowed to warm up to ambient temperature before a GasAlertMicro 5 photoionization detector (PID) was used to measure the concentration of organic vapors in the sample headspace. The PID probe was inserted into the headspace of the sample jars (through the aluminum foil), and the concentration of organic vapors was displayed by the instrument in parts per million (ppm), and recorded in a bound field notebook. The PID was calibrated to isobutylene prior to obtaining headspace readings. The PID readings are reported in Table 1 (Section 3). Figures 2 and 3 (Section 4) show the sample locations.

Soil samples were analyzed for TPH by EPA method SW-846-8015M, including gasoline range organics (GRO) and diesel range organics (DRO), for benzene, toluene, ethylbenzene and xylenes (commonly referred to as BTEX) by EPA method SW-846-8021B, and for chlorides by standard methods. Table 1 presents a summary of the laboratory analyses of soil from the excavation. Section 9 presents laboratory data and chain of custody documentation.

As no PSH was observed on the groundwater, clean imported soil was used to backfill the excavation from the total depth of 27 feet bgs to a depth of approximately 20 feet bgs on April 13 and April 16, 2007. On April 13, 2007, soil samples (SS-4 through SS-8) were collected at the 20 foot level, and delivered to Cardinal, where they were analyzed for TPH and chloride. A portion of each sample was collected for PID analysis, as described above. The PID readings and laboratory results are reported in Table 1 (Section 3). Figure 4 (Section 4) shows a cross-section of the excavation backfill. Section 9 presents laboratory data and chain of custody documentation. Referring to Table 1, all samples reported TPH and chloride concentrations below the RRALs.

Staged soil was blended with a 2 to 1 ratio of clean soil and a composite sample of the blended soil was collected on April 19, 2007, and submitted to Cardinal for TPH and chloride analysis. Laboratory results are presented in Table 1 (Section 4). Laboratory data is presented in Section 9. Referring to Table 1, the blended soil reported an average TPH concentration of 76.53 mg/kg and a chloride concentration of 80 mg/kg measured during backfill (SS-7 through SS-10).

Upon receipt from the NMOCD of approval to backfill the remaining excavation, blended soil was introduced into the excavation on May 14, 2007 in three (3) foot lifts, with each lift being compacted and a composite sample collected after each compaction. Soil samples were collected at depths of approximately 17, 14, 11, and 7 feet bgs, and delivered to Cardinal for TPH and chloride analysis. The PID readings and laboratory results are reported in Table 1 (Section 3). Figure 4 (Section 4) shows a cross-section of the excavation backfill. Section 9 presents laboratory data and chain of custody documentation. Referring to Table 1, all samples reported TPH and chloride concentrations below the RRALs.

Red clay was added from a depth of approximately 7 feet to 5 ½ feet bgs, and compacted to achieve at least 95% proctor density. Density testing was conducted by Pettigrew and Associates, P.A. (Pettigrew) of Hobbs, on May 15, 2007. Pettigrew reported a clay density of 101.3%. Test results are presented in Section 6. Figure 4 (Section 4) shows a cross-section of the excavation backfill.

The upper five (5) feet of the excavation (above the clay layer) was backfilled with clean soil on May 15, 2007. The topsoil was compacted and density testing conducted by Pettigrew on May 18, 2007, resulted in a 102.1% dry density compaction. Test results are presented in Section 6. Figure 4 (Section 4) shows a cross-section of the excavation backfill.

Groundwater Investigation

On April 20, 2007, one (1) monitoring well (MW-1) was installed east of the excavation, using an air rotary drilling rig by Harrison & Cooper, Inc., of Wolfforth, Texas. Basin Surveys of Hobbs, New Mexico surveyed the well for top-of-casing and ground elevation. Figure 5 presents a Site drawing with the monitoring well location. Table 2 presents a summary of drilling and completion details. Section 7 presents the boring log and well construction diagram.

Monitoring well MW-1 was constructed with threaded 4-inch schedule 20 PVC well screen and riser. The well screen, approximately 15 feet in length, was placed five (5) feet above and ten (10) feet below the groundwater level observed during drilling. Graded silica sand was placed around the well screen to approximately 3 feet above the screen. Approximately 3 feet of bentonite chips was placed above the sand, and hydrated with potable water. The remainder of the annulus was filled with cement and bentonite grout to about 2 feet BGS. The well is secured with a locking above-grade cover, anchored in a concrete pad measuring approximately 3 x 3 feet. The monitoring well was developed by pumping approximately 70 gallons from the well with an electric submersible pump until groundwater was visibly clear of fine grained sediment.

Depth to groundwater was measured in the monitoring well on April 23, 2007, at 22.89 feet below top of casing. After purging approximately twenty five gallons of water from the well, a groundwater sample was collected using a dedicated disposable polyethylene bailer. The sample was carefully poured into laboratory prepared containers, chilled in an ice chest and delivered under chain of custody control to Cardinal, where it was analyzed for BTEX, major ions, and total dissolved solids (TDS). Table 3 presents a summary of the organic analyses of the groundwater sample. Table 4 presents a summary of the inorganic analyses of the sample. Section 9 presents the laboratory report.

Referring to Table 3, the benzene concentration (0.06 mg/L) exceeds the Water Quality Control Commission (WQCC) standard of 0.01 mg/L. All other BTEX constituents were below the WQCC standards. Referring to Table 4, all inorganic constituents reported concentrations below the WQCC standards, except for chloride (1,939 mg/L) and TDS (4,343 mg/L).

Conclusions and Proposal

The source of contamination has been removed (the redwood tanks and the emergency overflow pit). As the excavation was conducted to groundwater, impacted soil of the vadose zone was also removed. The concentrations of soil used for backfill (SS-7 through SS-10) averaged a TPH concentration of 76.53 mg/kg and a chloride concentration of 80 mg/kg.

ROC is the service provider (agent) for the EME Salt Water Disposal System and has no ownership of any portion of the pipelines, wells, or facilities. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Environmental remediation projects of this magnitude require System Partner AFE approval and work begins as funds are received.

ROC will submit an Investigation and Characterization Plan to address further groundwater concerns. ROC will continue to sample the monitoring well (MW-1) on a quarterly basis with annual reports submitted to the OCD.

Sincerely,
Ocotillo Environmental, LLC

Cindy K. Crain

Cindy K. Crain, P.G.
Environmental Manager

Incorrect BTEX concentrations reported

Inbox

Print all

Kristin Pope to Edward, Carolyn, me

show details Jul 11 · Reply

Mr. Hansen,

It was recently brought to my attention that I reported incorrect BTEX concentrations in the April 23 letter (attached) requesting permission to backfill the EME H-20 SWD site. In this letter, BTEX concentrations were reported as follows:

Sample Date	Sample Name	Sample Location	Sample Depth (ft)	PID (field)	Total TPH (lab)	Chloride (lab)	BTEX (lab)
4/13/07	North	Wall comp.	12-25	127	922	96	0.281
4/13/07	East	Wall comp.	12-25	102	720	224	1.03
4/13/07	South	Wall comp.	12-25	228	950	96	0.828
4/13/07	West	Wall comp.	12-25	178	955	96	0.514

The correct BTEX concentrations (as shown on the attached lab report) are 0.510, 0.279, 0.824, and 1.028 mg/kg respectively for the North, East, South, and West wall composites. OCD approval to backfill this excavation was received on 5/7/07 and backfilling began soon after. A 4-in. monitoring well is on site and being monitored quarterly. I apologize for any inconvenience this error may have caused. Feel free to contact me with any questions.

Kristin Pope

---- Original Message ----
From: Kristin Pope
To: Hansen, Edward J., EMNRD
Cc: chris.williams@state.nm.us ; Carolyn Haynes ; Scott Curtis ; Haskell Conder
Sent: Monday, April 23, 2007 5:32 PM
Subject: Request for approval to backfill redwood tank excavation

Mr. Hansen,

Attached is a request to backfill an open excavation made by the delineation of a former redwood tank site. A hard copy follows via US Mail. Please contact me with any questions. Thank you.

Kristin Farris Pope
Project Scientist
RICE Operating Company
Hobbs, New Mexico
(505) 393-9174

2 attachments — Download all attachments

4.23.07 request to backfill package.pdf
1953K View as HTML Download

4-13-07 Walls LAB REPORT.pdf
1262K View as HTML Download

Reply · Reply to all · Forward Invite Kristin to Gmail

FW: EME H-20 excavation Backfill approval

Inbox

Print all

Haskell Conder to me

show details 4:13 pm (5 hours ago)

Reply

From: Hansen, Edward J., EMNRD [mailto:edwardj.hansen@state.nm.us]
Sent: Monday, May 07, 2007 7:07 PM
To: Kristin Pope
Cc: Carolyn Haynes; Scott Curtis; Haskell Conder; Price, Wayne, EMNRD
Subject: RE: EME H-20 excavation Backfill approval

Dear Ms. Pope:

The New Mexico Oil Conservation Division (NMOCD) has reviewed your request for approval to backfill excavation (dated April 23, 2007 and subsequent information dated April 30, 2007) for the above referenced site. The NMOCD hereby approves the backfill request with the conditions:

1) The proposed backfilling shall be initiated by June 1, 2007, at the site.

2) The 1 foot clay layer shall be compacted to at least 95% standard Proctor density. The top 5 feet of soil shall be compacted from 80% to 90% standard Proctor density.

3) Rice Operating Company must submit a monthly summary report(s) for the site, including a backfilling completion report, a proposal for additional groundwater monitoring wells, analytical results from any samples taken at the site, etc. Upon review of the report(s), the NMOCD will determine if the submittal of an Abatement Plan will be required for the site.

Please be advised that NMOCD approval of this plan does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the owner/operator of responsibility for compliance with any NMOCD, federal, state, or local laws and/or regulations.

If you have any questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen

Hydrologist

Environmental Bureau

From: Kristin Pope [mailto:kpope@riceswd.com]
Sent: Monday, May 07, 2007 4:16 PM
To: Hansen, Edward J., EMNRD; Price, Wayne, EMNRD
Cc: Carolyn Haynes; Scott Curtis; Haskell Conder
Subject: EME H-20 excavation

Edward & Wayne.

Per our phone conversation today, ROC requests approval to backfill the redwood tank excavation at the EMMA HE-20 site per the schematic outlined in the 4/23/07 letter. COD has been notified of elevated TADS and chloride concentrations measured in the on-site monitoring well and ROC will continue to monitor and investigate groundwater quality that may be affected by this site. A complete excavation report will be forthcoming with the understanding that the groundwater conditions make this site an open project. COD will be notified of all significant events. Thank you for your attention to this project.

Kristin Farris Pope
Project Scientist
RICE Operating Company
Hobbs, New Mexico
(505) 393-9174

RICE *Operating Company*
122 West Taylor • Hobbs, NM 88240
Phone: (505) 393-9174 • Fax: (505) 397-1471

April 23, 2007 *electronic mail to edwardj.hansen@state.nm.us*

CERTIFIED MAIL RETURN RECEIPT NO. 7005 1820 0001 6802 2453

Mr. Edward Hansen
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

RE: **REQUEST FOR APPROVAL TO BACKFILL EXCAVATION**
H-20 SWD site
Eunice-Monument-Eumont (EME) SWD System
Unit 'H', Sec. 20, T20S, R37E

Mr. Hansen:

On March 7, Rice Operating Company (ROC) submitted a C-103 form to notify the Oil Conservation Division (OCD), Environmental Bureau Chief of upcoming environmental delineation and remediation activities at the above-referenced site. These activities began on April 9, 2007 with notice given to OCD.

The redwood tanks and pit locations have been addressed by following the OCD-approved generic plans, "Closure Plan for Below-Grade Redwood Tanks" and "Closure Plan for Permitted Emergency Pits." Initial delineation revealed that the pit could be closed according to the Generic Plan. The redwood tank area, however, exhibited deeper impact. Delineation and excavation was directed by Ocotillo Environmental (Ocotillo) of Hobbs and concentrated around the former redwood tanks site. Chloride and hydrocarbon are constituents of concern and analyses of soil samples from the 98 x 73 x 27-foot-deep excavation are as follows:

Sample Date	**Sample Name**	**Sample Location**	**Sample Depth** (ft)	**PID** (field)	**Total TPH** (lab)	**Chloride** (lab)	**BTEX** (lab)
4/13/07	SS-1	Bottom	27	90	1,771.0	976	1.033
4/13/07	SS-2	Bottom	27	339	709	336	12.77
4/13/07	SS-3	Bottom	27	100	892	624	1.259
4/13/07	North	Wall comp.	12-25	127	922	96	0.281
4/13/07	East	Wall comp.	12-25	102	720	224	1.03
4/13/07	South	Wall comp.	12-25	228	950	96	0.828
4/13/07	West	Wall comp.	12-25	178	955	96	0.514
4/16/07	Comp SS-4	Excavated Soil	---	21	394.7	192	---
4/16/07	Comp SS-5	Excavated Soil	---	28	435.8	224	---
4/16/07	Comp SS-6	Excavated Soil	---	22	406.5	208	---
4/19/07	2:1 Blended	Blended Backfill	---	26	270	160	---

Per the generic work plans, ROC requests permission from OCD to backfill the redwood tank excavation according to the enclosed cross-section schematic. 7 feet of clean sand that was imported from an off-site source has already been placed at the bottom of the excavation to limit exposure of groundwater. Blended backfill with photoionization detection (PID) readings of 26 ppm, 270 mg/kg total petroleum hydrocarbon (TPH), and 160 mg/kg chloride concentrations will be placed on top of the clean sand from 20 to 6 ft below ground surface (BGS). 1.5 feet of clay will be placed at 6 feet BGS and on top of the blended backfill. The Generic Plan calls for a 95% density compaction of clay but recent research shows that compaction to approximately 85% that reflect native, undisturbed soils is more beneficial. **What level of compaction would OCD prefer for this site?** The remaining excavation on top of the clay will be filled with clean, imported topsoil that will sustain native vegetation restoration. A complete excavation report will be submitted to OCD by Ocotillo after the backfill is complete.

Because soil impacts were identified to groundwater level, a 4-inch monitoring well was installed at the site on Friday, April 20. The well was properly developed and was sampled today, April 23. Elevated chloride and total dissolved solids are known to be elevated on a regional scale in this area. OCD will be promptly notified when laboratory results are received.

ROC is the service provider (agent) for the EME Salt Water Disposal System and has no ownership of any portion of the pipelines, wells, or facilities. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Environmental remediation projects of this magnitude require System Partner AFE approval and work begins as funds are received.

The proposed backfill materials are currently staged on the surface of this site. As this excavation is currently open, a timely response to this request to backfill would be greatly appreciated. Should you have any questions or concerns regarding this request, please do not hesitate to contact me. A copy of this submission via U.S. Mail will follow.

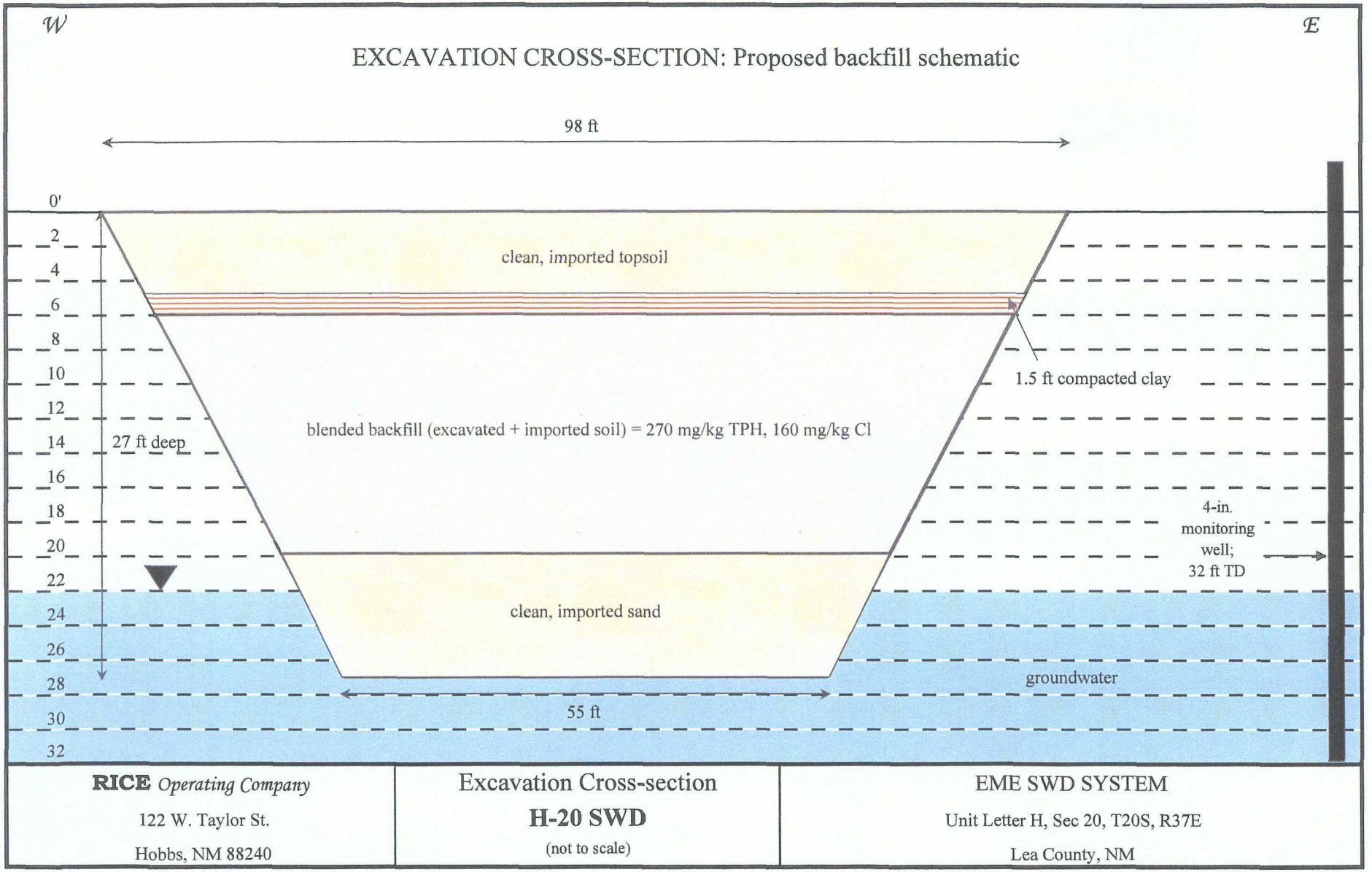
RICE OPERATING COMPANY

Kristin Farris Pope

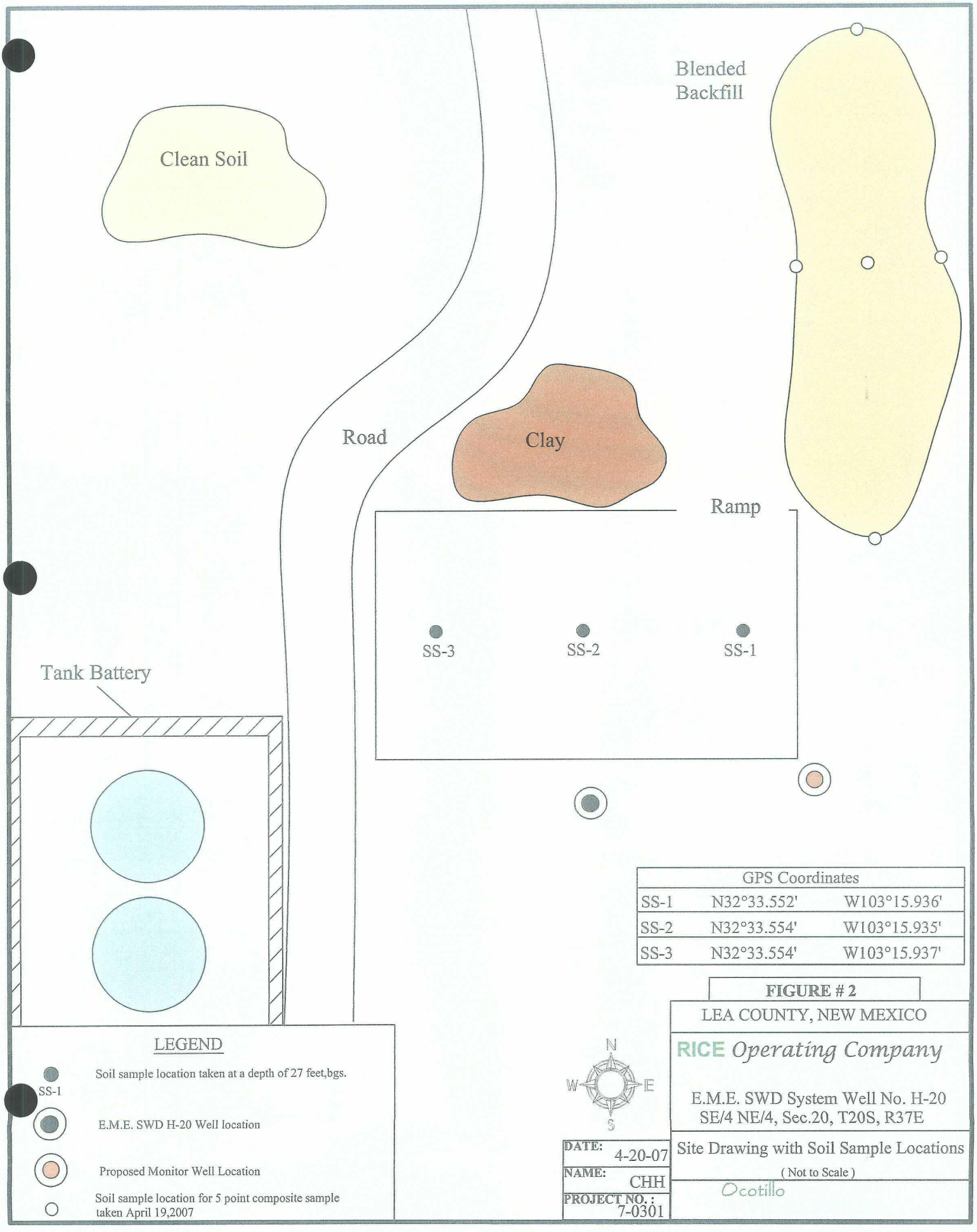
Kristin Farris Pope
Project Scientist

enclosures: plan-view, proposed backfill schematic, bottom & wall sample location diagram

cc: SC, CDH, Ocotillo, file, Mr. Chris Williams
Oil Conservation Division, District I Office
chris.williams@state.nm.us



RICE *Operating Company* 122 W. Taylor St. Hobbs, NM 88240	Excavation Cross-section **H-20 SWD** (not to scale)	EME SWD SYSTEM Unit Letter H, Sec 20, T20S, R37E Lea County, NM



GPS Coordinates		
SS-1	N32°33.552'	W103°15.936'
SS-2	N32°33.554'	W103°15.935'
SS-3	N32°33.554'	W103°15.937'

FIGURE # 2

LEA COUNTY, NEW MEXICO

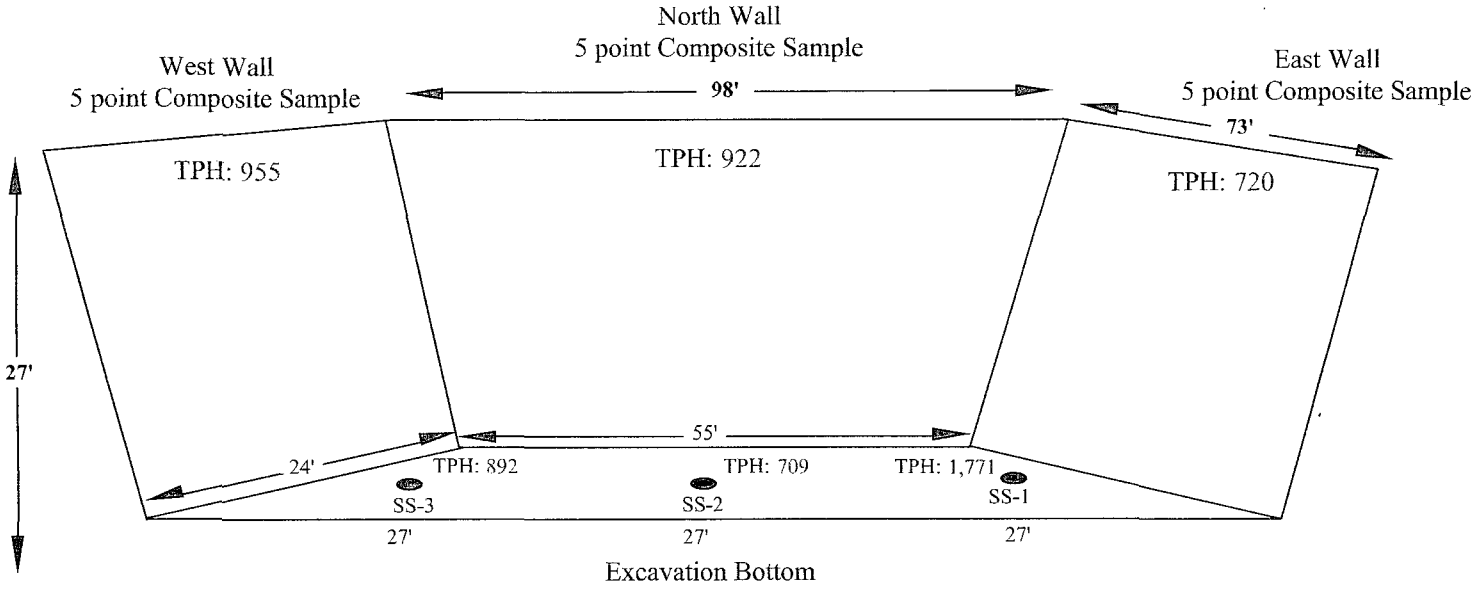
RICE *Operating Company*

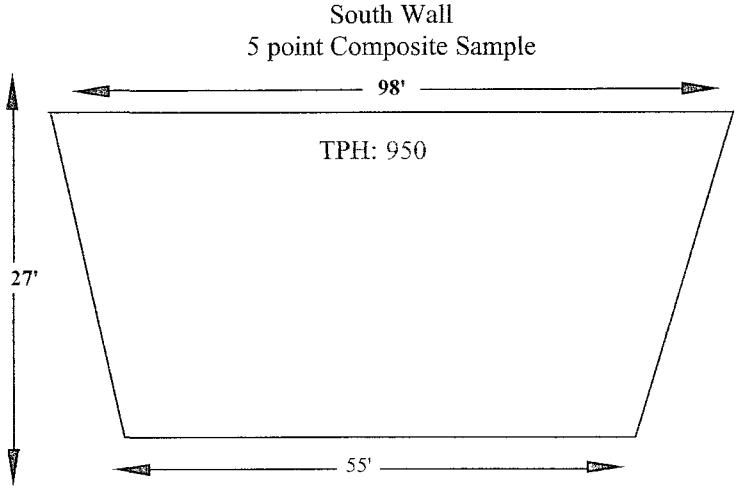
E.M.E. SWD System Well No. H-20
SE/4 NE/4, Sec.20, T20S, R37E

Site Drawing with Soil Sample Locations
(Not to Scale)

DATE:	4-20-07
NAME:	CHH
PROJECT NO. :	7-0301

Ocotillo





GPS Coordinates		
SS-1	N32°33.552'	W103°15.936'
SS-2	N32°33.554'	W103°15.935'
SS-3	N32°33.554	W103°15.937'

LEGEND

Soil sample location for sidewall composite sample with sample number and depth, feet.

TPH: 1,771 SS-1 27' Soil sample location with TPH concentration (mg/kg), at depth, (feet).

FIGURE # 1

LEA COUNTY, NEW MEXICO

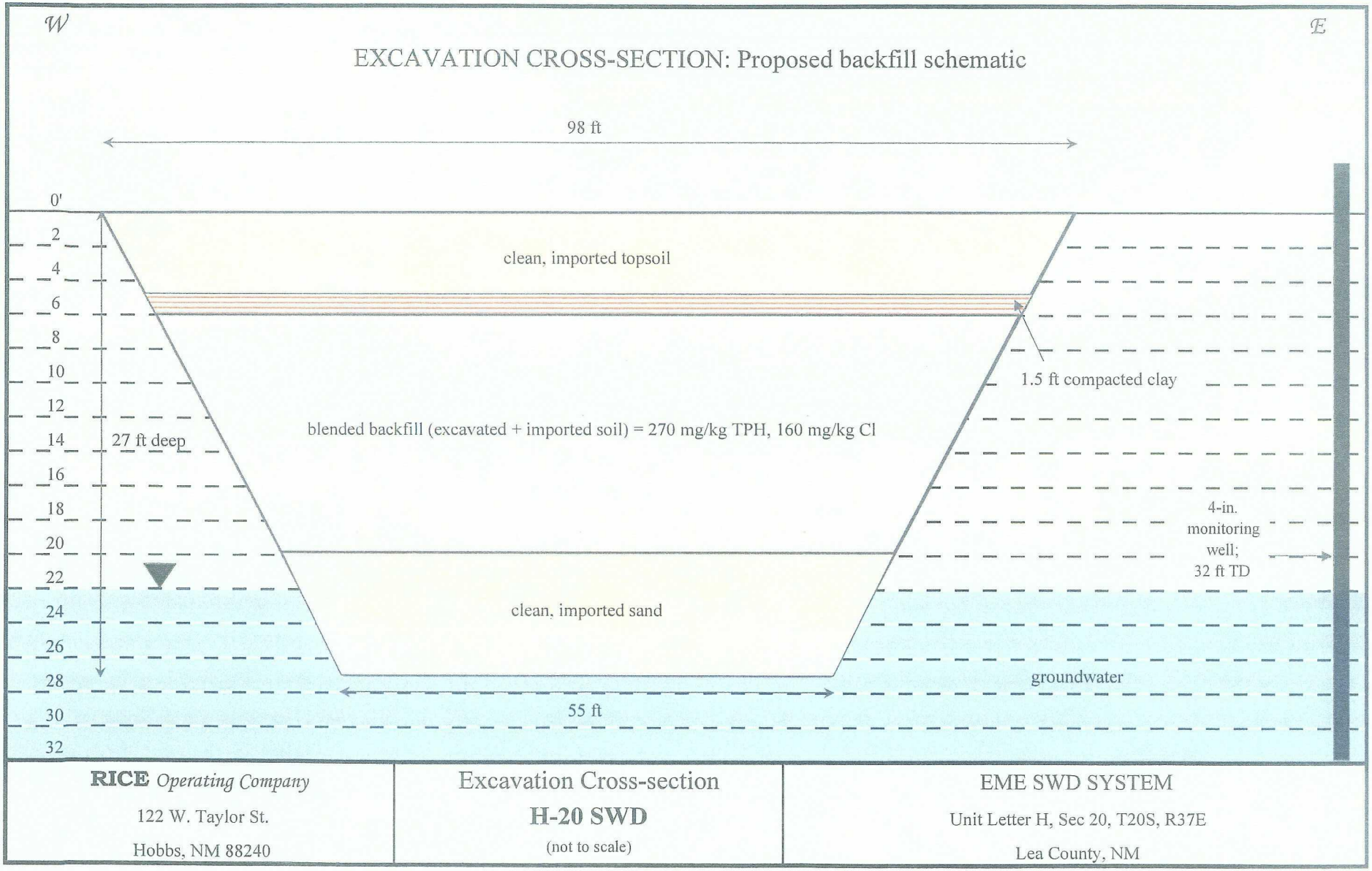
RICE *Operating Company*

E.M.E. SWD System Well No. H-20
SE/4 NE/4, Sec.20, T20S, R37E

Cross Section View of Sidewall and Bottom Soil Sample Locations
(Not to Scale)

Ocotillo

DATE:	4-17-07
NAME:	CHH
PROJECT NO. :	7-0301



RICE *Operating Company* 122 W. Taylor St. Hobbs, NM 88240	Excavation Cross-section **H-20 SWD** (not to scale)	EME SWD SYSTEM Unit Letter H, Sec 20, T20S, R37E Lea County, NM

Kristin Pope

From: "Kristin Pope" <kpope@riceswd.com>
To: "Daniel J Sanchez" <daniel.sanchez@state.nm.us>; "Wayne Price" <wayne.price@state.nm.us>; "Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>; "Larry Johnson" <larry.johnson@state.nm.us>; "Patricia Caperton" <patricia.caperton@state.nm.us>; "Myra Meyers" <mmeyer@slo.state.nm.us>; "Leon Anderson" <landerso@slo.state.nm.us>
Cc: "Scott Curtis" <scurtis@riceswd.com>; "Joe Purvis" <jpurvis@riceswd.com>; "Carolyn Haynes" <chaynes@riceswd.com>
Sent: Wednesday, April 11, 2007 4:14 PM
Attach: 4.10.07 amended.xls
Subject: ROC work schedule--revised

Please find the attached work schedule for this week. One revision has been made with the addition of the delineation of EME H-20 SWD (redwood tanks) site that was started today. Feel free to contact me with any questions.

As field conditions may be unpredictable, please call ROC for verification of a more specific time frame for any particular site.

Kristin Farris Pope
Project Scientist
RICE Operating Company
Hobbs, New Mexico
(505) 393-9174

RICE *Operating Company* **WORK SCHEDULE**

week of April 9 - 13, 2007 *amended*

Day	System	Location	Unit Letter	Section	Township	Range	GW depth (ft)	Scheduled Work	Driving Directions
10	BD	jct. K-18-2	K	18	22S	37E	190	jct. box excavation w/backhoe	turn L & go to jct. of Legion Rd & Delaware Rd. Turn R go 2.3 mi, turn L go 0.6 mi. Turn R go 0.2 mi. Go W to green & silver ROC tanks. Site is at the NW corner of battery.
10	BD	jct. J-18	J	18	22S	37E	120	jct. box excavation w/backhoe	Basin Rd, go W on DB Rd 1.5 mi. Turn L & go 0.62 mi. Turn L go 0.15 mi. Turn R to concrete box marked "I-18." Turn R & go 100' to site.
10	EME	P-6 leak	P	6	20S	37E	30	Seed disturbed surface AP #45	Maddox 0.5 mi. Turn L & go SE 0.8 mi to gate. Go E 0.2 mi through gate. Turn R & go 0.2 mi. Turn L & go 0.3 mi. to ROC Tank facility. Site is located on E side of battery along fence line.
10	EME	jct. E-5 (Marathon Barber)	E	5	20S	37E	35	Seed disturbed surface #1R0427-91	
10-13	EME	H-20 SWD	H	20	20S	37E	22	redwood tank delineation	From jct. of hwy 322 & hwy 8 in Monument, go south on hwy 8 for 4 mi. Turn right at cattle guard and go 0.3 mi. west. Turn left and proceed to location.
11	BD	jct. J-18-1	J	18	22S	37E	120	jct. box excavation w/backhoe	SW of Eunice @ jct. of Legion Rd & Delaware Basin Rd, go W on DB Rd 1.5 mi. Turn L & go 0.62 mi. Turn L go 0.15 mi. Turn R to concrete box marked "I-18." Turn R & go 100' to site.
11	EME	D-2 Pump Station leak	D	2	20S	36E	92	Seed disturbed surface	for 2.9 mi. Turn R go through cattle guard & turn L 0.4 mi. Turn R & follow rd for 0.5 mi. Turn S & then SE. Location is N of the Green and Silver tank battery.

Kristin Pope

From: "Kristin Pope" <kpope@riceswd.com>
To: "Wayne Price" <wayne.price@state.nm.us>; "Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>; "Daniel J Sanchez" <daniel.sanchez@state.nm.us>; "Patricia Caperton" <patricia.caperton@state.nm.us>; "Larry Johnson" <larry.johnson@state.nm.us>
Cc: "Carolyn Haynes" <chaynes@riceswd.com>; "Joe Purvis" <jpurvis@riceswd.com>; "Tim Reed" <treed@hec-enviro.com>; "Randall Hicks" <R@rthicksconsult.com>; "Katie Lee" <katie@rthicksconsult.com>; "Scott Curtis" <scurtis@riceswd.com>
Sent: Friday, April 13, 2007 2:56 PM
Attach: 4.13.07.xls
Subject: ROC work schedule

Please find the attached work schedule for next week. As field conditions may be unpredictable, please call ROC for verification of a more specific time frame for any particular site.

Please note that soil borings and the installation of monitoring wells will be conducted on major project sites that have AP numbers.

Thanks.

Kristin Farris Pope
Project Scientist
RICE Operating Company
Hobbs, New Mexico
(505) 393-9174

RICE *Operating Company* **WORK SCHEDULE**

week of April 16 - 20, 2007 *amended*

Date	System	Location	Unit Letter	Section	Township	Range	GW depth (ft)	Scheduled Work	Driving Directions
17	BD	jct. D-5	D	5	22S	37E	100	delineation soils bores at jct. box site	on caliche rd to Wiser Oil. Co. sign. Left 0.5 miles. Right 0.35 miles. Follow main lease road which will curve left. Right 0.1 miles to Wiser Oil Co. Downs 'B' battery. Site is @ NE corner of the battery across the road in pasture.
18	BD	J-30 vent	J	30	21S	37E	99	delineation soils bores at jct. box site	Coyote Hill Rd., go West on Hwy. 8 for 0.25 mi. Turn right and continue North on lease road 0.15 mi. to location located on the left side of lease road.
18	BD	jct. N-20	N	20	21S	37E	99	delineation soils bores at jct. box site	West of Eunice at intersection of Hwy. 8 and Turner Rd., go North on Turner Rd. for 1.1 mi. Turn left and continue west 0.5 mi. to site on North site of lease road.
20	EME	H-20 SWD	H	20	20S	37E	22	installation of one 4-in. monitoring well	From jct. of Hwy 322 & Hwy 8 in Monument, go south on hwy 8 for 4 mi. Turn right at cattle guard and go 0.3 mi. west. Turn left and proceed to location.

Kristin Pope

From: "Kristin Pope" <kpope@riceswd.com>
To: "Larry Johnson" <larry.johnson@state.nm.us>; "Patricia Caperton" <patricia.caperton@state.nm.us>; "Wayne Price" <wayne.price@state.nm.us>; "Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>; "Daniel J Sanchez" <daniel.sanchez@state.nm.us>
Cc: "Ron Anderson" <randerson@riceswd.com>; "Joe Purvis" <jpurvis@riceswd.com>; "Carolyn Haynes" <chaynes@riceswd.com>
Sent: Friday, April 20, 2007 12:38 PM
Attach: 4.20.07.xls
Subject: ROC work schedule

Please find the attached work schedule for next week. As field conditions may be unpredictable, please call ROC for verification of a more specific time frame for any particular site.

Kristin Farris Pope
Project Scientist
RICE Operating Company
Hobbs, New Mexico
(505) 393-9174

RICE *Operating Company* **WORK SCHEDULE**

week of April 23 - 27, 2007

50	System	Location	Unit Letter	Section	Township	Range	GW depth (ft)	Scheduled Work	Driving Directions
23	BD	XTO AL Christmas 'C' EOL	E	18	22S	37E	190	jct. box delineation w/backhoe	In Eunice @ jct of Jct 207 & Hwy 234, S on 207 for 2.6 mi to jct. of 207 & Delaware Basin Rd. Right on DB Rd 3.0 mi. Left & go 0.5 mi to XTO battery on S side of battery. Turn left & go 150' to site located on right side of lease rd ~30' in the pasture.
23	BD	jct. J-4	J	4	22S	37E	90	jct. box delineation w/backhoe	From Texas & Main St. in Eunice, S 1.0 mi. Turn right thru cattle guard, go 0.3 mi. Turn S & continue on lease rd. Jct. box location ~300 yds on left side.
23	EME	H-20 SWD	H	20	20S	37E	22	continue redwood tank delineation	From jct. of hwy 322 & hwy 8 in Monument, go south on hwy 8 for 4 mi. Turn right at cattle guard and go 0.3 mi. west. Turn left and proceed to location.
24	BD	E-15 leak	E	15	22S	37E	75	Set up groundwater recovery system (AP-27)	Call (505) 393-9174
25	Abo	G-1 leak	G	1	19S	36E	94	Re-seeding disturbed surface	North of Hobbs on Hwy 18 just past mm #66, turn left at BOC gas & cross cattle guard. West 0.8 mi. Turn left 0.3 mi. Turn left 0.1 mi to Apache LA battery. Site is located on the south side of Jct Box.

Kristin Pope

From: "Kristin Pope" <kpope@riceswd.com>
To: "Wayne Price" <wayne.price@state.nm.us>; "Daniel J Sanchez" <daniel.sanchez@state.nm.us>; "Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>; "Larry Johnson" <larry.johnson@state.nm.us>; "Patricia Caperton" <patricia.caperton@state.nm.us>
Cc: "Scott Curtis" <scurtis@riceswd.com>; "Carolyn Haynes" <chaynes@riceswd.com>; "Joe Purvis" <jpurvis@riceswd.com>; "Ron Anderson" <randerson@riceswd.com>
Sent: Tuesday, May 15, 2007 10:35 AM
Attach: 5.9.07 amended.xls
Subject: ROC work schedule--amended

Please find the attached amended work schedule for this week. **I've added backhoe delineation and excavation of the BD L-32-2 Vent.** Please contact me with any questions. Thanks.

Kristin Pope

----- Original Message -----
From: Kristin Pope
To: Wayne Price ; Hansen, Edward J., EMNRD ; Daniel J Sanchez ; Larry Johnson ; Patricia Caperton
Cc: Joe Purvis ; Ron Anderson ; Carolyn Haynes ; Scott Curtis
Sent: Friday, May 04, 2007 2:30 PM
Subject: ROC work schedule

Please find the attached work schedule for next week. As field conditions may be unpredictable, please call ROC for verification of a more specific time frame for any particular site.

Kristin Farris Pope
Project Scientist
RICE Operating Company
Hobbs, New Mexico
(505) 393-9174

RICE *Operating Company* **WORK SCHEDULE**

week of May 11 - 18, 2007 amended

Day	System	Location	Unit Letter	Section	Township	Range	GW depth (ft)	Scheduled Work	Driving Directions
11	EME	H-20 SWD	H	20	20S	37E	22	Begin backfill of redwood tank excavation	From jct. of hwy 322 & hwy 8 in Monument, go south on hwy 8 for 4 mi. Turn right at cattle guard and go 0.3 mi. west. Turn left and proceed to location.
14	BD	H-35 pit	H	35	22S	37E		Hauling excavated soil to disposal facility	From the junction of NM 234 and Hwy 18, go south on Hwy 18 for 0.6 mile.Turn left onto black top and go 5.4 miles south to location on right.
14	BD	jct. J-4	J	4	22S	37E	90	backfill jct. box excavation	From Texas & Main St. in Eunice, S 1.0 mi. Turn right thru cattle guard, go 0.3 mi. Turn S & continue on lease rd. Jct. box location ~300 yds on left side.
15	BD	jct. C-4-2	C	4	22S	37E	95	jct. box delineation & excavation	In Eunice @ jct. of Texas Ave & Main St, S on 207 for 1 mi. Turn R go 0.37 mi. Turn R go 0.3 mi. Turn L go 0.11 mi. Curve NW go 0.15 mi to open hole on L side of lease rd.
15	BD	I-24 EOL	I	24	21S	36E	137	Initial jct. box investigation	call (505) 393-9174
15	BD	Baker 'B' EOL	N	10	22S	37E	92	Initial jct. box investigation	call (505) 393-9174
15	BD	P-21 EOL	P	21	21S	37E	70	Initial jct. box investigation	call (505) 393-9174

Kristin Pope

From: "Kristin Pope" <kpope@riceswd.com>
To: "Larry Johnson" <larry.johnson@state.nm.us>; "Patricia Caperton" <patricia.caperton@state.nm.us>; "Daniel J Sanchez" <daniel.sanchez@state.nm.us>; "Wayne Price" <wayne.price@state.nm.us>; "Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>
Cc: "Scott Curtis" <scurtis@riceswd.com>; "Joe Purvis" <jpurvis@riceswd.com>; "Carolyn Haynes" <chaynes@riceswd.com>; "Ron Anderson" <randerson@riceswd.com>
Sent: Friday, May 18, 2007 2:48 PM
Attach: 5.18.07.xls
Subject: ROC work schedule

Please find the attached work schedule for next week. As field conditions may be unpredictable, please call ROC for verification of a more specific time frame for any particular site.

Kristin Farris Pope
Project Scientist
RICE Operating Company
Hobbs, New Mexico
(505) 393-9174

RICE *Operating Company* **WORK SCHEDULE**

week of May 21 - 25, 2007

Day	System	Location	Unit Letter	Section	Township	Range	GW depth (ft)	Scheduled Work	Driving Directions
21	BD	E-15 leak	E	15	22S	37E	75	installing additional solar panel to groundwater treatment project	In Eunice @ jct. of Hwy 234 & 207, S 2.5 mi. Turn L & go thru cattle guard. Follow lease rd E to 2 tan tanks. ROC BD E-15 GW Recovery Project on S side of lease rd.
21	BD	jct. C-4-2	C	4	22S	37E	95	jct. box delineation & excavation	In Eunice @ jct. of Texas Ave & Main St, S on 207 for 1 mi. Turn R go 0.37 mi. Turn R go 0.3 mi. Turn L go 0.11 mi. Curve NW go 0.15 mi to open hole on L side of lease rd.
21	BD	L-32-2 vent	L	32	22S	38E	None	jct. box delineation & excavation	Rd, go S on Drinkard to jct. with Vivian Rd. Turn L onto Vivian & follow E and then curve S to cattle guard (stay L). Go past cattleguard 0.6 mi. Turn L & go 0.1 mi. to site.
22	BD	H-35 pit	H	35	22S	37E		Hauling excavated soil to disposal facility	From the junction of NM 234 and Hwy 18, go south on Hwy 18 for 0.6 mile.Turn left onto black top and go 5.4 miles south to location on right.
22	EME	H-20 SWD	H	20	20S	37E	22	backfill of redwood tank excavation per OCD conditions	From jct. of hwy 322 & hwy 8 in Monument, go south on hwy 8 for 4 mi. Turn right at cattle guard and go 0.3 mi. west. Turn left and proceed to location.
22	Hobbs	N-6 leak		5,6			40	testing soil gases in MWs	W of Hobbs @ intersection of Marland and West Co. Rd., go S on West Co. Rd. 0.3 mi. Turn L to metal building.
24	BD	jct. G-3-1	G	3	22S	37E		jct. box delineation & excavation	In Eunice @ jct. of Texas Ave & 4th St., S on 4th St 0.63 mi to Middle Plant LN. Turn R go 453'. Turn L go 0.18 mi. Turn R go 300' to site located on the N side of lease rd across from Chevron Battery.
24	BD	B-17 EOL	B	17	22S	37E	100	jct. box delineation & excavation	SW of Eunice @ jct. of Legion & Delaware Basin Rd., go W on DB Rd 454'. Turn L & go 0.34 mi. Turn R & go 0.38 mi. Turn L @ battery; site is located on SW corner of battery outside fence.

Kristin Pope

From: "Kristin Pope" <kpope@riceswd.com>
To: "Daniel J Sanchez" <daniel.sanchez@state.nm.us>; "Wayne Price" <wayne.price@state.nm.us>; "Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>; "Larry Johnson" <larry.johnson@state.nm.us>
Cc: "Joe Purvis" <jpurvis@riceswd.com>; "Scott Curtis" <scurtis@riceswd.com>; "Carolyn Haynes" <chaynes@riceswd.com>; "Ron Anderson" <randerson@riceswd.com>
Sent: Wednesday, May 30, 2007 2:50 PM
Attach: 5.30.07.xls
Subject: ROC work schedule

Please find the attached work schedule for next week. As field conditions may be unpredictable, please call ROC for verification of a more specific time frame for any particular site.

Kristin Farris Pope
Project Scientist
RICE Operating Company
Hobbs, New Mexico
(505) 393-9174

RICE *Operating Company* **WORK SCHEDULE**

week of June 4 - 8, 2007

Day	System	Location	Unit Letter	Section	Township	Range	GW depth (ft)	Scheduled Work	Driving Directions
4	BD	jct. C-4-2	C	4	22S	37E	95	backfilling jct. box excavation	In Eunice @ jct. of Texas Ave & Main St, S on 207 for 1 mi. Turn R go 0.37 mi. Turn R go 0.3 mi. Turn L go 0.11 mi. Curve NW go 0.15 mi to open hole on L side of lease rd.
4	BD	L-32-2 vent	L	32	22S	38E	None	backfilling jct. box excavation	SE of Eunice @ jct. of Hwy 18 & Drinkard Rd, go S on Drinkard to jct. with Vivian Rd. Turn L onto Vivian & follow E and then curve S to cattle guard (stay L). Go past cattleguard 0.6 mi. Turn L & go 0.1 mi. to site.
5	BD	E-15 leak	E	15	22S	37E	75	adjustments to groundwater treatment system	In Eunice @ jct. of Hwy 234 & 207, S 2.5 mi. Turn L & go thru cattle guard. Follow lease rd E to 2 tan tanks. ROC BD E-15 GW Recovery Project on S side of lease rd.
5	Hobbs	N-6 leak		5,6	19S	38E	40	testing soil gases in MWs	W of Hobbs @ intersection of Marland and West Co. Rd., go S on West Co. Rd. 0.3 mi. Turn L to metal building.
5	BD	H-35 pit	H	35	22S	37E	44	Hauling soil to disposal facility	From the junction of NM 234 and Hwy 18, go south on Hwy 18 for 0.6 mile.Turn left onto black top and go 5.4 miles south to location on right.
5	BD	B-17 EOL	B	17	22S	37E	100	jct. box delineation & excavation	SW of Eunice @ jct. of Legion & Delaware Basin Rd., go W on DB Rd 454'. Turn L & go 0.34 mi. Turn R & go 0.38 mi. Turn L @ battery; site is located on SW corner of battery outside fence.
5	EME	H-20 SWD	H	20	20S	37E	22	seeding disturbed surface of backfilled redwood tank location	From jct. of hwy 322 & hwy 8 in Monument, go south on hwy 8 for 4 mi. Turn right at cattle guard and go 0.3 mi. west. Turn left and proceed to location.
6	BD	jct. G-3-1	G	3	22S	37E	90	jct. box delineation & excavation	In Eunice @ jct. of Texas Ave & 4th St., S on 4th St 0.63 mi to Middle Plant LN. Turn R go 453'. Turn L go 0.18 mi. Turn R go 300' to site located on the N side of lease rd across from Chevron Battery.
6	EME	Sarah Phillips EOL	K	33	19S	37E	31	delineation & excavation per OCD-approved remediation protocol. Whole Earth #1R0427-17	From Monument Hwy 8 & Jct 322, Go S on Hwy 8 for 0.4 mi. Turn L (east) go 0.4 mi. Turn R to location. Former jct. box was located 20' S of Amerada Hess sign.

RICE Operating Company
122 West Taylor • Hobbs, New Mexico 88240
Phone: (505)393-9174 • Fax: (505) 397-1471

March 7, 2007

Mr. Chris Williams
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, District I Office
1625 N. French Drive
Hobbs, New Mexico 88240

RE: Form C-103 (Environmental Notice)
H-20 SWD site
Eunice-Monument-Eumont (EME) SWD System
Unit 'H', Sec. 20, T20S, R37E

Mr. Williams:

Rice Operating Company (ROC) notifies the Oil Conservation Division (OCD) District I Supervisor of upcoming environmental delineation and remediation activities at the above-referenced site. ROC anticipates this work to begin next week; OCD will be notified 48 hours prior to all significant events. ROC intends to close the redwood tanks and pit locations under the OCD-approved generic plans, "Closure Plan for Below-Grade Redwood Tanks" and "Closure Plan for Permitted Emergency Pits."

ROC is the service provider (agent) for the EME Salt Water Disposal System and has no ownership of any portion of the pipelines, wells, or facilities. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Environmental remediation projects of this magnitude require System Partner AFE approval and work begins as funds are received.

Please accept this notification and C-103 package for this site. Should you have any questions or concerns regarding this site, please do not hesitate to contact me.

RICE OPERATING COMPANY

Kristin Farris Pope

Kristin Farris Pope
Project Scientist

enclosures: as stated

cc: SC, CDH, file; Mr. Wayne Price, Env. Bureau Chief
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO. 30-025-12800-00-00

5. Indicate Type of Lease STATE ☒ FEE ☐

6. State Oil & Gas Lease No. SWD 0067

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other SWD WELL

7. Lease Name or Unit Agreement Name
Eunice Monument Eumont (EME) SWD System

8. Well Number H-20

2. Name of Operator RICE OPERATING COMPANY

9. OGRID Number

3. Address of Operator 122 W. TAYLOR ST., HOBBS, NM 88240

10. Pool name or Wildcat SAN ANDRES

4. Well Location
Unit Letter H : 2475 feet from the NORTH line and 165 feet from the EAST line
Section 20 Township 20S Range 37E NMPM County LEA

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 3510 GR

Pit or Below-grade Tank Application ☐ or Closure ☒

Pit type: SWD Emergency Overflow Depth to Groundwater: 30 ft Distance from nearest fresh water well: 2640 ft

Distance from nearest surface water: >1000 ft Pit Liner Thickness: n/a mil Below-Grade Tank: Volume _850 each (2 tanks) bbls;

Construction Material: Redwood

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
OTHER: Close Redwood Tanks & Emergency Overflow Pit ☒		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Proposed work at SWD site according to NMOCD-approved generic plans, "Closure Plan for Below-Grade Redwood Tanks" and "Closure Plan for Permitted Emergency Pits" (revised 2/23/2000): Delineate constituents of concern, remove redwood tanks, clean up and upgrade location pursuant to generic plans. All major events will be coordinated to allow 48 hours notice to NMOCD.
Pit permit # H-74.
The USGS groundwater database lists a water well located in unit 'O' of Sec. 20, T20S, R37E, which is approx. 1400 ft S-SE of the H-20 facility. Field check revealed no water sources within 100 ft of site.

Site Assessment Criteria:

Depth to groundwater = 22.5 ft No water source <1000 ft = 0 Surface water body >1000 ft = 0
RANKING SCORE = 20

Enclosed: driving directions, Generic Closure Plan, pit permit, lease summary, pit inventory form, current photos, site profile summary, facility diagram

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☒.

SIGNATURE Kristin Farris Pope TITLE Project Scientist DATE 3-7-2007
Type or print name Kristin Farris Pope E-mail address: kpope@riceswd.com Telephone No. (505) 393-9174

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any):

Environmental Closure of Permitted Overflow Pits and Below-Grade Redwood Tanks

ROC was informed by the NMOCD that all emergency overflow pits and below-grade redwood tanks located in New Mexico would require bonding under NM Rule 711 unless action was taken to properly close these sites. ROC responded with generic work plans outlining the closure procedure that would be used at these sites. NMOCD approved these generic plans.

For closure of permitted below-grade tank sites and overflow pits in Texas, the procedure detailed in the RRC Pit Permit must be followed.

Landowners are notified that remediation/upgrade work is planned at the lease site.

All closure activities concerning closure of emergency overflow pits and below grade tanks are conducted pursuant to regulatory guidelines.

The Closure Plan for Below Grade Redwood Tanks and the Closure Plan for Permitted Emergency Pits detail the order of activities.

REVISED
4-23-99
2-23-00

Closure Plan for Below Grade Redwood Tank

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.

2. Procure soil samples from 3' below bottom of tanks (9-11' below grade) at tank sides.
   A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 4.
   B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 3.

3. Delineate any portion of tank site that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
   A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 4.
   B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.

4. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing.

5. Move onto SWD facility site with temporary tank system. Re-route fluid flow from below grade redwood tanks into the temporary tank system. Plumb to SWD well.

6. Empty and clean redwood tanks, properly disposing of any BS & W. Excavate sides of redwood tanks to allow for working space to manipulate tank support banding. Remove redwood tanks reserving boards for proper disposal.

7. Excavate ramp into redwood tank hole. Remove and properly dispose of concrete base if impacted. If concrete is not impacted, use as fill (below plow depth) in excavation area.

8. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.

9. Procure random 5-point composite bottom sample from 3'below tank bottom and random 4-point composite side sample for lab TPH, Benzene, and BTEX testing.
   A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 11.
   B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 10.

10. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than $1x10^{-7}$ cm/sec for containment/isolation of impact.

11. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill/installation of new tanks and plumbing within engineered secondary containment system.

12. Apply to NMOCD for closure of redwood tank site per NMOCD guidelines and site results.

REVISED
4-23-99
2-23-00

Closure Plan for Permitted Emergency Pits

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.

2. Remove and properly dispose of visibly contaminated soil pursuant to NMOCD guidelines.

3. Procure soil samples from surface and 3' below excavation bottom and excavation sides.
   A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 6.
   B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 4.

4. Delineate any portion of excavation that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
   A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 5.
   B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.

5. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing

6. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.

7. Procure random 5-point composite bottom sample and random 4-point composite side sample for laboratory TPH, Benzene, and BTEX testing.
   A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 9.
   B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 8.

8. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than $1x10^{-7}$ cm/sec for containment/isolation of impact.

9. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill.

10. Apply to NMOCD for closure of permitted emergency pit site per NMOCD guidelines and site results.

RICE Operating Company
122 W. Taylor St. • Hobbs, New Mexico 88240
Phone: (505) 393-9174 • Fax: (505) 397-1471

SITE PROFILE

Location

The H-20 Facility is part of the Eunice-Monument-Eumont (EME) Salt Water Disposal (SWD) System located approximately 4 miles south of Monument, New Mexico. The site is located in unit letter 'H', section 20, Township 20 South, Range 37 East.

Site History

The site is a collection center for produced water from oil and gas leases in the area for disposal by injection into a associated and permitted SWD well. The faciliy included two 28 ft diameter below-grade redwood tanks and a permitted emergency overflow pit that was used for emergency capacity.

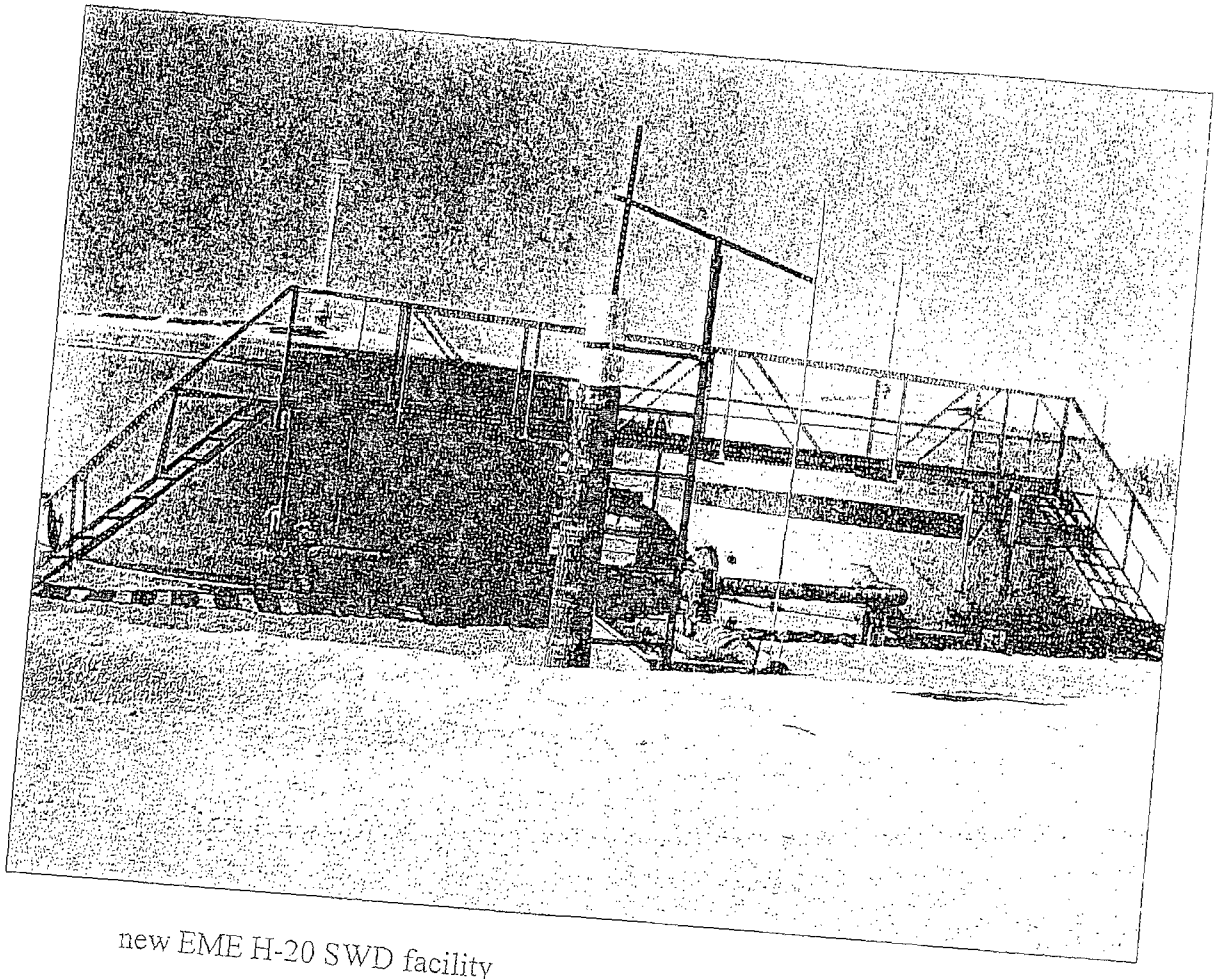
The facility upgrade was completed in 2006. The redwood tanks were removed and 2 new fiberglass tanks (one for production, one for overflow) are located approximately 120 ft west of the former tanks. A 3-ft bermed perimeter lined with 40-mil polyethylene provides secondary containment.

Land Use

The H-20 SWD facility is located on New Mexico State Lands (lease SWD-067). The site is located near the convergence of the physiographic subdivisions referred to as the Eunice Plain and the Laguna Valley. Local landscape is dominated by eolian dune sands which drift locally. The overall topography is unremarkable: a generally flat, treeless plain dominated by short grasses. Land use primarily consists of cattle grazing and oil and gas production.

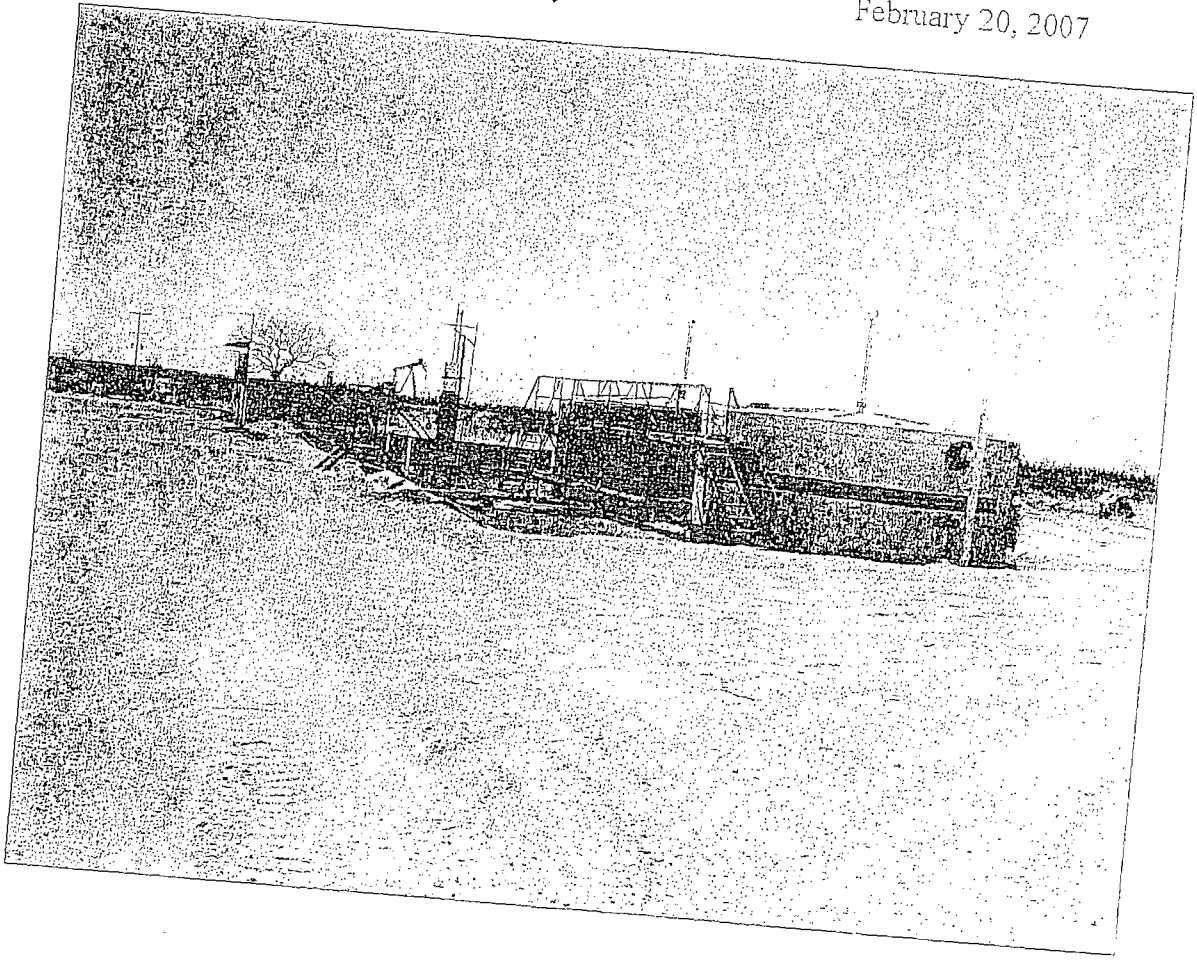
Distance to Groundwater and Surface Water

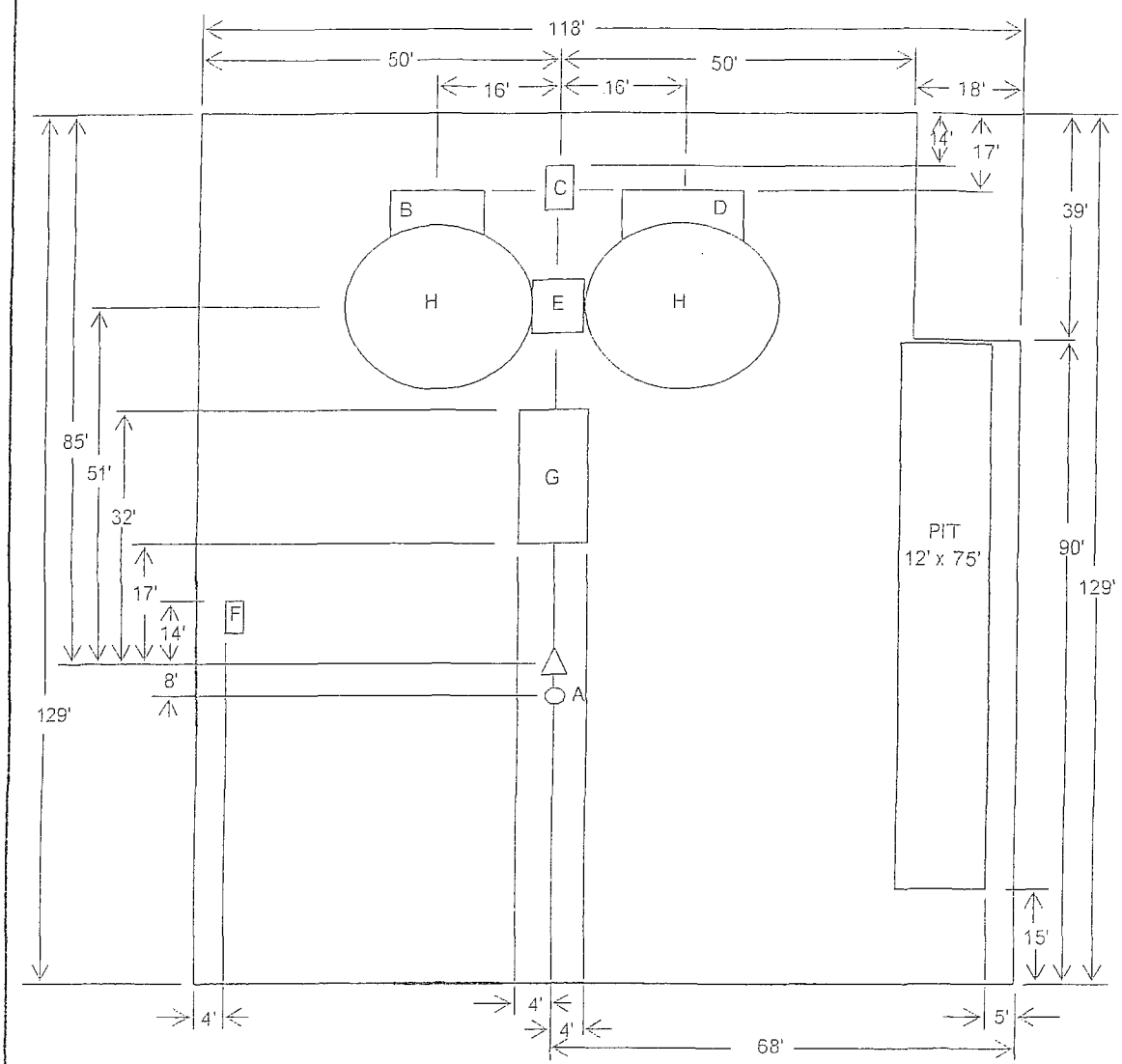
There are no surface waters located within 1000 ft of the facility. An inactive water well registered with the U.S. Geological Survey is located in unit 'O', section 20, T20S, R37E, approximately 1400 ft South-Southeast of the H-20 site. Depth to groundwater was measured 22.5 ft in this well.



new EME H-20 SWD facility

February 20, 2007





LEGEND

A - 165 GALLON ANNULUS TANK
B - JCT BOX 4' x 11'
C - JCT BOX 4' x 7'
D - JCT BOX 4' x 14'
E - JCT BOX 5' x 6'
F - ALARM
G - METER PIT
H - 2 - 28'DIA x 8'HIGH REDWOOD TANKS

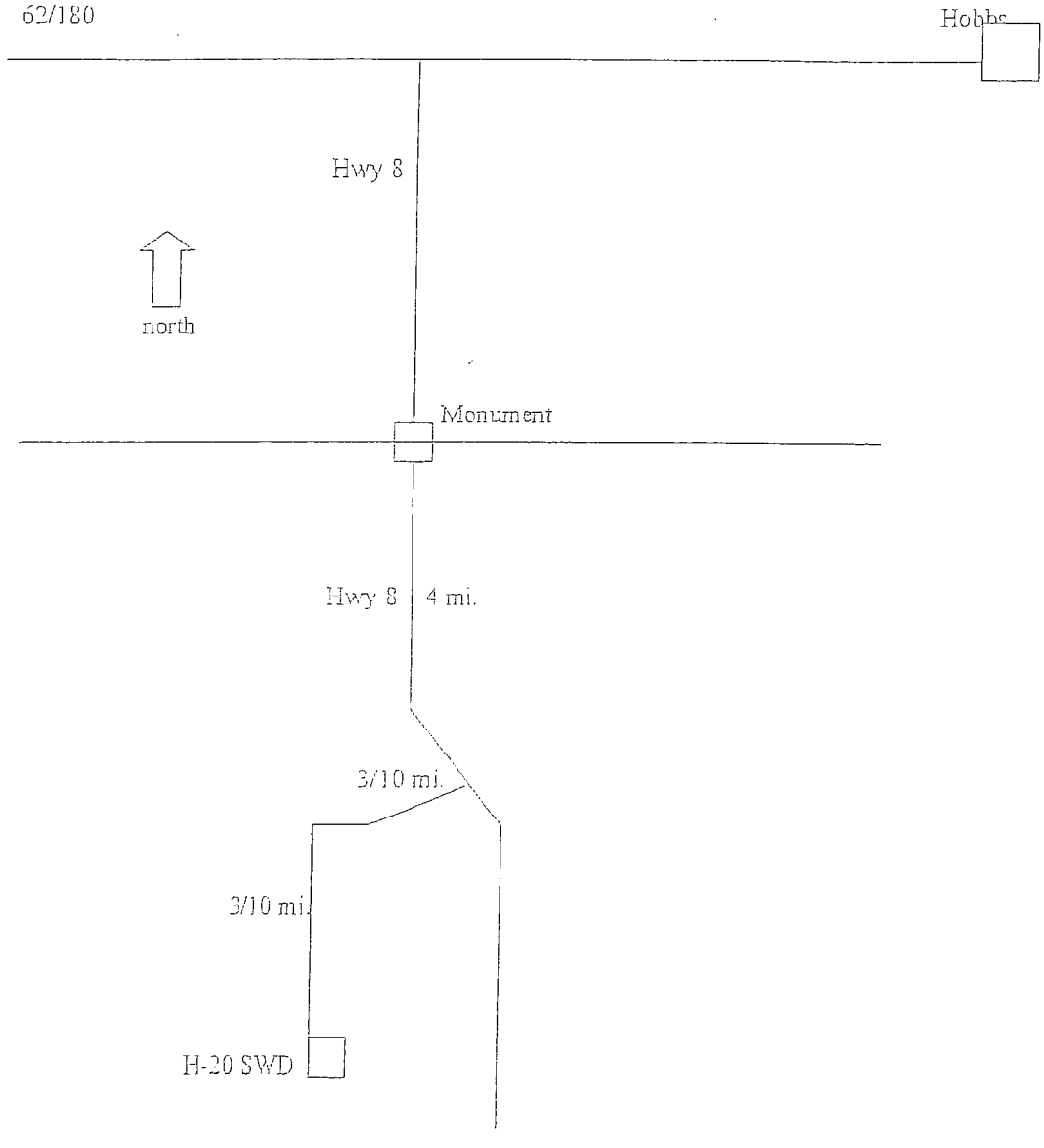
N

S

RICE OPERATING COMPANY 122 WEST TAYLOR HOBBS, NEW MEXICO 88240 (505) 393-9174	SPCC FACILITY IDENTIFICATION	DISPOSAL FACILITY EME SWD WELL H-20 UNIT LETTER H, SEC.20,T20S,R37E LEA COUNTY, NEW MEXICO

SYSTEM: E.M.E.
WELL: H-20
LEGALS: SEC. 20 – T20S – R37E

From junction of hwy 322 and hwy 8 in monument go south on hwy 8 for 4.0 miles. Turn right at cattle guard and go 3/10 miles west. Turn left and go to location.



Submit 4 Copies
to Appropriate
District Office

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-134
Aug. 1, 1989

Permit No. H-74
(For Division Use Only)

APPLICATION FOR EXCEPTION TO DIVISION ORDER R-8952
FOR PROTECTION OF MIGRATORY BIRDS Rule 8(b), Rule 105(b), Rule 312(h), Rule 313, or Rule711(I)

Operator Name: Rice Engineering Corporation

Operator Address: 122 W. Taylor, Hobbs, New Mexico 88240

Lease or Facility Name E-M-E SWD System Well H-20 Location H 20 20S 37E
Ut. Ltr. Sec. Twp. Rge

Size of pit or tank: 68'x15'x7' deep, approx. 1300 bbls.

Operator requests exception from the requirement to screen, net or cover the pit or tank at the above-described facility.

X The pit or tank is not hazardous to migratory waterfowl. Describe completely the reason pit is non-hazardous.

The pit is used only in emergencies such as major well remedial work.

Normally kept empty.

1) If any oil or hydrocarbons should reach this facility give method and time required for removal:

Method: Vacuum truck

Time: Within 24 hrs. of discovery

2) If any oil or hydrocarbons reach the above-described facility the operator is required to notify the appropriate District Office of the OCD with 24 hours.

_____ Operator proposes the following alternate protective measures:

CERTIFICATION BY OPERATOR: I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature S. A. Haktanir Title Division Manager Date July 25, 1990

Printed Name S. A. Haktanir Telephone No. 393-9174

FOR OIL CONSERVATION DIVISION USE

Date Facility Inspected 8/27/90

Inspected by R A Kautz

Approved by

Title OIL & GAS INSPECTOR

Date

District I · (505) 393-6161
P.O. Box 1980
Hobbs, NM 88241-1980
District II · (505) 748-1283
811 S. First
Artesia, NM 88210
District III · (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV · (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Originated 6/27/97

Submit Original
Plus 1 Copy
to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 WEST TAYLOR
Hobbs, New Mexico 88240

Phone Number: (505) 393-9174

Previous Operator(s): None

Is the pit permitted: Yes ☐ No ☒

Unit Letter: H Section: 20 Township: 20S Range: 37E

County: Lea County

Location Name: Eunice-Monument-Eumont Salt Water Disposal Well H-20

Number of wells to the pit: System Terminal Tanks (Varies)

Are the wells to the pit operated by one operator ☐ or multiple operators ☒

Total daily volume (in barrels) to the pit: 2,200

Pit Type: 2-below ground redwood terminal tanks
(Emergency, Production, Workover, Reserve/Drilling(greater than 6 months old), Flare, Blowdown, Separator, Dehydrator, Line Drip, Pig/Sump W/Tank Bottoms, Compressor, Pigging, Washdown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt(production water)

Pit age (years): 35

Is the pit lined ☒ or unlined ☐

Type of liner (None, Synthetic, Clay): Redwood tank resting on concrete pad

Is leak detection present: Yes ☒ No ☐ Observation boxes around tanks

Is the pit netted: Yes ☒ No ☐ Covered with redwood top

Pit dimensions (LxWxD): two-28'diaX8'ht

CERTIFICATION

I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/30/97

District I - (505) 393-6161
P.O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Originated 6/27/97

Submit Original
Plus 1 Copy
to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 WEST TAYLOR

HOBBS, NEW MEXICO 88240

Phone Number: (505) 393-9174

Previous Operator(s): None

Is the pit permitted: Yes ☒ No ☐

Unit Letter: H Section: 20 Township: 20S Range: 37E

County: Lea

Location Name: EME Salt Water Disposal System Well H-20

Number of wells to the pit: 1

Are the wells to the pit operated by one operator ☒ or multiple operators ☐

Total daily volume (in barrels) to the pit: None

Pit Type: Emergency

(Emergency, Production, Workover, Reserve/Drilling greater than 6 months old), Flare, Blowdown, Seperator, Dehydration Unit, Drip, BS&W/Tank Bottoms, Compressor, Pigging, Wastedown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (p roduction water)

Pit age (years): 35

Is the pit lined ☐ or unlined ☒

Type of liner (None, Synthetic, Clay): None

Is leak detection present: Yes ☐ No ☒

Is the pit netted: Yes ☐ No ☒

Pit dimensions (LxWxD): 68'X15'X7'

CERTIFICATION

I hereby certify that the information submitted is true and correct to the best of my knowledge and belief.

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/23/97

LEASE SUMMARY

System: EME SWD SYSTEM WELL H-20
SEC-TNSP-RNG: Sec 20 - T20S - R37E
Lease No. SWD-067
Salt Water Disposal Easement

Start Date: Mar 3rd 97
End Date: Mar 3rd 99
Lease Term: Two years
Fee Due Annually

Lessor State of New Mexico
Address Commissioner of Public Lands
State Land Office
P.O. Box 1148
Santa Fe, NM 87504-1148

Total Cost $1030
Annual Pmt $530 ($30 App. Fee)
Per ~~Bbl~~ Acre $200/Acre - 2½ Acres

Description: Attached below

COMMENTS: The facility has 2 below-grade redwood terminal tanks and an emergency overflow pit.

Description:

All that certain parcel or tract of land in the NE/4 of Section 20, Township 20 South, Range 37 East, Lea County, New Mexico, being fully described as follows:

Beginning at a point 2310 feet South 0° 05' East of the Northeast corner of Section 20, which is the Northeast corner of this tract; thence South 330 feet to a point, the Southeast corner of this tract; thence West 330 feet to a point, the Southwest corner of this tract; thence North 330 feet to a point, the Northwest corner of this tract; thence East 330 feet to the place of beginning, said tract contains 2½ acres, more or less.

NEW MEXICO STATE LAND OFFICE

SALT WATER DISPOSAL EASEMENT

SALT WATER DISPOSAL
EASEMENT NO. SWD-067

THIS AGREEMENT, dated this 3rd day of March, 2006, made and entered into between the State of New Mexico, acting by and through the undersigned, its Commissioner of Public Lands, hereinafter called the grantor, and Rice Operating Company of 122 W. Taylor, Hobbs, NM 88240, hereinafter called the grantee,

WITNESSETH:

THAT, whereas, the said grantee has filed in the Land Office an application for salt water disposal easement and has tendered the sum of $500.00, together with the sum of $30.00 application fee;

NOW, THEREFORE, in consideration of the foregoing tender, receipt of which is acknowledged, and the covenants herein, grantor does grant to the grantee a salt water disposal easement for the sole and only purpose of underground disposal of salt water produced in connection with oil and gas operations, together with the right to make sure reasonable use of the land as may be necessary to dispose of said salt water. Said easement shall cover the following described lands:

INSTITUTION	SECTION	TOWNSHIP	RANGE	SUBDIVISION	ACRES
C.S.	20	20 South	37 East	Portion Within SE¼NE¼	2.5

TO HAVE AND TO HOLD said lands and privileges hereunder for a term of one year from the date first above written, subject to all terms and conditions hereinafter set forth:

1. Grantee shall pay the grantor the sum of $500.00 annually, in advance.

2. With the consent of the grantor and payment of a fee of $30.00, the grantee may surrender or relinquish this salt water disposal easement to the grantor; provided, however, that this surrender clause shall become absolutely inoperative immediately and concurrently with the filing of any suit in any court or law or equity by the grantor or grantee or any assignee to enforce any of the terms of this salt water disposal easement.

3. The grantee, with the prior written consent of the grantor, may assign his salt water disposal easement in whole only. Upon approval of the assignment, in writing, by the grantor, the grantee shall stand relieved from all obligations to the grantor with respect to the lands embraced in the assignment, and the grantor shall likewise be relieved from all obligations to the assignor as to such tracts, and the assignee shall succeed to all of the rights and privileges of the assignor with respect to such tracts

and shall be held to have assumed all of the duties and obligations of the assignor to the grantor as to such tracts.

4. The grantor may cancel this salt water disposal easement for non-payment of annual consideration or for violation of any of the terms and covenants hereof; provided, however, that before any such cancellation shall be made, the grantor must mail to the grantee or assignee, by registered mail, addressed to the post office address of such grantee or assignee, shown by the records, a thirty-day notice of intention to cancel said salt water disposal easement is subject to cancellation. No proof of receipt of notice shall be necessary and thirty days after such mailing, the grantor may enter cancellation unless the grantee shall have sooner remedied the default.

5. The grantee shall furnish copies of records and such reports and plats of his operations, including any and all data relating to geological formations, as the grantor may reasonably deem necessary to his administration of the lands.

6. Grantee may make or place such improvements and equipment upon the land as may reasonably be necessary to dispose of salt water, and upon termination of this salt water disposal easement for any reason, grantee may remove such improvements and equipment as can be removed without material injury to the premises; provided, however that all sums due the grantor have been paid and that such removal is accomplished within one year of the termination date or before such earlier date as the grantor may set upon thirty days written notice to the grantee. All improvements and equipment remaining upon the premises after the removal date, as set in accordance with this paragraph, shall be forfeited to the grantor without compensation. All pipelines constructed hereunder shall be buried below plow depth.

7. This salt water disposal easement is made subject to all the provisions and requirements applicable thereto which are to be found in various acts of the legislature of New Mexico and the rules of the Commissioner of Public Lands of the State of New Mexico, the same as though they were fully set forth herein, and said laws and rules, so far as applicable to this salt water disposal easement, are to be taken as a part hereof.

8. All the obligations, covenants, agreements, rights and privileges of this salt water disposal easement shall extend to and be binding and inure to the benefit of the lawful and recognized assigns or successors in interest of the parties hereof.

9. Grantee shall post with grantor a bond or undertaking in an amount required by grantor in favor of the owner of improvements lawfully located upon the lands herein to secure payment of damage, if any, done to such improvements by reason of grantee's operations.

10. Payment of all sums due hereunder shall be made at the office of the Commissioner of Public Lands, 310 Old Santa Fe Trail, P.O. Box 1148, Santa Fe, New Mexico 87504-1148.

11. Grantee, including his heirs, assigns, agents, and contractors shall at their own expense fully comply with all laws, regulations, rules, ordinances, and requirements of the city, county, state, federal authorities and agencies, in all matters and things affecting the premises and operations thereon which may be enacted or promulgated under the governmental police powers pertaining to public health

and welfare, including but not limited to conservation, sanitation, aesthetics, pollution, cultural properties, fire, and ecology. Such agencies are not to be deemed third party beneficiaries hereunder; however, this clause is enforceable by the grantor as herein provided or as otherwise permitted by law.

12. Grantee shall save and hold harmless, indemnify and defend the State of New Mexico, the Commissioner of Public Lands, and his agent or agents, in their official and individual capacities, of and from any and all liability claims, losses, or damages, arising out of or alleged to arise out of or indirectly connected with the operations of grantee hereunder, off or on the herein above described lands, or the presence on said lands of any agent, contractor or sub-contractor of grantee.

AFFIRMATION OF GEOLOGIC, ENGINEERING & HYDROLOGIC INVESTIGATION: I hereby affirm that the available geologic and engineering data have been examined and no evidence has been found of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

IN WITNESS WHEREOF, the State of New Mexico has hereunto signed and caused its name to be signed by its Commissioner of Public Lands, thereunto duly authorized with the seal of his office affixed, and the grantee has signed this agreement to be effective the day and year above written.

STATE OF NEW MEXICO

GRANTOR	GRANTEE
New Mexico State Land Office	Rice Operating Company
P.O. Box 1148	122 W. Taylor
Santa Fe, NM 87504	Hobbs, NM 88240

BY: PATRICK H. LYONS/BB
PATRICK H. LYONS 5-18-06
COMMISSIONER OF PUBLIC LANDS

BY: [signature]
(Name)

(ACKNOWLEDGMENT BY ATTORNEY-IN-FACT)

STATE OF ______________________)
COUNTY OF ______________________) ss.

The foregoing instrument was acknowledged before me this _____ day of ________________,
20_____, as attorney-in-fact on behalf of ____.

(ACKNOWLEDGMENT BY CORPORATION)

STATE OF New Mexico)

COUNTY OF Lea) ss.

The foregoing instrument was acknowledged before me this 28th day of April,

20 06, by Lov B. Goodheart (NAME), President (TITLE)

of Rice Operating Company (CORPORATION).

My Commission Expires 12-27-08 Notary Public: Stephanie Willis

OFFICIAL SEAL
STEPHANIE WILLIS
NOTARY PUBLIC
STATE OF NEW MEXICO
MY COMMISSION EXPIRES 12-27-08

Table 1: Summary of Laboratory Analysis of Soil Samples
Rice, EME SWD System, Well No. H-20
Section 20, Township 20 South, Range 37 East
Lea County, New Mexico

Sample Date	Sample Number	Sample Location	Sample Depth	PID	GRO (C6-C12) (mg/kg)	DRO (C12-C35) (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	BTEX (mg/kg)
4/13/07	SS-1	Bottom	27'	90	382	1,389.0	1,771.0	976	1.033
4/13/07	SS-2	Bottom	27'	339	139	570	709.0	336	12.77
4/13/07	SS-3	Bottom	27'	100	162	730	892.0	624	1.259
4/13/07	East	Sidewall	*	102	74	646	720.0	224	0.279
4/13/07	West	Sidewall	*	178	205	750	955.0	96	1.028
4/13/07	South	Sidewall	*	228	150	800	950.0	96	0.824
4/13/07	North	Sidewall	*	127	145	777	922.0	96	0.510
4/16/07	SS-4	NE (Bottom)	20'	16	<10.0	31.6	31.6	<16.0	---
4/16/07	SS-5	SE (Bottom)	20'	5	<10.0	<10.0	<20.0	<16.0	---
4/16/07	SS-6	Center (Bottom)	20'	4	<10.0	<10.0	<20.0	<16.0	---
4/16/07	SS-7	NW (Bottom)	20'	3	<10.0	<10.0	<20.0	<16.0	---
4/16/07	SS-8	SW (Bottom)	20'	2	<10.0	<10.0	<20.0	<16.0	---
4/19/07	2:1 Blended	Staged Soil	---	26	<10.0	270	270.0	160	---
5/14/07	SS-7	Bottom Composite @ Lift 1	17	5	<10.0	94.0	94.0	96	---
5/14/07	SS-8	Bottom Composite @ Lift 2	14	43	<10.0	84.5	84.5	144	---
5/14/07	SS-9	Bottom Composite @ Lift 3	11	4	<10.0	62.9	62.9	32	---
5/14/07	SS-10	Bottom Composite @ Lift 4	7	6	<10.0	64.7	64.7	48	---

Notes: Analyses performed by Cardinal Laboratories, Hobbs, New Mexico

1. RRAL: Recommended Remediation Action Level
2. BGS: Depth in feet below ground surface
3. mg/kg: Milligrams per kilogram
4. ---: No data available
5. <: Below method detection limit
6. *: See Figure 2 for composite sample locations and depths.

Table 2: Summary of Well Completion Details
Rice, EME SWD System, Well No. H-20
Section 20, Township 20 South, Range 37 East
Lea County, New Mexico

Well Number	Date Drilled	Ground Elevation (Feet AMSL)	Top of Casing Elevation (Feet AMSL)	Drilled Depth (Feet BGS)	Well Depth (Feet TOC)	Well Diameter (Inches)	Screen Interval (Feet BGS)	Depth to Groundwater 4-23-07 (Feet TOC)
MW-1	4/20/2007	3516.53	3518.88	33.0	33.00	4	18 - 33	22.90

Notes: Well installed by Harrison and Cooper, Lubbock, Texas

1. BGS: Depth in feet below ground surface
2. AMSL: Elevation in feet above mean sea level
3. TOC: Depth in feet below top-of-casing

Table 3:

Summary of Organic Analysis of Groundwater Sample from Monitoring Well Rice, EME SWD System, Well No. H-20
Section 20, Township 20 South, Range 37 East
Lea County, New Mexico

Monitor Well	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Total BTEX (mg/L)
Standard (WQCC)		0.01	0.75	0.75	0.62	
MW-1	4/23/2007	0.060	<0.002	0.002	<0.006	0.062

Notes: Analyses performed by Cardinal Laboratories, Hobbs, New Mexico

1. WQCC: New Mexico Water Quality Control Commission
2. mg/L: Concentration in milligrams per liter

Table 4:

Summary of Inorganic Analysis of Groundwater Sample from Monitoring Well
Rice, EME SWD System, Well No. H-20
Section 20, Township 20 South, Range 37 East
Lea County, New Mexico

Monitor Well	Sample Date	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity ($mgCaCO_3/L$)	Cl (mg/L)	SO_4 (mg/L)	CO_3 (mg/L)	HCO_3 (mg/L)	pH (s.u.)	TDS (mg/L)
Standard (WQCC)								250	600			6-9	1000
MW-1	4/23/2007	1,387	106	137	50.3	6,990	610	1,939	544	0	744	7.42	4,343

Notes: Analyses performed by Cardinal Laboratories, Hobbs, New Mexico

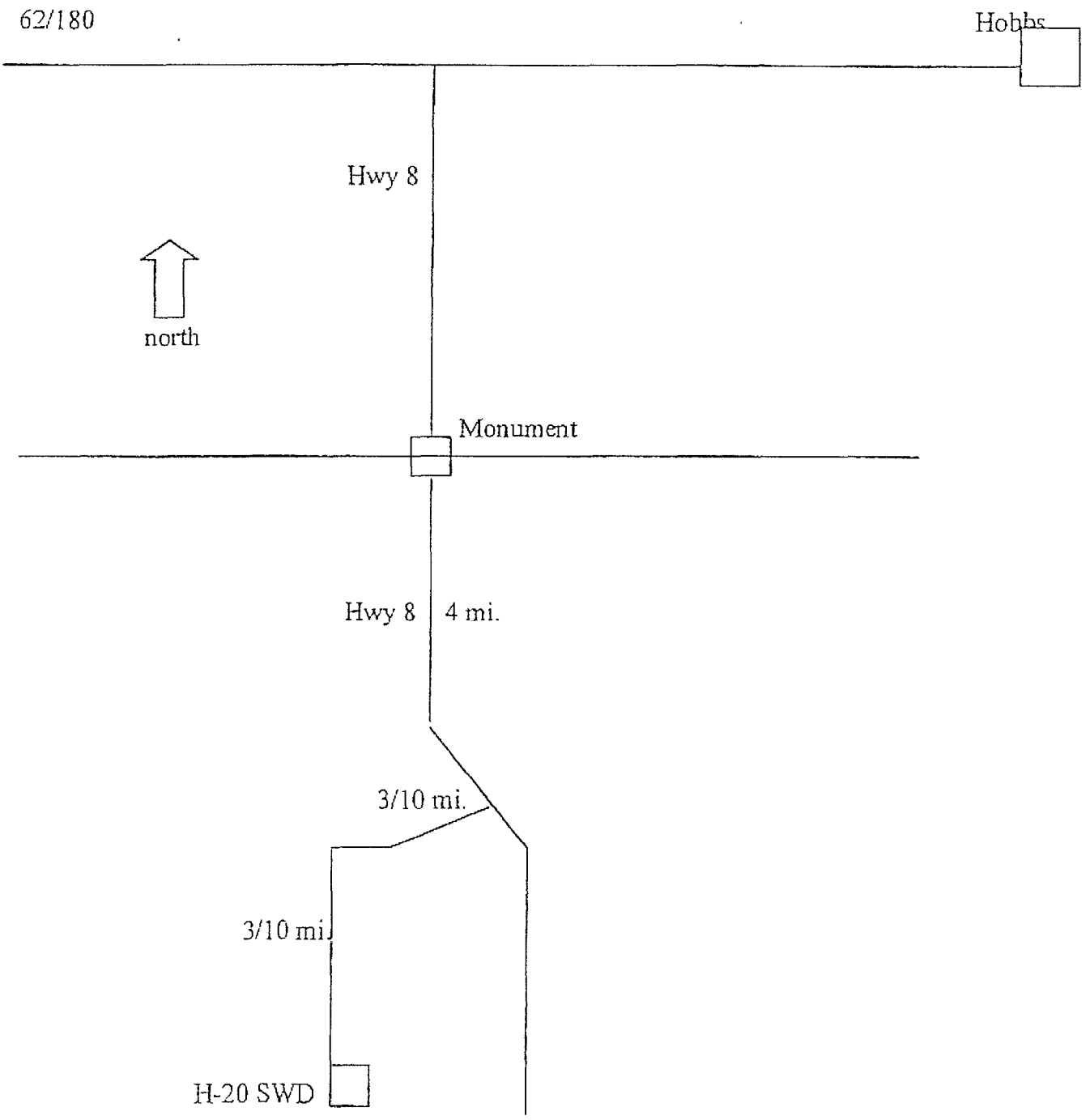
1. WQCC: New Mexico Water Quality Control Commission
2. mg/L: Concentration in milligrams per liter

LIST of EXHIBITS

1. Driving Directions
2. Site Location
3. Site Location with Soil Sample Locations
4. Cross Section View of Sidewall and Bottom Soil Sample Locations
5. Excavation Cross-Section: Backfill Schematic

SYSTEM: E.M.E.
WELL: H-20
LEGALS: SEC. 20 – T20S – R37E

From junction of hwy 322 and hwy 8 in monument go south on hwy 8 for 4.0 miles. Turn right at cattle guard and go 3/10 miles west. Turn left and go to location.



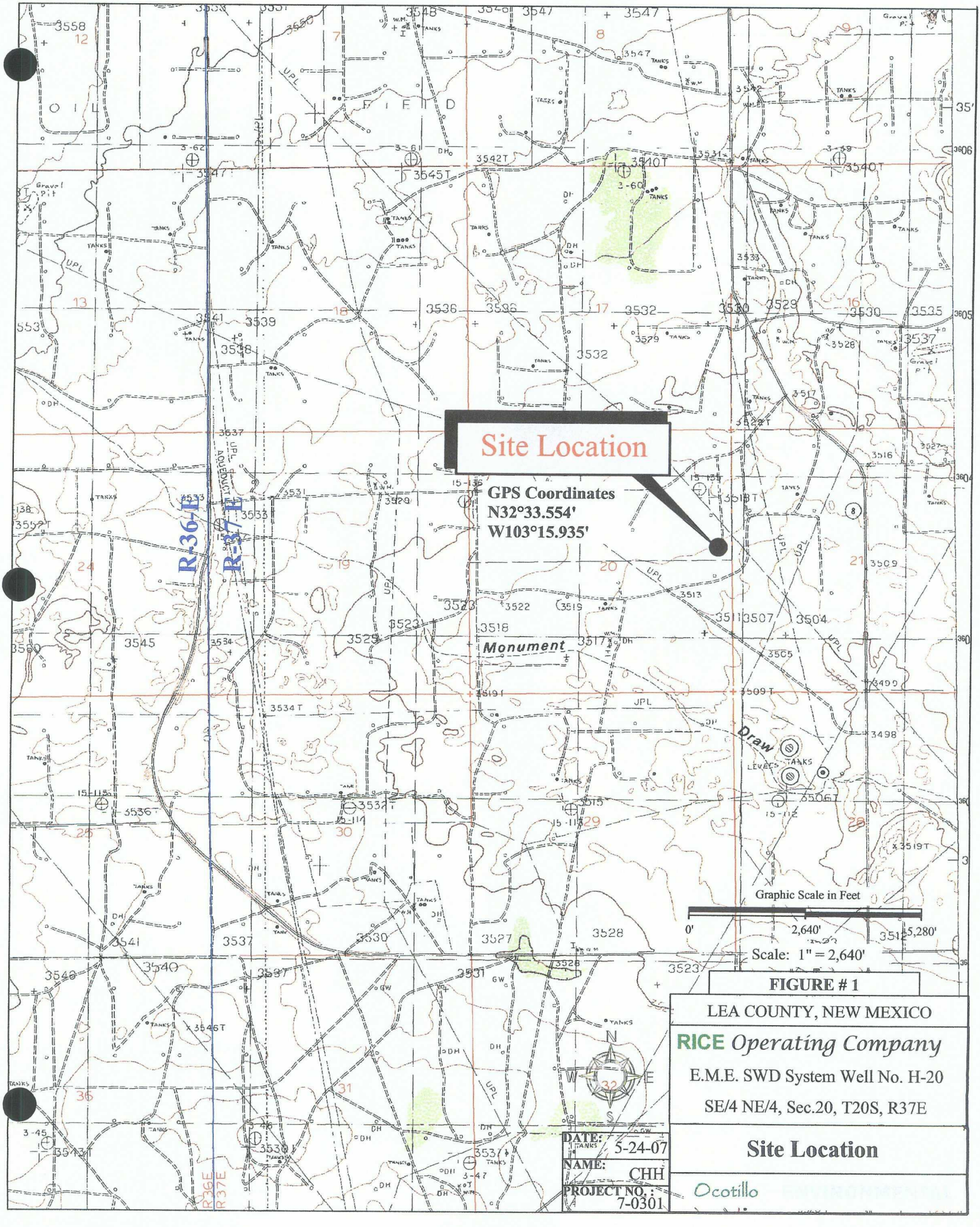


FIGURE # 1

LEA COUNTY, NEW MEXICO

RICE *Operating Company*

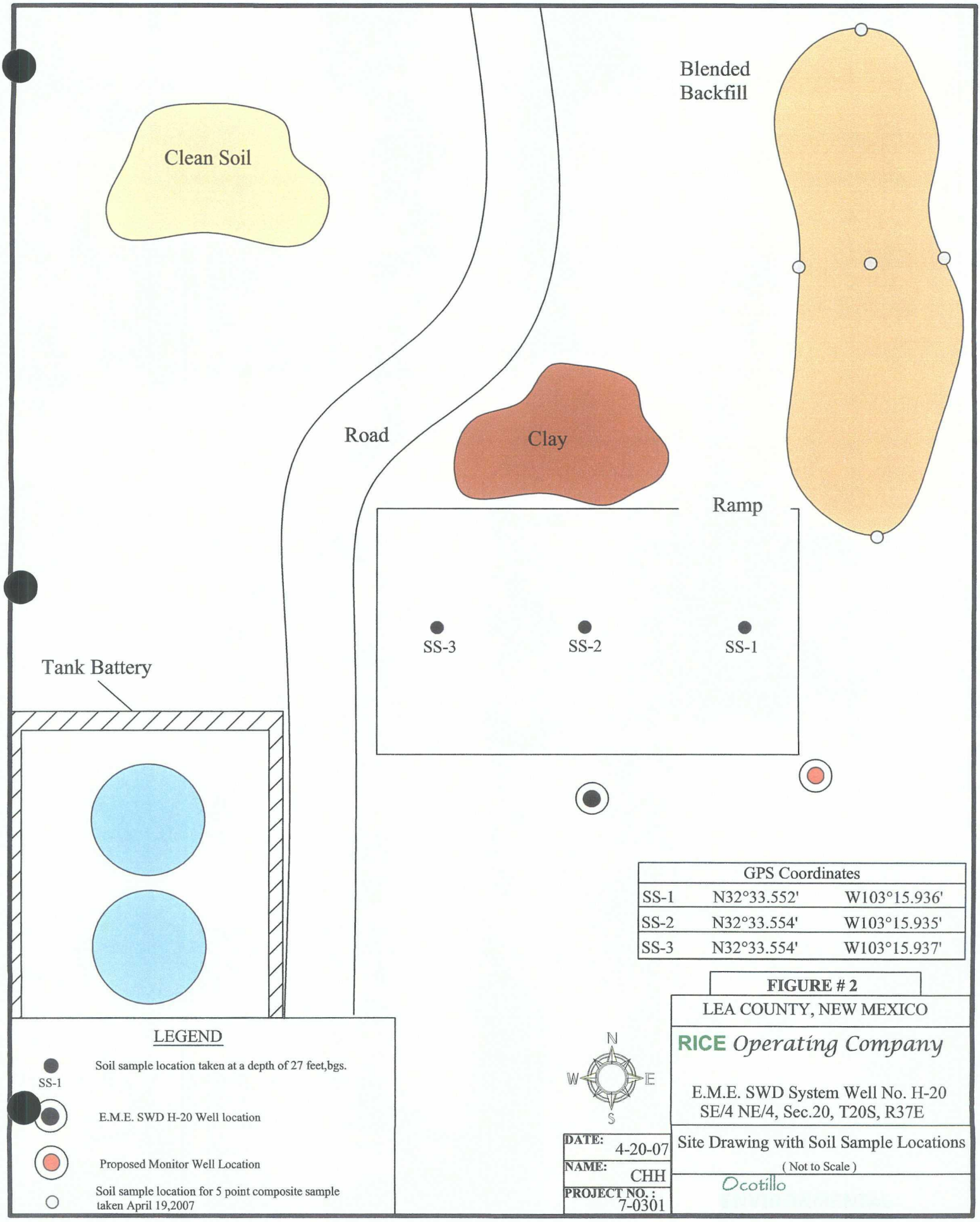
E.M.E. SWD System Well No. H-20

SE/4 NE/4, Sec.20, T20S, R37E

Site Location

DATE:	5-24-07
NAME:	CHH
PROJECT NO. :	7-0301

Ocotillo



GPS Coordinates		
SS-1	N32°33.552'	W103°15.936'
SS-2	N32°33.554'	W103°15.935'
SS-3	N32°33.554'	W103°15.937'

FIGURE # 2

LEA COUNTY, NEW MEXICO

RICE *Operating Company*

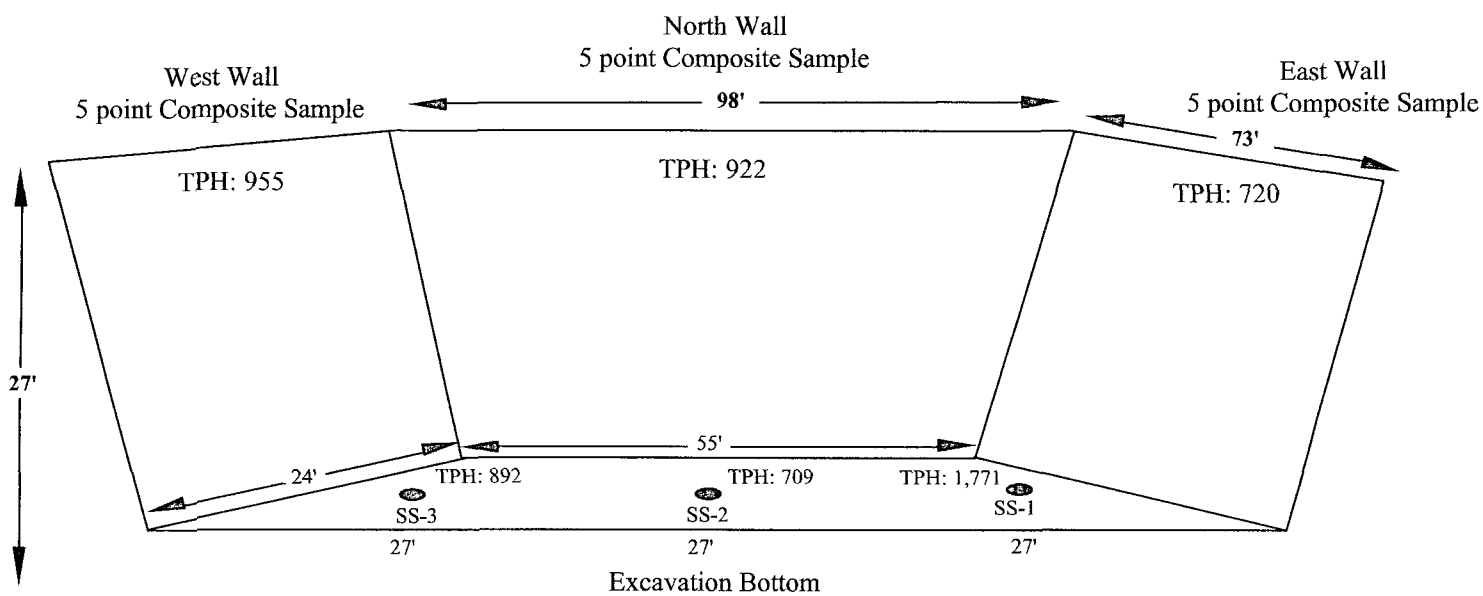
E.M.E. SWD System Well No. H-20
SE/4 NE/4, Sec.20, T20S, R37E

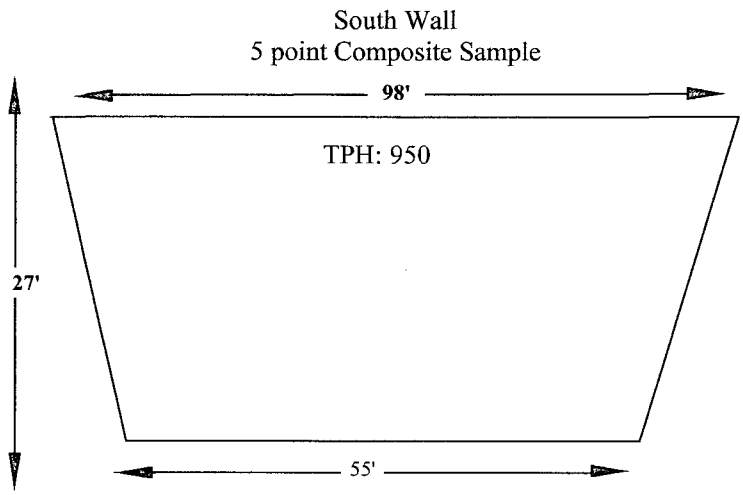
Site Drawing with Soil Sample Locations

(Not to Scale)

Ocotillo

DATE:	4-20-07
NAME:	CHH
PROJECT NO. :	7-0301





GPS Coordinates		
SS-1	N32°33.552'	W103°15.936'
SS-2	N32°33.554'	W103°15.935'
SS-3	N32°33.554	W103°15.937'

LEGEND

Soil sample location for sidewall composite sample with sample number and depth, feet.

TPH: 1,771 SS-1 27' Soil sample location with TPH concentration (mg/kg), at depth, (feet).

DATE:	4-17-07
NAME:	CHH
PROJECT NO. :	7-0301

FIGURE # 3

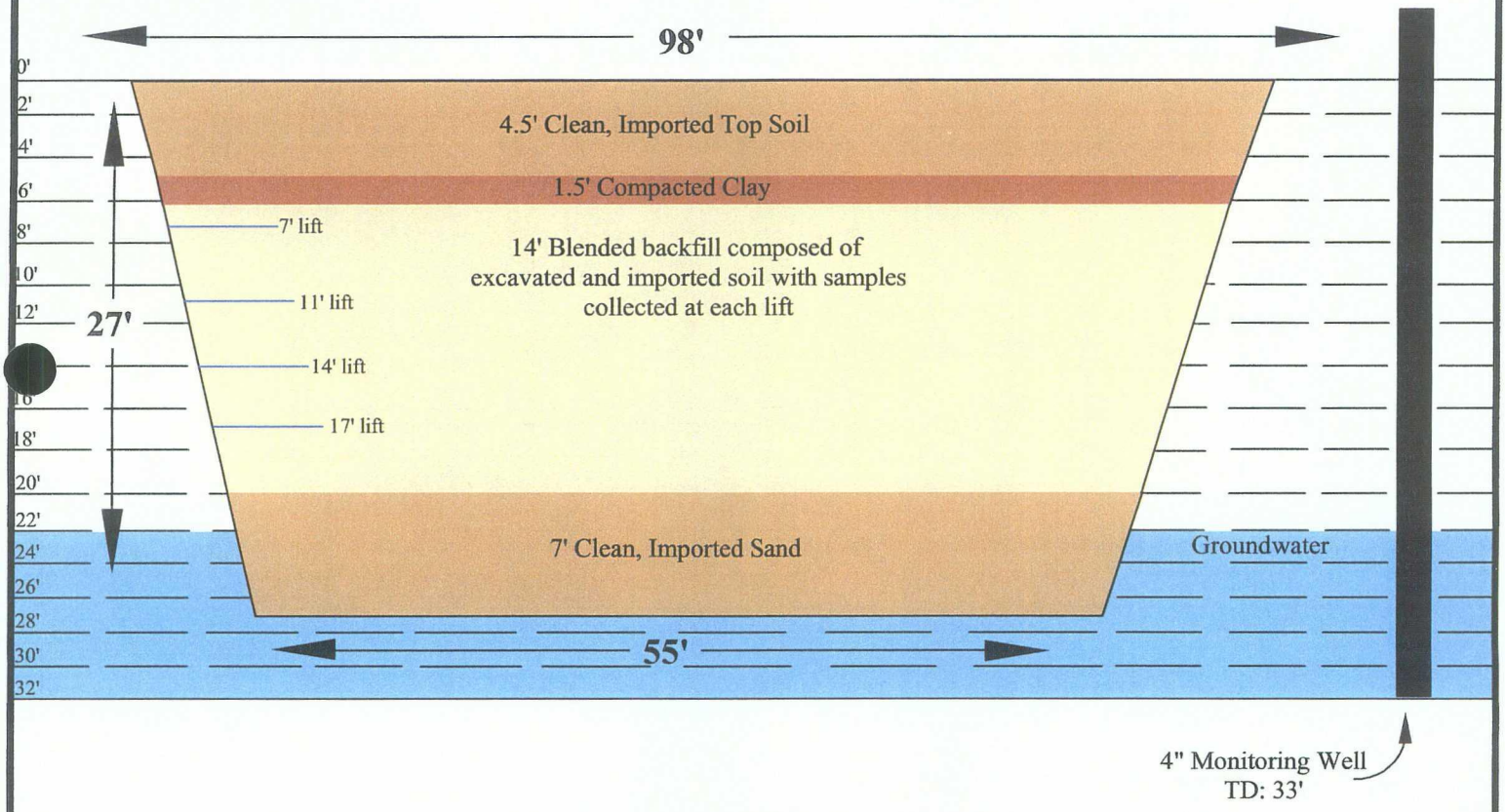
LEA COUNTY, NEW MEXICO

RICE *Operating Company*

E.M.E. SWD System Well No. H-20
SE/4 NE/4, Sec.20, T20S, R37E

Cross Section View of Sidewall and Bottom Soil Sample Locations
(Not to Scale)

Ocotillo ENVIRONMENTAL



Soil Sample Results for Each Lift		
Lift	Chloride (mg/kg)	TPH (mg/kg)
7'	48	64.7
11'	32	62.9
14'	144	84.5
17'	96	94

FIGURE # 4

LEA COUNTY, NEW MEXICO

RICE *Operating Company*

E.M.E. SWD System Well No. H-20
SE/4 NE/4, Sec.20, T20S, R37E

DATE:	8-2-07
NAME:	CHH
PROJECT NO. :	7-0301

Excavation Cross-Section: Backfill Schematic

(Not to Scale)

Ocotillo

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

24 *YDS.*

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: *C-3*

IGNATURE OF TRANSPORT (DRIVER):

Robert Hilburn

IGNATURE OF DRIVER

4/11/07

DATE

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Environmental Protection gency (EPA). The waste are: generated from oil and gas exploration and production operations; exempt from Resource Conservation nd Recovery Act (RCRA) Subtitle C Regulations: and not mixed with non exempt waste."

ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

120 YDS.

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: C-3

IGNATURE OF TRANSPORT (DRIVER):

Robert Allen

IGNATURE OF DRIVER

4/12/07

DATE

103

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

108 YDS.

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: C-3

IGNATURE OF TRANSPORT (DRIVER):

X

IGNATURE OF DRIVER

4/12/07
DATE

MDe

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

120 *YDS.*

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: *C-3*

IGNATURE OF TRANSPORT (DRIVER):

X Laurence Ortega

IGNATURE OF DRIVER

4/12/07

DATE

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

120 YDS.

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: C-3

IGNATURE OF TRANSPORT (DRIVER):

IGNATURE OF DRIVER

4/12/07
DATE

1105

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

120 *YDS.*

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: *C-3*

IGNATURE OF TRANSPORT (DRIVER):

X Edmond D Ejon

IGNATURE OF DRIVER

4-12-07

DATE

101

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

12a YDS.

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: C-3

IGNATURE OF TRANSPORT (DRIVER):

X Wendell Woodruff
IGNATURE OF DRIVER

4/12/07
DATE

C.C. & Co, LLC

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
'OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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Der
ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

CASE OPERATOR:
CE OPERATING
2 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
25 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

60 YDS.

CILITY CONTACT:

GNATURE OF CONTACT

DATE

LL NUMBER MATERIAL PLACED IN: C-3

GNATURE OF TRANSPORT (DRIVER):

GNATURE OF DRIVER

4/12/07
DATE

SPOSAL SITE:
UTH MONUMENT SURFACE WASTE FACILITY
O. BOX 418
OBBS, NM 88241-0418
5-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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CILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:
ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:
24 YDS.

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: C-3

IGNATURE OF TRANSPORT (DRIVER):

IGNATURE OF DRIVER

4/13-07
DATE

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:

24 *YDS.*

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: *C-3*

IGNATURE OF TRANSPORT (DRIVER):

Wendell Woodruff

IGNATURE OF DRIVER

4/13/07

DATE

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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ACILITY REPRESENTATIVE

DATE

MANIFEST #_____

SOUTH MONUMENT SURFACE WASTE FACILITY
LANDFARM – DIRT SALES
505-392-1050 (WORK) 505-390-3665 (CELL) 505-391-8391 (HOME)

EASE OPERATOR:
ICE OPERATING
22 W. TAYLOR
OBBS, NM 88240

ORIGINATING LOCATION:
EME – H-20

RANSPORTER NAME & ADDRESS:
COTILLO ENVIRONMENTAL
125 N. FRENCH DR.
OBBS, NM 88240

ESCRIPTION OF WASTE:

ON-HAZARDOUS HYDRO-CARBONS

QUANTITY:
24 *YDS.*

ACILITY CONTACT:

IGNATURE OF CONTACT

DATE

ELL NUMBER MATERIAL PLACED IN: *C-3*

IGNATURE OF TRANSPORT (DRIVER):

Laurence Cobb
IGNATURE OF DRIVER

4/13/07
DATE

ISPOSAL SITE:
OUTH MONUMENT SURFACE WASTE FACILITY
.O. BOX 418
OBBS, NM 88241-0418
05-390-3665 (CELL) 505-391-8391 (HOME)

PERMIT #NM-01-0032
N/2 N3/4 S25/T20S/R36E

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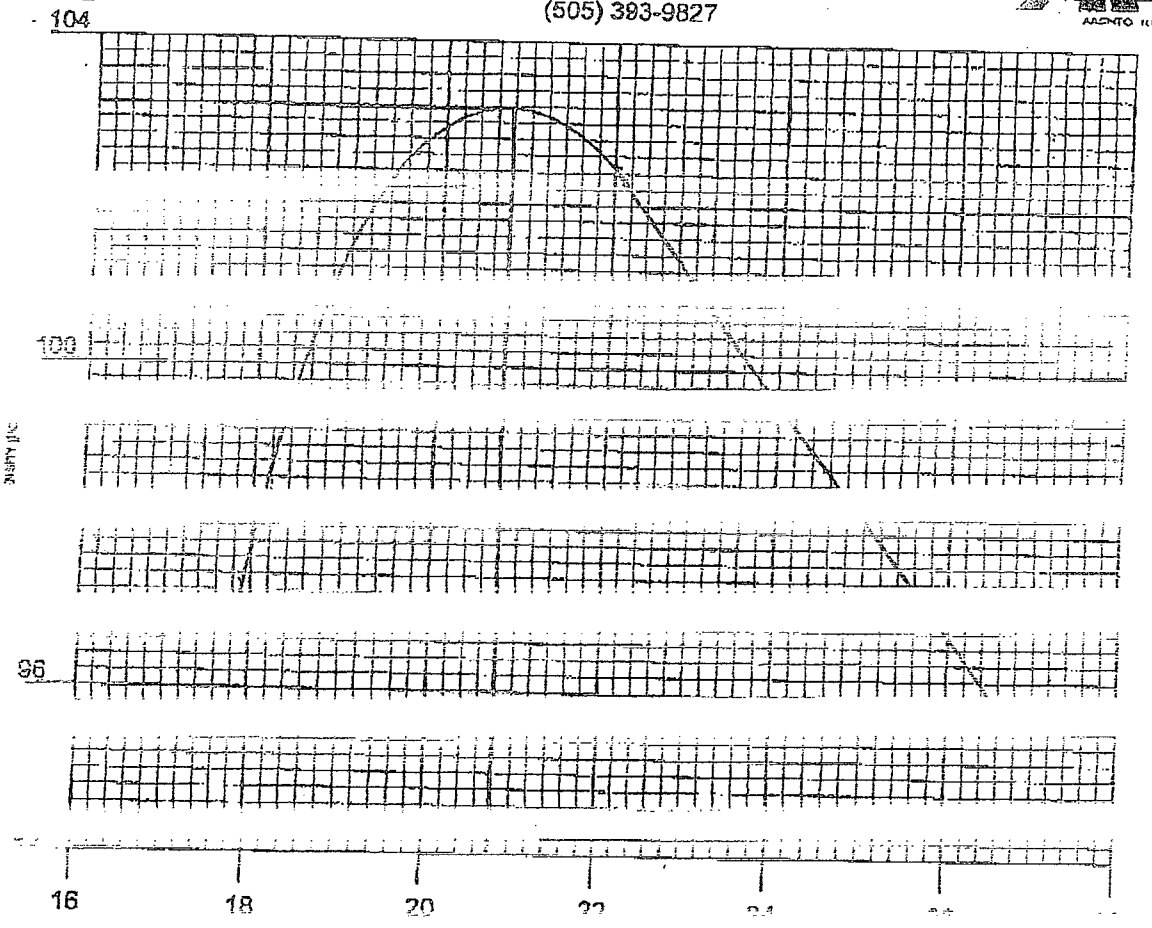
ACILITY REPRESENTATIVE

DATE

PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES ST.
HOBBS, NM 88240
(505) 393-9827



General Information

SAMPLE LOCATION: Stockpile at Red Byrd Pit

SOIL CLASSIFICATION: _____ TEST METHOD: ASTM: D 698

DATE: 4/27/07 LAB NO. 07 4146-4148

DRY WEIGHT LB/CU. FT. 103.3 MOISTURE CONTENT %

PETTIGREW & ASSOCIATES

BY: Erica McDonald

COPIES: Rice Operating

BY: G. Glenn Pettigrew P.E.

amec

PROJECT:	Rice Operating General Information	**JOB NO:**	6-119-000624
LOCATION:	Hobbs, NM	**WORK ORDER NO:**	5
MATERIAL:	Red Clay	**LAB NO:**	12
SAMPLE SOURCE:	Unknown	**DATE SAMPLED:**	4/30/07
SAMPLE PREP:	Remolded to 95% Max Dry Density and Opt. Moisture		
TARGET:	Max Dry Density D698A 98.1 pcf @ 20.8% Opt. Moisture		

MEASUREMENT OF HYDRAULIC CONDUCTIVITY OF SATURATED POROUS MATERIALS
USING A FLEXIBLE WALL PERMEAMETER (ASTM 5084-00)
"CV" METHOD F

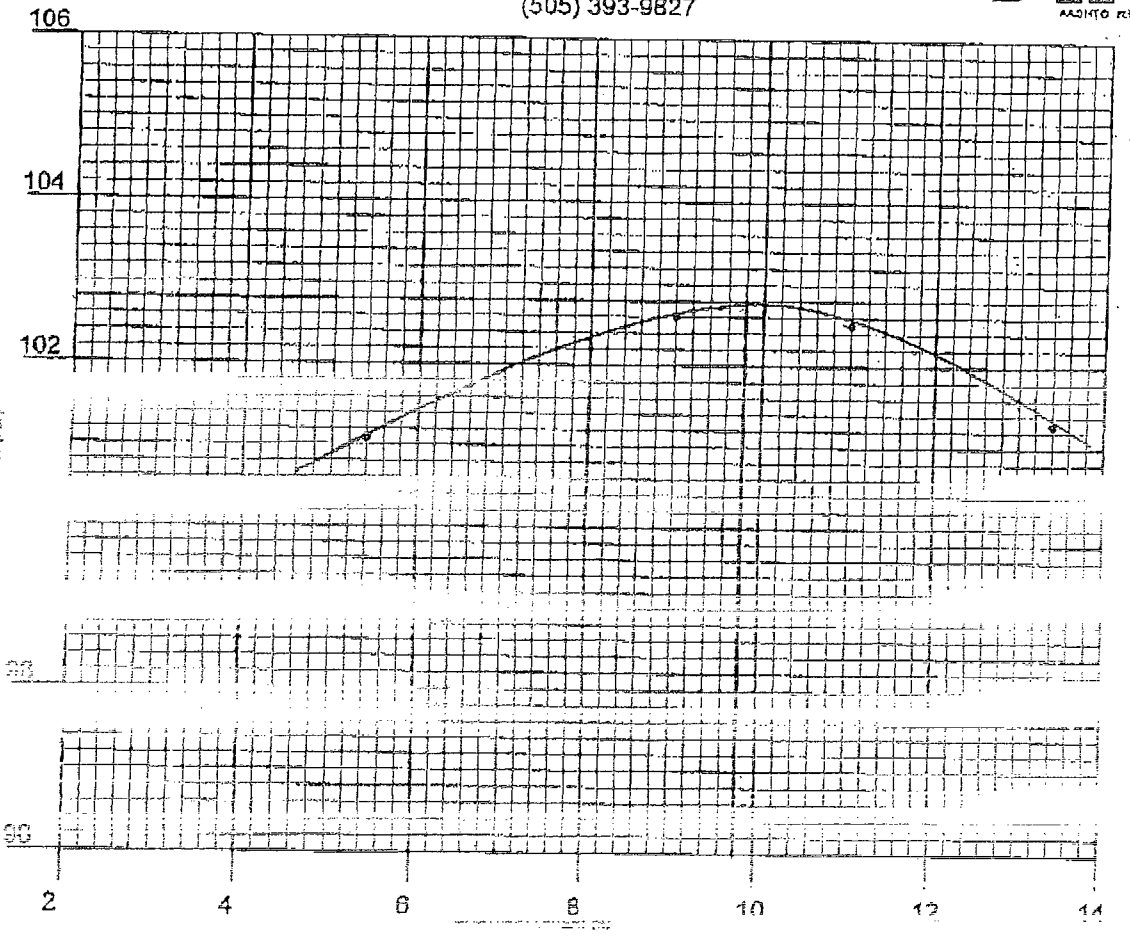
AVERAGE PERMEABILITY			3.47E-08	cm/sec
INITIAL LENGTH OF SPECIMEN			7.16	cm
INITIAL DIAMETER OF SPECIMEN			7.16	cm
INITIAL WATER CONTENT			20.6	%
INITIAL DRY UNIT WEIGHT			98.1	pcf
INITIAL VOLUME			17.54	cu.in
PERMEANT LIQUID			BOTTLED WATER	
MAGNITUDE OF TOTAL BACK PRESSURE			66	psi
EFFECTIVE CONSOLIDATION STRESS			5	psi
RANGE OF HYDRAULIC GRADIENT USED	15.7	to	16.9	
FINAL LENGTH OF SPECIMEN			7.15	cm
FINAL DIAMETER OF SPECIMEN			7.16	cm
FINAL WATER CONTENT			25.1	%
FINAL DRY UNIT WEIGHT			98.0	pcf
FINAL VOLUME			17.57	cu.in
DEGREE OF SATURATION (BEFORE AND AFTER TEST)	90%	and	97%	
SPECIFIC GRAVITY USED IN CALCULATIONS OF SATURATION			2.651	

TIME INTERVAL	K	K
sec	cm/sec	ft/yr.
985	3.39E-08	0.04
1123	3.45E-08	0.04
1259	3.61E-08	0.04
1537	3.42E-08	0.04

REVIEWED BY

PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240

PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES ST.
HOBBS, NM 88240
(505) 393-9827



General Information

CLIENT: Rice Operating PROJECT: Project No. 2007-1507

SAMPLE LOCATION: On-Site

SOIL DESCRIPTION: Blow Sand

SOIL CLASSIFICATION: _____ TEST METHOD: ASTM: D 698

ATTERBERG: LL ____ PI ____ Delivered 5/16/07

DATE: 5/17/07 LAB NO. 07 4890

DRY WEIGHT LB/CU. FT. 102.8 MOISTURE CONTENT % 9.8

SIEVE ANALYSIS - % PASSING									

PETTIGREW & ASSOCIATES

BY: _____

COPIES: Rice Operating

BY: _____ P.E.

LABORATORY TEST REPORT
PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS III, P.E./P.S.

To:	Rice Operating Attn: Hack Conder 122 W. Taylor Hobbs, NM 88240	**Material:**	Red Clay
		Test Method:	ASTM: D 2922
Project:	General Information - EMESWDH20 Project No. 2007.1007		
Date of Test:	May 15, 2007	**Depth:**	4 1/2' Below Finished Subgrade
		Depth of Probe:	6"

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG 5	20' W. & 40' N. of the SE Corner	101.3	17.8	

Control Density:	103.3 ASTM: D 698	**Optimum Moisture:**	20.8%
Required Compaction:	95%	**Densometer ID:**	5572
Lab No.:	07 4728-4729		
Copies To:	Rice		

PETTIGREW & ASSOCIATES

BY: Erica M. Hart

BY: Corey Nash for DEBRA HICKS P.E.

LABORATORY TEST REPORT

PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS, III, P.E./P.S.

To:	Rice Operating Attn: Hack Conder 122 W. Taylor Hobbs, NM 88240	**Material:**	Red Sand
		Test Method:	ASTM: D 2922
Project:	General Information - EMESWDH20 Project No. 2007.1007		
Date of Test:	May 18, 2007	**Depth:**	6" Below Finished Subgrade
		Depth of Probe:	6"

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG 6	50' N. & 50' E. of the SW Corner	102.1	11.3	

Control Density:	102.6 ASTM: D 698	**Optimum Moisture:**	9.8%
Required Compaction:	90%	**Densometer ID:**	5572
Lab No.:	07 4888-4889		
Copies To:	Rice		

PETTIGREW & ASSOCIATES

BY: Elvia M Hart

BY: Cg Nader for DEBRA P.E. HICKS

Client: Rice Operating Company

Project: E.M.E. SWD System Well No. H-20

Project Number: 7-0301

Location: Monument, NM

MW-1

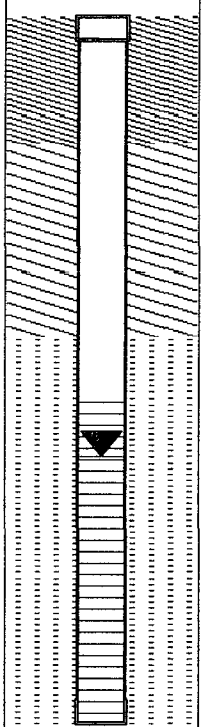
Date: 04/23/07

Project Manager: Cindy Crain

SUBSURFACE PROFILE

SAMPLE

Depth	Symbol	Description	Depth/Elev.	Number	Type	Recovery	P.I.D (250 500 750)	Well Construction	Well Completion Details
0		Ground Surface	0.0						
0–24		*Silty Sand* Light tan, fine grained, well sorted, loose, dry.	0.0						
24			-25.0						
26–28		*Silty Sand* Light gray, fine grained, well sorted, loose, damp	25.0 -27.0 27.0						
28–32		*Silty Sand* Dark gray, fine grained, well sorted, wet, hydrocarbon odor.	-33.0						
34		*TD: 33'*	33.0						



Top of Casing 2' 3.5" above ground surface.

0-6 feet bgs: Cement-Bentonite Grout

0-18 feet bgs: Schedule 20 PVC threaded casing

6-12 feet bgs: Bentonite Pellets

15-33 feet bgs: Sand

Depth to Water (4/23/07) 20.55' bgs

18-33 feet bgs: Schedule 20 PVC 0.02 inch slotted, threaded PVC screen

Drill Method: Air Rotary

Drill Date: 04/20/07

Hole Size: 4"

Ocotillo Environmental, L.L.C.
2125 French Drive
Hobbs, NM 88240
(505) 393-6371

Elevation: N/A

Checked By: C. Crain

Drilled By: Harrison & Cooper

Ocotillo ENVIRONMENTAL

Procedure for Obtaining Soil Samples for Transportation to a Laboratory

1.0 Purpose

This procedure outlines the methods to be employed when obtaining soil samples to be taken to a laboratory for analysis.

2.0 Scope

This procedure is to be used when collecting soil samples intended for ultimate transfer to a testing laboratory.

3.0 Preliminary

3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the soil. The shipment should include a Certificate of Compliance from the manufacturer of the collection bottle or vial and a serial number for the lot of containers. Retain this certificate for future documentation purposes.

3.2 If collecting TPH, BTEX, RCRA 8 metals, cation/anions or O&G, the sample jar may be a clear container with Teflon lid. If collecting PAH's, use an amber 4 oz. container.

4.0 Chain of Custody

4.1 Prepare a sample plan. The plan will list the number, location and designation of each planned sample and the individual tests to be performed on the sample. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.

4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label.) Affix the labels to the jars.

5.0 Sampling Procedure

5.1 Do not touch the soil with your bare hands. Use new latex gloves with each sample to help minimize may cross contamination.

5.0 Sampling Procedure (Continued)

5.2 Go to the sampling point with the sample container. If not analyzing for metals or ions, use a trowel to obtain the soil.

5.3 Pack the soil tightly into the container leaving the top slightly domed. Screw the lid down tightly. Enter the time of collection onto the sample collection jar label.

5.4 Place the sample directly on ice for transport to the laboratory if required.

5.5 Complete the Chain of Custody form, COC, to include the collection times for each sample. Deliver all samples to the laboratory.

6.0 Records

6.1 The testing laboratory shall provide the following minimum information:

a. Project and sample name
b. Signed copy of the original Chain of Custody form including the time the sample was received by the lab.
c. Results of the requested analyses
d. Test Methods employed
e. Quality Control methods and results

Rice Operating Company

Quality Procedure
Composite Sampling of Excavation Sidewalls and Bottoms For TPH and Chloride Analysis

1.0 Purpose

This procedure outlines the methods to be employed when obtaining final composite soil samples for TPH and Chloride analysis.

2.0 Scope

This procedure is to be used in conjunction with *Quality Procedure – 02: Soil Samples for Transportation to a Laboratory* and will be inserted at subparagraph 5.2 of Section 5.0: Sampling Procedure.

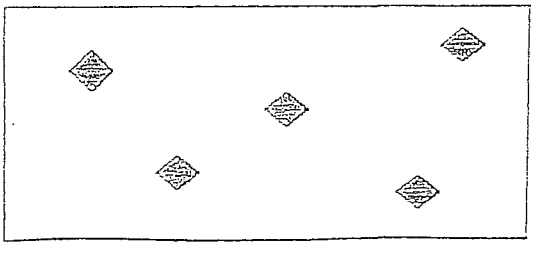
3.0 Sampling Procedure

Follow *Quality Procedure – 02: Soil Samples for Transportation to a Laboratory* for all Sections and subparagraphs until subparagraph 5.2 of Section 5.0: Sampling Procedure. Instead of 5.2 instructions, perform the composite sample collection procedure as follows:

3.1 Go to the excavation with a clean large blending bowl or new plastic baggie. If not analyzing for ions or metals, use a trowel to obtain the soil. If the excavation is deeper than 6' BGS, do not enter the pit, but use a backhoe to assist in procurement of the sample. (If a backhoe is used, the backhoe will obtain an amount of soil from each composite point, bring the purchase to the surface staging area where a sample-portion of soil will be extracted from the backhoe purchase. The remainder of the backhoe purchase will be staged on the surface with other staged soils.)

3.2 Sidewall samples

3.2.1 On each sidewall, procure a 5oz sample from each of five distinct points on the sidewall with distinct points resembling the "W" pattern:



3.2.2 Thoroughly blend these five samples in the blending bowl.
3.2.3 Pour blended sample into sifter and sift into labeled baggie.
3.2.4 Repeat steps 3.2.1 through 3.2.4 for each remaining sidewall, using a clean blending bowl for each sidewall.
3.2.5 From each labeled baggie, procure a 5 oz portion and pour into a baggie labeled "Sidewall Composite". Blend this soil mixture completely.
3.2.6 Obtain proper laboratory sample container for "Sidewall Composite" and continue with subparagraph 5.3 of QP – 02.

3.3 Bottom Sample

3.3.1 From bottom of excavation, procure a 5oz sample from each of five distinct points with distinct points resembling the "W" pattern as illustrated above.
3.3.2 Thoroughly blend these five samples in a clean blending bowl.
3.2.3 Pour blended sample into sifter and sift into baggie labeled "Bottom Composite".
3.2.6 Obtain proper laboratory sample container for "Bottom Composite" and continue with subparagraph 5.3 of QP – 02.

Ocotillo ENVIRONMENTAL

Procedure for Developing Cased Water Monitoring Wells

1.0 Purpose

This procedure outlines the methods to be employed to develop cased monitoring wells.

2.0 Scope

This procedure shall be used for developed cased water monitoring wells. It is not to be used for standing water samples such as ponds or streams.

3.0 Sample Collection and Preparation

3.1 Prior to development, the static water level and height of the water column within the well casing will be measured with the use of an electric D.C. Probe or a steel engineer's tape and water sensitive paste.

3.2 All measurements will be recorded within a field log notebook.

3.3 All equipment used to measure the static water level will be decontaminated after each use by means of Liquinox, a phosphate free laboratory detergent and water to reduce the possibility if cross-contamination. The volume of water in each well casing will be calculated.

4.0 Purging

4.1 Wells will be purged by using a 2" decontaminated submersible pump or dedicated one liter Teflon bailer. Wells should be purged until the pH and conductivity are stabilized and the turbidity has been reduced to the greatest extent possible.

4.2 If submersible is used the pump will be decontaminated prior to use by scrubbing the outside surface of tubing and wiring with a Liquinox water mixture, pumping a Liquinox-water mixture through the pump, and final flush with fresh water.

5.0 Water Disposal

5.1 All purge decontamination water will be temporarily stored within a portable tank to be later disposed of in an appropriate manner.

6.0 Records

6.1 Ocotillo Environmental, LLC. Will record the amount of water removed from the well during the development procedures. The purge volume will be reported to the appropriate regulatory authority when filing the closure report.

Ocotillo ENVIRONMENTAL

Procedure for Obtaining Water Samples (Cased Wells) Using One Liter Bailer

1.0 Purpose

This procedure outlines the methods to be employed when obtaining water samples from cased monitoring wells.

2.0 Scope

This procedure is to be used for developed, cased water monitoring wells. It is not to be used for standing water samples such as ponds or streams.

3.0 Preliminary

3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the water. The shipment should include a Certificate of Compliance from the manufacturer of the collection bottle or vial and a serial number for the lot of containers. Retain this certificate for future documentation purposes.

3.2 The following table shall be used to select the appropriate sampling container, preservative method and holding times for the various elements and compounds to be analyzed.

Compound to be Analyzed	Sample Container Size	Sample Container Description	Cap Requirements	Preservative	Maximum Hold Time
BTEX	40 ml	VOA Container	Teflon lined	HCl	7 days
TPH	1 liter	Clear glass	Teflon lined	HCl	28 days
PAH	1 liter	Amber glass	Teflon lined	Ice	7 days
Cation/Anion	1 liter	Clear glass	Teflon lined	None	48 Hours
Metals	1 liter	HD Polyethylene	Any plastic	Ice/HNO_3	28 Days
TDS	300 ml	Clear glass	Any plastic	Ice	7 Days

4.0 Chain of Custody

4.1 Prepare a sample plan. The plan will list the well identification and the individual tests to be performed at that location. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.

4.0 Chain of Custody (Continued)

4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label.) Affix the labels to the jars.

5.0 Bailing Procedure

5.1 Identify the well from the sites schematics. Place ore-labeled jar(s) next to the well. Remove the plastic cap from the well bore by first lifting the metal lever and then unscrewing the entire assembly.

5.2 Using a dedicated one liter Teflon bailer, purge a minimum of three well volumes. Place the water in a storage container for transport to a ROC disposal facility.

5.3 Take care to unsure that the bailing device and string do not become cross-contaminated. A clean pair of rubber gloves should be used when handling either the retrieval string or bailer. The retrieval string should not be allowed to come into contact with the ground.

6.0 Records

6.1 Once the well has been bailed in accordance with 5.2 of this procedure, a sample may be decanted into the appropriate sample collection jar directly from the bailer. The collection jar should be filled to the brim. Once the jar is sealed, turn the jar over to detect any bubbles that may be present. Add additional water to remove al bubbles from the sample container.

6.2 Note the time of collection on the sample jar with a fine Sharpie.

6.3 Place the sample directly on ice for transport to the laboratory. The preceding table shows the maximum hold times between collection and testing for the various analyses.

6.4 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

7.0 Documentation

7.1 The testing laboratory shall provide the following minimum information:

a. Project and Sample name
b. Signed copy of the original Chain of Custody form including the time the sample was received by the lab.
c. Results of the requested analyses
d. Test methods employed
e. Quality Control methods and results.

Calculation for Determining the Minimum Bailing Volume for Monitor Wells

Formulas:
$V = (\pi r^2 h)$
2" well [V/231 = gal] X 3 = Purge Volume

V = Volume
π = pi
r = inside radius of the well bore
h = maximum height of well bore in water table

Example:

π	r^2	h(in)	V (cu.in)	V (gal)	X 3 Volumes	Actual
3.1416	1	180	565.488	2.448	7.34 gal	>10 gal

Ocotillo ENVIRONMENTAL

Sampling and Chloride Testing Protocol Using the IPEC Soil Salt Analysis Kit

1.0 Purpose

This procedure is to be used to determine the concentration of chloride in soil.

2.0 Scope

This procedure is to be used as the standard field measurement for soil chloride concentrations.

3.0 Sample Collection and Preparation

3.1 Collect at least 50 grams of soil from the sample collection point. Take care to insure that the sample is representative of the general background to include visible concentrations of hydrocarbons and soil types. If necessary, prepare a composite sample for soils obtained at several points in the sample area. Take care to insure that no loose vegetation, rocks or liquids are included in the sample(s).

3.2 The soil sample(s) shall be immediately inserted into a one-quart or larger polyethylene freezer bag. Care should be taken to insure that no cross contamination occur between the soil sample and the collection tools or sample processing equipment.

3.3 The sample bag should be sealed and massaged to break up any clods.

4.0 Sample Preparation

4.1 Using a clean spoon place approximately 25 grams of soil in a clean graduated plastic cup.

4.2 Add 20 ml of IPEC's saturated calcium sulfate solution and stir until well mixed.

4.3 Allow the sample to set for a period of 5 minutes or until the separation of soil and saturated calcium sulfate solution.

5.0 Titration Procedure

5.1 Place the lower end of a low range (30-600 ppm) chloride titrator into the mixture in the sample cup.

5.2 When the titrator wick is completely saturated and the yellow band has turned black the reaction is complete.

5.3 Note where the tip of the white peak falls on the numbered titrator, this represents the chloride concentration in the soil.

5.4 Relate this scale reading to the approximate chloride concentration using the chart provided in the IPEC soil salt analysis kit.

5.5 Record your results in the field book.

CARDINAL LABORATORIES

PHONE (325) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603
PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NM 88240

ANALYTICAL RESULTS FOR
OCOTILLO ENVIRONMENTAL
ATTN: CINDY CRAIN
P.O. BOX 1816
HOBBS, NM 88241
FAX TO: (432) 272-0304

Receiving Date: 04/13/07
Reporting Date: 04/16/07
Project Owner: RICE
Project Name: EME H #20 WELL
Project Location: MONUMENT, NM

Analysis Date: 04/16/07
Sampling Date: 04/13/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H12460-1	1 (27')	976
H12460-2	2 (27')	336
H12460-3	3 (27')	624
H12460-4	COMPOSITE EAST WALL	224
H12460-5	COMPOSITE WEST WALL	96
H12460-6	COMPOSITE SOUTH WALL	96
H12460-7	COMPOSITE NORTH WALL	96
Quality Control		490
True Value QC		500
% Recovery		98
Relative Percent Difference		1.0

METHOD: Standard Methods	4500-Cl^-B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Chemist

04-16-07
Date

H12460

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
OCOTILLO ENVIRONMENTAL
ATTN: CINDY CRAIN
P.O. BOX 1816
HOBBS, NM 88241
FAX TO: (432) 272-0304

Receiving Date: 04/13/07
Reporting Date: 04/17/07
Project Owner: RICE
Project Name: EME H #20 WELL
Project Location: MONUMENT, NM

Sampling Date: 04/13/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: LB

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		04/17/07	04/17/07	04/17/07	04/17/07
H12460-1	1 (27')	0.005	0.054	0.033	0.941
H12460-2	2 (27')	0.220	0.910	4.27	7.37
H12460-3	3 (27')	0.059	0.091	0.304	0.805
H12460-4	Composite East Wall	<0.002	0.010	0.025	0.244
H12460-5	Composite West Wall	<0.002	0.038	0.353	0.637
H12460-6	Composite South Wall	<0.004	0.042	0.046	0.736
H12460-7	Composite North Wall	<0.004	0.024	0.054	0.432
Quality Control		0.098	0.102	0.102	0.310
True Value QC		0.100	0.100	0.100	0.300
% Recovery		98.7	102	102	103
Relative Percent Difference		7.8	8.5	7.5	7.1

METHOD: EPA SW-846 8021B

Chemist

4/17/07
Date

H12460B 060

CARDINAL LABORATORIES

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ANALYTICAL RESULTS FOR
OCOTILLO ENVIRONMENTAL
ATTN: CINDY CRAIN
P.O. BOX 1816
HOBBS, NM 88241
FAX TO: (432) 272-0304

Receiving Date: 04/13/07
Reporting Date: 04/16/07
Project Owner: RICE
Project Name: EME H #20 WELL
Project Location: MONUMENT, NM

Sampling Date: 04/13/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC

LAB NO.	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)
ANALYSIS DATE:		04/13/07	04/13/07
H12460-1	1 (27')	382	1389
H12460-2	2 (27')	139	570
H12460-3	3 (27')	162	730
H12460-4	COMPOSITE EAST WALL	74.0	646
H12460-5	COMPOSITE WEST WALL	205	750
H12460-6	COMPOSITE SOUTH WALL	150	800
H12460-7	COMPOSITE NORTH WALL	145	777
Quality Control		752	778
True Value QC		800	800
% Recovery		93.4	97.3
Relative Percent Difference		5.9	3.5

METHOD: SW-846 8015 M

Chemist

4/16/07
Date

H12460A OCO

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Cactilla Environmental
Project Manager:	Cindy Crain
Address:	3125 French Dr.
City:	Hobbs State: NM Zip: 88240
Phone #:	(505) 441-7244 Fax #: (432) 272-0304
Project #:	Project Owner: Rice
Project Name:	EME H #20 Well
Project Location:	Monument, NM
Sampler Name:	Cindy Crain

BILL TO

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

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH 8015 M	BTEX 8021 B	Chlorides			Rush 24 Hr. (TPH ONLY)						
H12460-1	1 (27')	G	1			✓					✓		4/13/07	1205	✓	✓	✓			✓						
-2	2 (27')	G	1			✓					✓		"	1210	✓	✓	✓			✓						
-3	3 (27')	G	1			✓					✓		"	1215	✓	✓	✓			✓						
-4	Composite East Wall	C	1			✓					✓		"	1400	✓	✓	✓			✓						
-5	Composite West Wall	C	1			✓					✓		"	1505	✓	✓	✓			✓						
-6	Composite South Wall	C	1			✓					✓		"	1445	✓	✓	✓			✓						
-7	Composite North Wall	C	1			✓					✓		"	1430	✓	✓	✓			✓						

Relinquished By: Cindy Crain	Date: 4/13/07 Time: 1550	Received By: Nat Tullis	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool: ☒ Yes ☐ No; Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) CT	

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: Call with results Please email results to: Cindy.Crain@gmail.com and fax to (432) 272-0304

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

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
OCOTILLO ENVIRONMENTAL
ATTN: CINDY CRAIN
P.O. BOX 1816
HOBBS, NM 88241
FAX TO: (432) 272-0304

Receiving Date: 04/16/07
Reporting Date: 04/17/07
Project Owner: RICE
Project Name: EMEH #20
Project Location: MONUMENT, NM

Sampling Date: 04/16/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/HM

LAB NO. SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE	04/16/07	04/16/07	04/16/07
H12465-1 STAGED SOIL COMPOSITE #1	16.8	370	184
Quality Control	752	778	490
True Value QC	800	800	500
% Recovery	93.4	97.3	98.0
Relative Percent Difference	5.9	3.5	1.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analysis performed on a 1:4 w:v aqueous extract.

Chemist

Date 4/17/07

H12465 OCO

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: Ocotillo Environmental	**BILL TO**
Project Manager: Cindy Crain	P.O. #:
Address: P.O. Box 1658	Company: Ocotillo
City: Hobbs, NM State: Zip: 88241	Attn: Cindy Crain
Phone #: Fax #: (432) 272-0504	Address:
Project #: Project Owner: Rice	City:
Project Name: EMEH #20	State: Zip:
Project Location: Monument,	Phone #:
Sampler Name: Cassie Hobbs	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 8015M (24hr)	BTEX 8021
H12465-1	Staged Soil Composite #1		1			✓					✓		4/16	10:15	✓	✓

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: Cassie Hobbs	Date: 4/16/07 Time: 1:20	Received By:	
Relinquished By:	Date: Time:	Received By: Burgett/McCook	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool: ☒ Yes ☐ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials)

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: Email to cindy

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PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NM 88240

ANALYTICAL RESULTS FOR
OCOTILLO ENVIRONMENTAL
ATTN: CINDY CRAIN
P.O. BOX 1816
HOBBS, NM 88241
FAX TO: (432) 272-0304

Receiving Date: 04/17/07
Reporting Date: 04/17/07
Project Owner: RICE
Project Name: EMEH #20
Project Location: MONUMENT, NM

Sampling Date: 04/16/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/HM

LAB NO. SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE	04/17/07	04/17/07	04/17/07
H12469-1 STAGED SOIL COMPOSITE SS-4	15.7	379	192
H12469-2 STAGED SOIL COMPOSITE SS-5	13.8	422	224
H12469-3 STAGED SOIL COMPOSITE SS-6	16.5	390	208
Quality Control	732	778	500
True Value QC	800	800	500
% Recovery	97.3	97.3	100
Relative Percent Difference	0.6	1.2	1.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

4/17/07
Date

H12469 OCO

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Ocotillo Environmental.	**BILL TO**	
Project Manager:	Cassie Crain	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner: Rice	City:	
Project Name:	EMEH #20	State: Zip:	
Project Location:	Monument	Phone #:	
Sampler Name:	Cassie Hobbs.	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 (8015 M'24a)	Cl
H12467-1	Staged Soil Composite SS-4		1			✓					✓		4/16/07		✓	✓
-2	" " SS-5		1			✓					✓		"		✓	✓
-3	" SS-6		1			✓					✓		"		✓	✓

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Relinquished By:	Date:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Cassie Hobbs	Time:		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date: 4/17/07	Received By:	REMARKS: RUSH please call with verbal Results. CASSIE (432) 425-9067
	Time: 8:40AM	Burgess A Cook	
Delivered By: (Circle One)	Sample Condition: Cool: ☒ Yes ☐ No; Intact: ☒ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:			

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CARDINAL LABORATORIES

PHONE (325) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603
PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NM 88240

ANALYTICAL RESULTS FOR
OCOTILLO ENVIRONMENTAL
ATTN: CINDY CRAIN
P.O. BOX 1816
HOBBS, NM 88241
FAX TO: (432) 272-0304

Receiving Date: 04/17/07
Reporting Date: 04/18/07
Project Number: NOT GIVEN
Project Name: EMEH #20
Project Location: MONUMENT, NM

Sampling Date: 04/16/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		04/17/07	04/17/07	04/18/07
H12471-1	SS-4 20'	<10.0	31.6	<16
H12471-2	SS-5 20'	<10.0	<10.0	<16
H12471-3	SS-6 20'	<10.0	<10.0	<16
H12471-4	SS-7 20'	<10.0	<10.0	<16
H12471-5	SS-8 20'	<10.0	<10.0	<16
Quality Control		780	791	490
True Value QC		800	800	500
% Recovery		97.5	98.9	98.0
Relative Percent Difference		4.4	0.6	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

4/18/07
Date

H12471 OCO

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Cotillo Environmental.	**BILL TO**	
Project Manager:	Craig Crain	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	EMEH #20	State: Zip:	
Project Location:	Monument.	Phone #:	
Sampler Name:		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH 8015M	Cl
21124-1	SS-4 20'		1			✓					✓		4/16/07	15:20	✓	✓
-2	SS-5 20'		1			✓					✓		"	15:23	✓	✓
-3	SS-6 20'		1			✓					✓		"	15:25	✓	✓
-4	SS-7 20'		1			✓					✓		"	15:27	✓	✓
-5	SS-8 20'		1			✓					✓		"	15:30	✓	✓

Relinquished By:	Date: 4/17/07	Received By:	
Jessica Hobbs	Time: 8:50		
Relinquished By:	Date:	Received By:	
	Time:	Burgess A Cook	

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

Sample Condition Cool	Intact	CHECKED BY: (Initials)
☒ Yes	☒ Yes	
☐ No	☐ No	

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

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

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
OCOTILLO ENVIRONMENTAL
ATTN: CINDY CRAIN
P.O. BOX 1816
HOBBS, NM 88241
FAX TO: (432) 272-0304

Receiving Date: 04/19/07
Reporting Date: 04/20/07
Project Owner: RICE
Project Name: EMEH-20
Project Location: MONUMENT, NM

Sampling Date: 04/19/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: LB
Analyzed By: BC/LB

LAB NO.	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		04/19/07	04/19/07	04/19/07
H12481-1	2:1 BLENDED STAGED SOIL	<10.0	270	160
	5-PT COMPOSITE SAMPLE			
Quality Control		780	791	490
True Value QC		800	800	500
% Recovery		97.5	98.9	98.0
Relative Percent Difference		4.4	0.6	0.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analysis performed on a 1:4 w:v aqueous extract.

Chemist

4/20/07
Date

H12481 OCO

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Ocotillo Environmental
Project Manager:	Candy Crain
Address:	P.O. Box 1812
City:	Hobbs State: NM Zip: 88241
Phone #:	Fax #:
Project #:	Project Owner: Rice
Project Name:	EME H-20
Project Location:	Monument, NM
Sampler Name:	Cassie Hobbs

BILL TO

P.O. #:	
Company:	Rice
Attn:	Mack Conder
Address:	122 W. Taylor
City:	Hobbs
State: NM Zip:	88240
Phone #:	393-9174
Fax #:	397-1471

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:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	TIME	TPH 8015 M (Rust)	Cl
H12481-1	2:1 Blended Staged Soil 5-pt Composite Sample		1			✓					✓		4/9/07	12:00	✓	✓

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:	Cassie Hobbs	Date: 4/10/07 Time: 12:55	Received By:
Relinquished By:		Date: Time:	Received By:

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

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

CHECKED BY: (Initials) TB

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

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

WELL SAMPLING DATA FORM

CLIENT: **RICE** *Operating Company* WELL ID: Monitor Well #1

SYSTEM: EME DATE: April 23, 2007

SITE LOCATION: H-20 SWD SAMPLER: Rozanne Johnson

PURGING METHOD: ☐ Hand Bailed ☑ Pump, Type Purge Pump

SAMPLING METHOD: ☑ Disposable Bailer ☐ Direct from Discharge Hose ☐ Other:

Following Well Recovery

DISPOSAL METHOD OF PURGE WATER: ☐ On-site Drum ☐ Drums ☑ SWD Disposal Facility

TOTAL DEPTH OF WELL: 34.95 Feet

DEPTH TO WATER: 22.89 Feet

HEIGHT OF WATER COLUMN: 12.06 Feet 4 In. Well Diameter

WELL VOLUME: 7.8 Gal. 25 Gallons purged prior to sampling

TIME	TEMP. °C	COND. mS/cm	pH	PHYSICAL APPEARANCE AND REMARKS
14:10	21.6	6.85	7.31	Clear with Slight Odor.
				Samples Collected
				BTEX (2-40ml VOA)
				Major Ions/TDS (1-1000ml Plastic)

COMMENTS:

Myron Model 6P instrument used to obtain pH, conductivity, and temperature measurements.

Delivered samples to Cardinal Labs in Hobbs, New Mexico for BTEX, Major Ions, and TDS analysis.

CARDINAL LABORATORIES

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR STREET
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 04/23/07
Reporting Date: 04/24/07
Project Number: NOT GIVEN
Project Name: EME H-20 SWD
Project Location: T20S-R37E-SEC. 20H, LEA COUNTY, NM

Sampling Date: 04/23/07
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: HM

LAB NUMBER SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity ($mgCaCO_3/L$)
ANALYSIS DATE:	04/23/07	04/23/07	04/23/07	04/23/07	04/23/07	04/23/07
H12499-1 MONITOR WELL #1	1387	106	137	50.3	6990	610
Quality Control	NR	51.9	49.2	1.94	1374	NR
True Value QC	NR	50.0	50.0	2.00	1413	NR
% Recovery	NR	104	98.4	97	97.2	NR
Relative Percent Difference	NR	13.8	9.5	0.5	1.1	NR
METHODS:		SM3500-Ca-D	3500-Mg E	8049	120.1	310.1

LAB NUMBER SAMPLE ID	Cl^- (mg/L)	SO_4 (mg/L)	CO_3 (mg/L)	HCO_3 (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	04/23/07	04/23/07	04/23/07	04/23/07	04/23/07	04/23/07
H12499-1 MONITOR WELL #1	1939	544	0	744	7.42	4343
Quality Control	490	23.1	NR	952	6.96	NR
True Value QC	500	25.0	NR	1000	7.00	NR
% Recovery	98	92.5	NR	95.2	99.4	NR
Relative Percent Difference	2.1	3.4	NR	1.3	0.4	NR
METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1

Chemist

04-24-07
Date

H12499

CARDINAL LABORATORIES

PHONE (325) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603
PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR STREET
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 04/23/07
Reporting Date: 04/24/07
Project Number: NOT GIVEN
Project Name: EME H-20 SWD
Project Location: T20S-R37E-SEC.20H, LEA COUNTY - NEW MEXICO

Sampling Date: 04/23/07
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC

LAB NUMBER SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE	04/23/07	04/23/07	04/23/07	04/23/07
H12499-1 MONITOR WELL #1	0.060	<0.002	0.002	<0.006
Quality Control	0.104	0.104	0.105	0.293
True Value QC	0.100	0.100	0.100	0.300
% Recovery	104	104	105	97.6
Relative Percent Difference	5.1	6.2	2.6	3.1

METHOD: EPA SW-846 8260

Chemist

4/24/07
Date

H12499 RICE

101 East Marland - Hobbs, New Mexico 88240
Tel (505) 393-2326
Fax (505) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Kristin Farris-Pope, Project Scientist	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (505) 393-9174 Fax#: (505)397-1471
Phone #: (505) 393-9174	Fax #: (505)397-1471
Project #:	Project Name: EME H-20 SWD
Project Location: T20S-R37E-Sec 20 H Lea County - New Mexico	Sampler Signature: Rozanne Johnson (505)631-9310 rozanne@valornet.com

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO_3	$NaHSO_4$	H_2SO_4	ICE	NONE	SAMPLING: DATE (2007)	TIME
H12499-1	Monitor Well #1	G	3	X				X				X		4-23	14:10

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content		Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Total Dissolved Solids		Turn Around Time ~ 24 Hours
	X																X	X	X		)

Relinquished by: Rozanne Johnson	Date: 4-23-07	Time: 2:30 PM	Received by: [signature]
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool Yes [X] No [ ] Intact Yes [X] No [ ]	CHECKED BY: (Initials)	

Phone Results		Yes		No	
Fax Results	X	Yes		No	Additional Fax Number:

REMARKS: 24 Hour Turn around.

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
OCOTILLO ENVIRONMENTAL
ATTN: CINDY CRAIN
P.O. BOX 1816
HOBBS, NM 88241
FAX TO: (432) 272-0304

Receiving Date: 05/16/07
Reporting Date: 05/17/07
Project Owner: RICE
Project Name: EME SWD H-20
Project Location: MONUMENT, NM

Sampling Date: 05/14/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: LB
Analyzed By: BC/AB

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		05/16/07	05/16/07	05/16/07
H12600-1	SS-7	<10.0	94.0	96
H12600-2	SS-8	<10.0	84.5	144
H12600-3	SS-9	<10.0	62.9	32
H12600-4	SS-10	<10.0	64.7	48
Quality Control		753	790	490
True Value QC		800	800	500
% Recovery		94.1	98.8	98.0
Relative Percent Difference		1.5	3.2	0.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-ClB
*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

5/17/07
Date

H12600 OCO

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Ocotillo	**BILL TO**	
Project Manager:	Cindy Crain	P.O. #:	
Address:		Company:	Rice
City:	State: Zip:	Attn:	Hack Conder
Phone #:	Fax #:	Address:	122 W. Taylor
Project #:	Project Owner: Rice	City:	Hobbs
Project Name:	EME SWD H-20	State: NM Zip:	88240
Project Location:	Monument, NM	Phone #:	
Sampler Name:	Cassie Hobbs	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	Cl	TPH
H12600-1	SS-7		1			✓					✓		5/14	10:31	✓	✓
-2	SS-8		1			✓					✓		"	11:30	✓	✓
-3	SS-9		1			✓					✓		"	12:45	✓	✓
-4	SS-10		1			✓					✓		"	1:30	✓	✓

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 period. 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:	Date: 5/16/07	Received By:	
Cassie Hobbs	Time: 9:06		
Relinquished By:	Date:	Received By:	
	Time:		

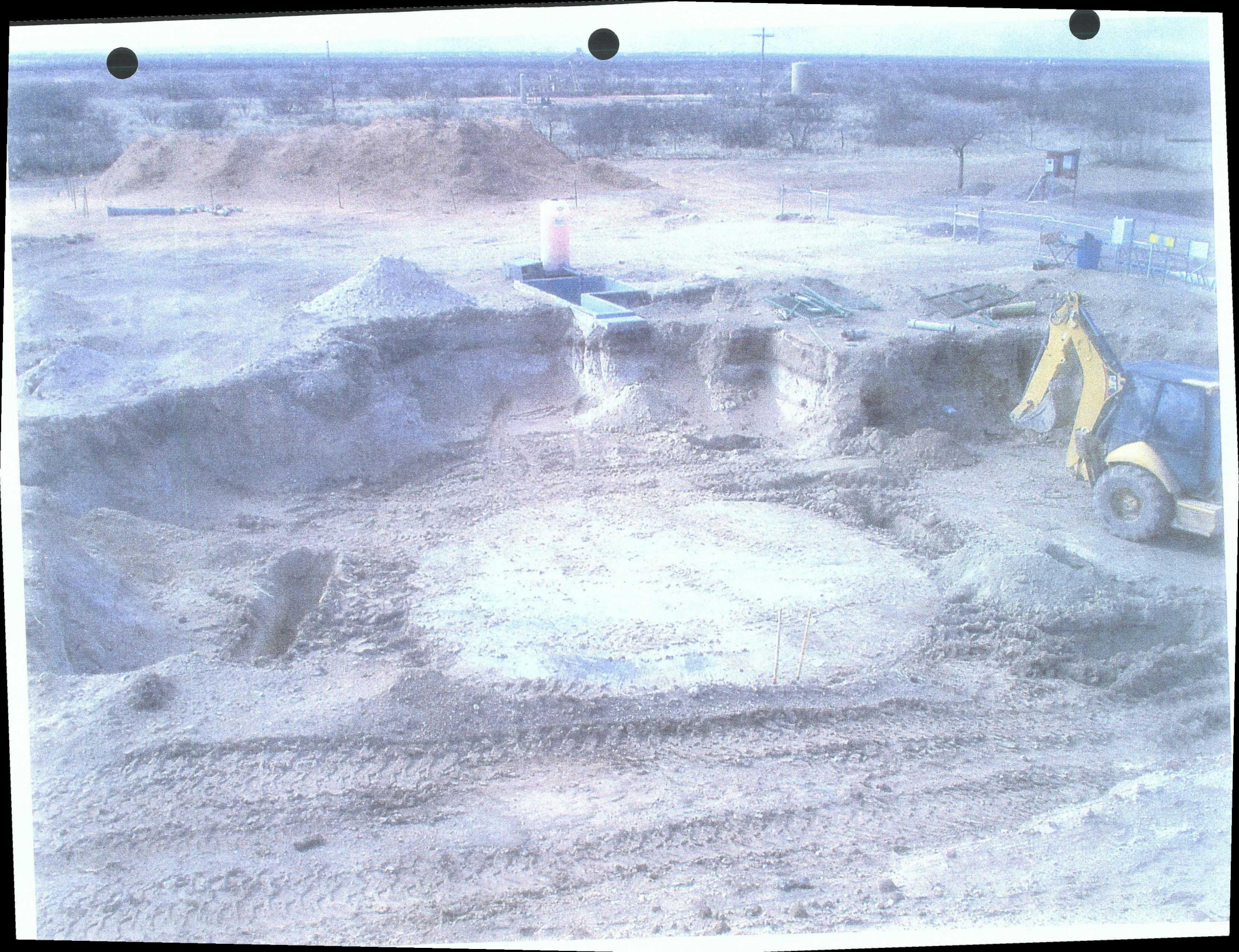
Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

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

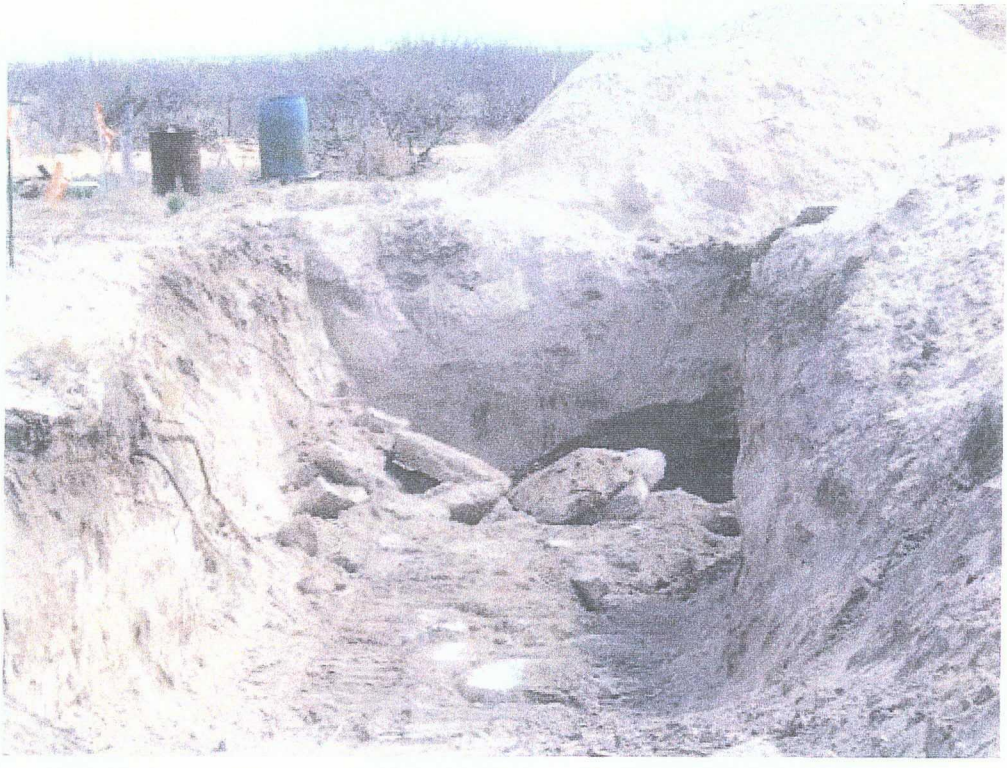
Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☒ Yes ☐ No	☒ Yes ☐ No	SB

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

CAT
950

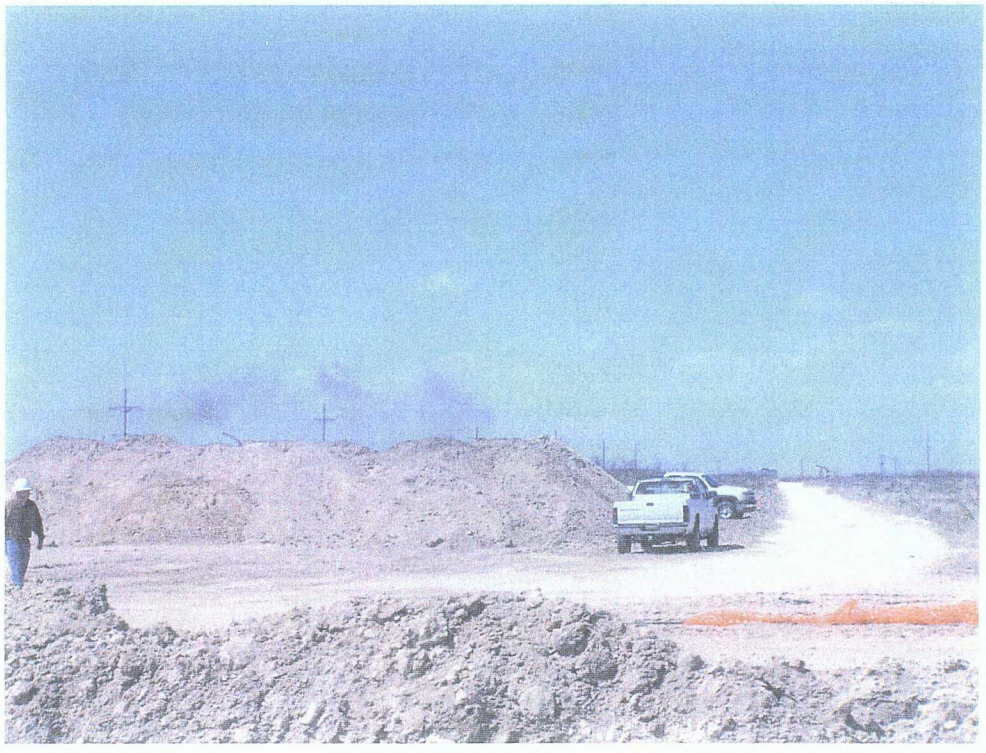


RICE OPERATING COMPANY
EME H-20 Well



1. View to south of pit with tank bottoms (4/9/07).

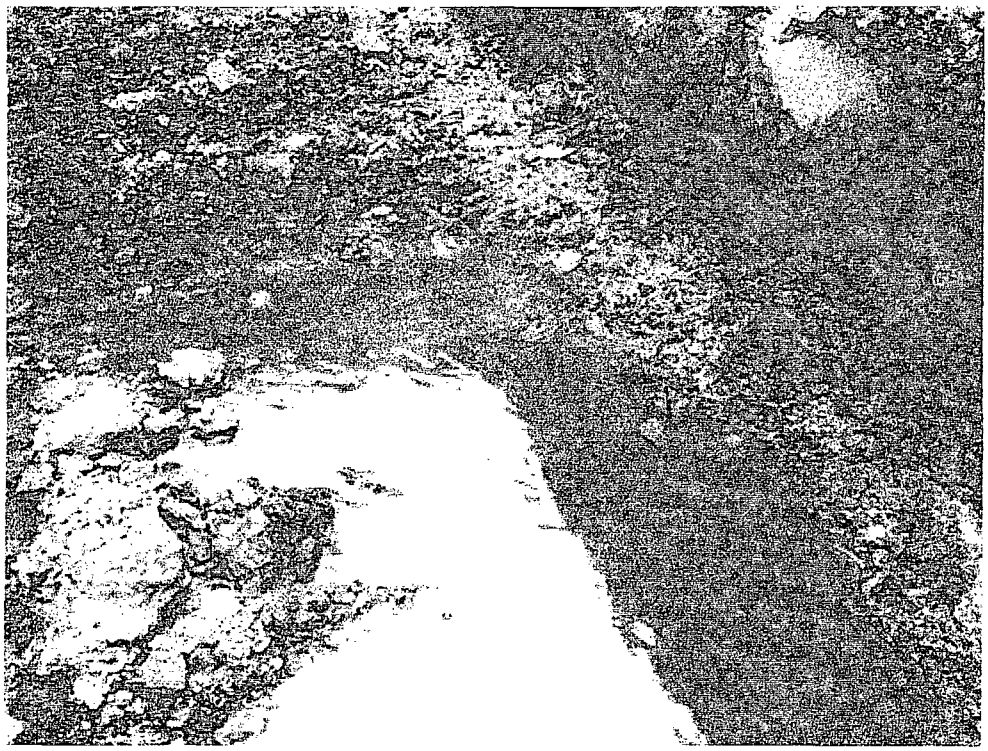
2. View to southeast of backfilled pit (4/9/07).



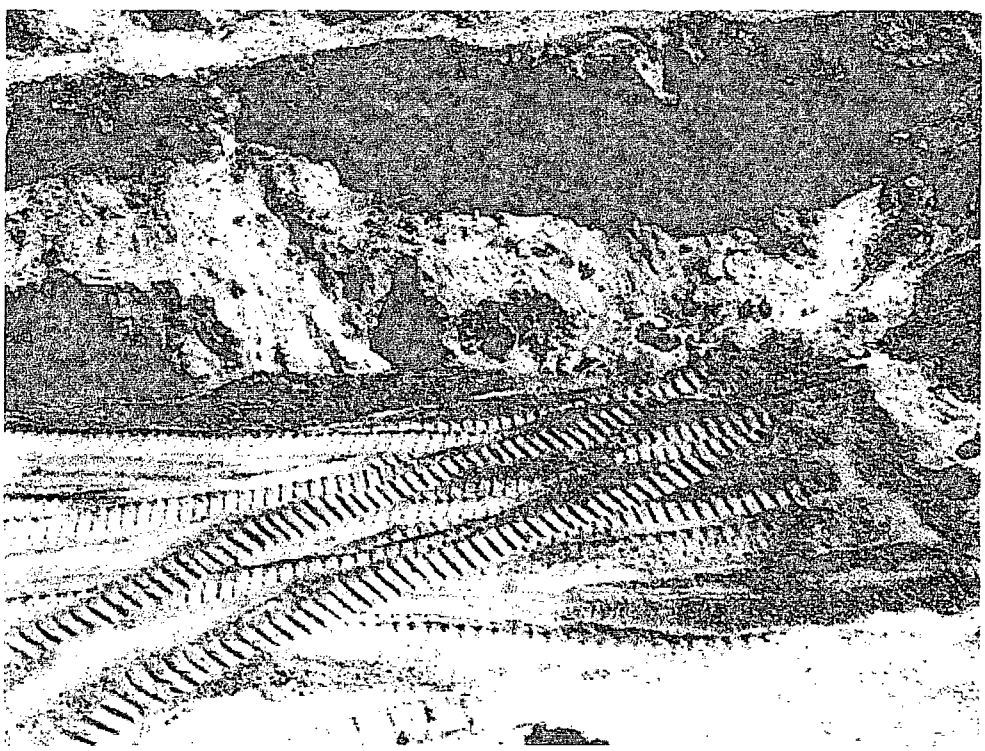
3. View to northwest of clean stockpiled soil (4/10/07).

4. View to south of excavation (4/12/07).

RICE OPERATING COMPANY
EME H-20 Well



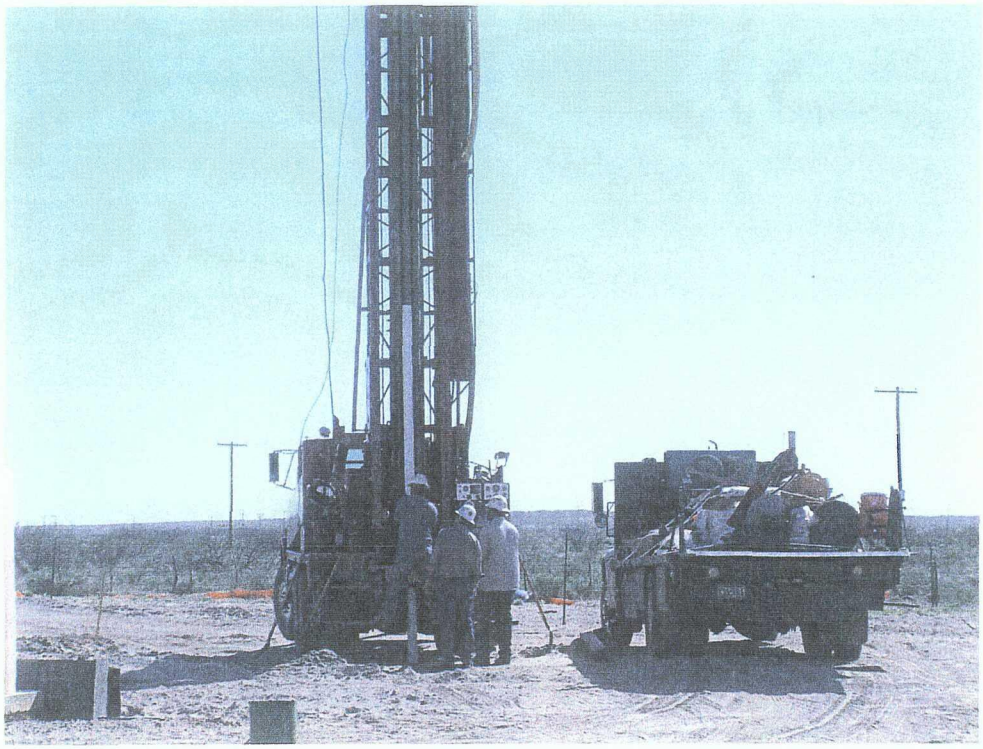
5. View of exposed groundwater (4/13/07).



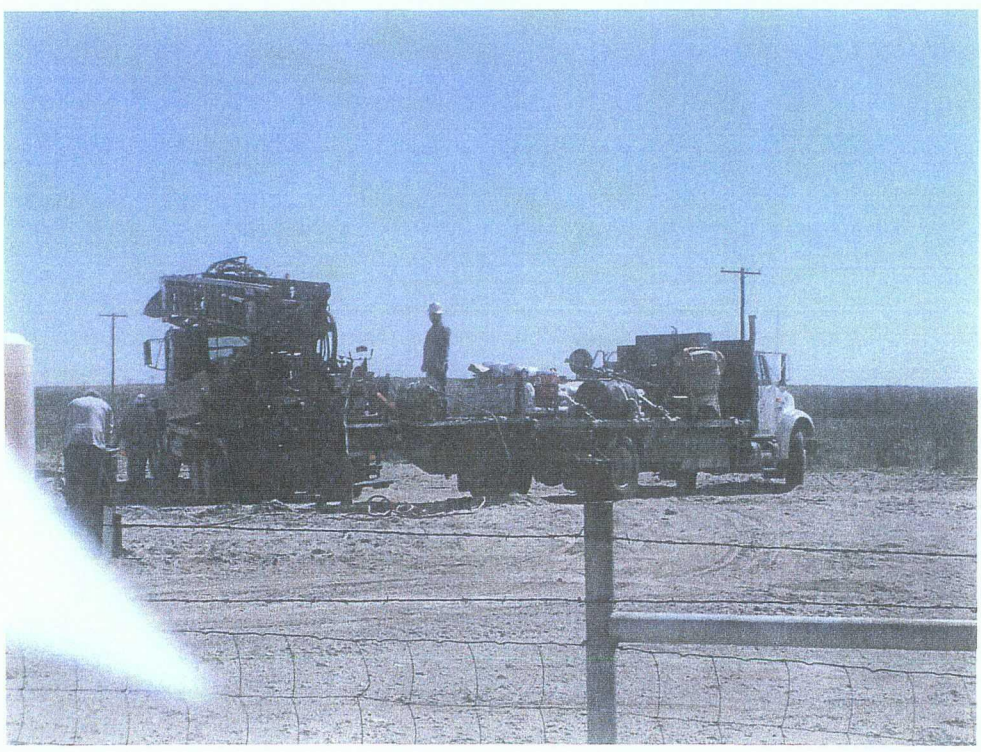
6. View of clean sand covering groundwater (4/13/07).

7. View to east of clean sand up to 20' bgs (4/16/07).

8. View to northwest of soil blending (4/19/07).

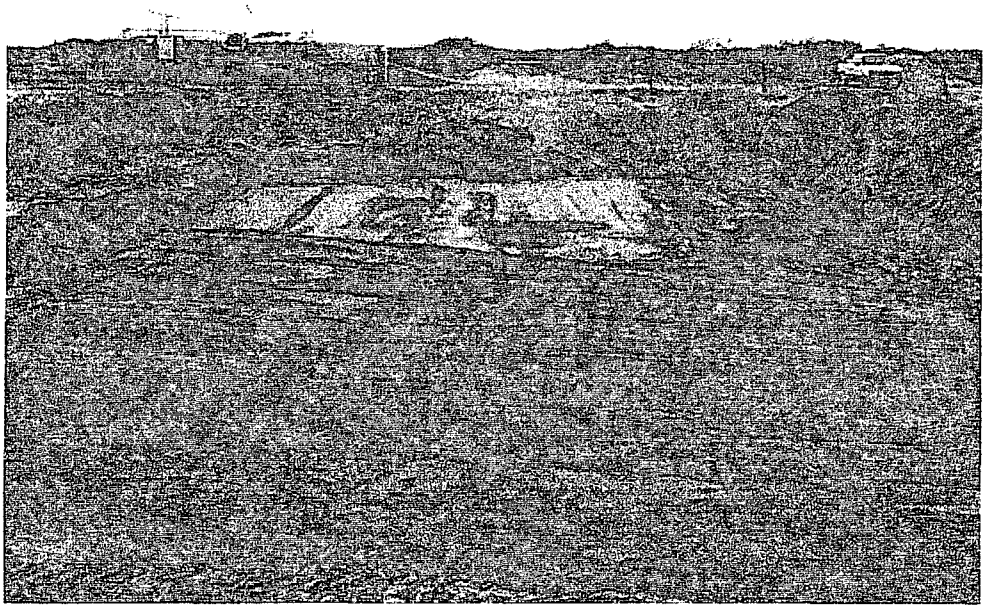


9. View to northeast of monitoring well installation (4/20/07).

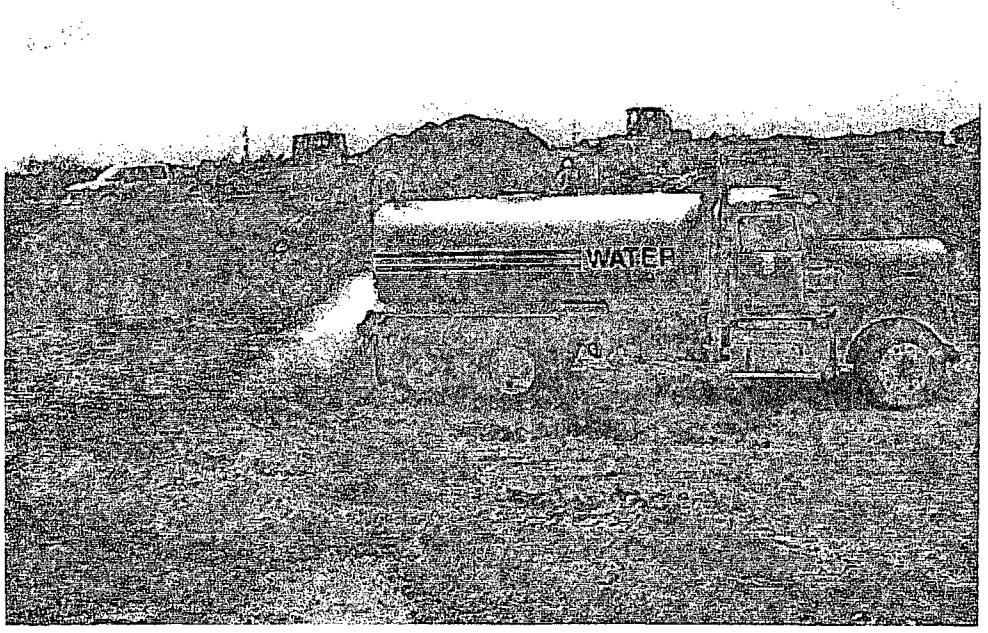


10. View of monitoring well development (4/20/07).

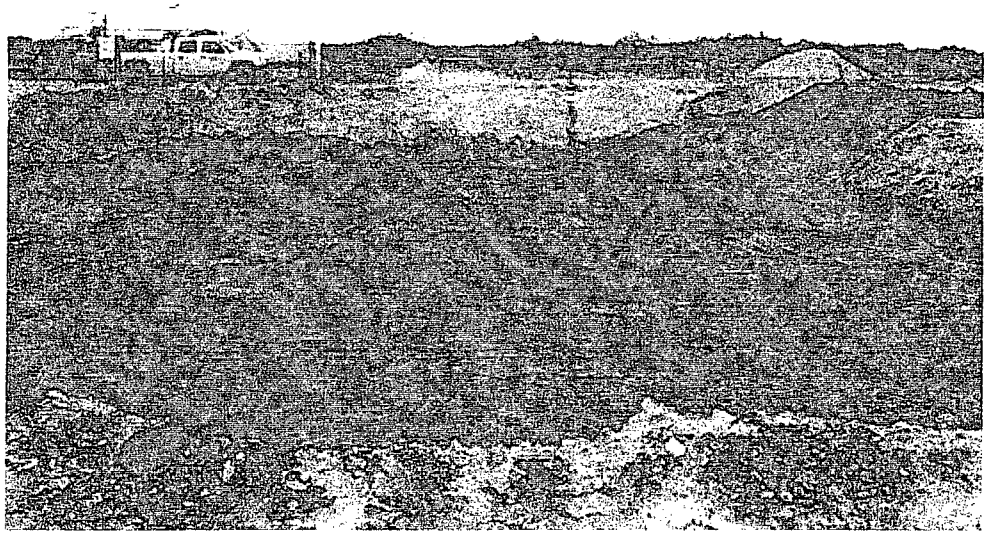
RICE OPERATING COMPANY
EME H-20 Well



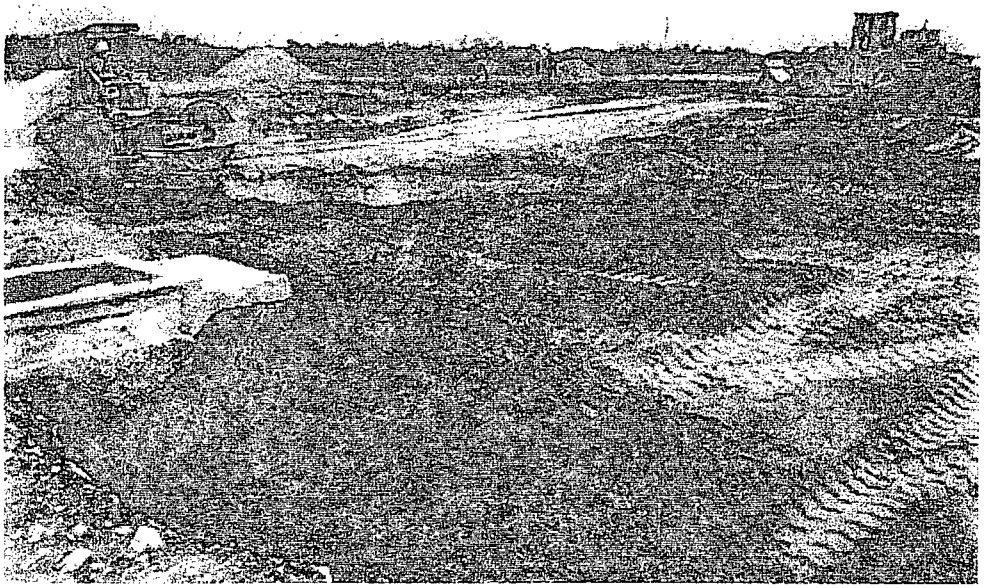
11. View to west of excavation backfilled to 6 ft. bgs (5/14/07).



12. View of clay installation (5/14/07).



13. View to west of clay layer prior to compaction test (5/15/07).



14. View to northwest of topsoil installation (5/17/07).

NEW MEXICO ONE CALL
Locate Request Confirmation

Ticket #:2007142212 Reason Code:STANDARD LOCATE
Work to Begin Date: 04/06/2007 Time: 10:36:00 AM

CALLER INFORMATION

HENRY MULLINGS Excavator Type:CONTRACTOR
OCOTILLO ENVIRONMENTAL Tel.:(505)393-6371

DIG LOCATION

City:RURAL LEA
Subdivision:
Address : To:
Street : WELL EMEH #020
Nearest Intersecting Street :

Second Intersecting Street :

Additional Dig Information:
EXCAVATING CONTAM SOIL === FRM MONUMENT FROM
MONUMENT CAFE - S ON HWY 8 4.0MI -T/R ON LEASE RD
- W 0.4MI - T/L 0.3MI TO LOCATION ON L SIDE OF RD
===SPOT 1000FT IN ALL DIRECTIONS OF WELL

Remarks:

Township: 20S Range: 37E Section 1/4: 20 SE
Township: 20S Range: 37E Section 1/4: 20 SW
Township: 20S Range: 37E Section 1/4: 20 NE
Township: 20S Range: 37E Section 1/4: 20 NW

Type of Work: OIL/GAS-PIPELINE CONSTRUCTION

The following utility owners have been notified of
your proposed excavation site:
CHEVRON-HOBBS
PLAINS PIPELINE- EOTT (LINK)
LINKENERGY (EOTT)
EL PASO NATURAL GAS CO - PLAINS
DCP MIDSTREAM - EUNICE
PLAINS PIPELINE, LP
DYNEGY-MONUMENT
RICE-EME
SOUTHERN UNION GAS SERVICES
XTO ENERGY

IMPORTANT CONFIRMATION NOTICE

Your fax request has been received and processed. It is your responsibility to review the information provided on this faxback confirmation ticket and ensure it has been correctly interpreted from

your request. Notify us immediately of any corrections or errors. Acceptance of this faxback confirmation ticket means you accept responsibility for the accuracy of the information contained in the ticket and you agree to indemnify New Mexico One Call Systems, Inc. of all liability, claims, fees, or damages, including reasonable attorney fees arising from or resulting from the use of the information provided on this confirmation ticket.

New Mexico Law requires you to wait two working days from the date and time of this confirmation notice before you begin excavation. This request is valid for ten working days. Only the facility owners listed on this ticket will be notified.

Ocotillo
ENVIRONMENTAL

2425 French Drive Hobbs, NM 88240
Phone:(505) 393-2926
Fax: (505) 393-

VOC Field Test Report Form

PID Meter Reading & Calibration

Model No. M5-BAT01 **Serial No. SM106-002788**

Lot No.415401C **Gas Composition: Isobutylene 100 ppm/ Air: balance**

Fill Date: **Exp. Date: 7/26/2007**

Accuracy: +/- 5% **Calibration Completion: 100%**

Operator	Site Name	Unit	Section	Township	Range
Rice	EME SWD H-20	H	20	20S	37E

Sample	PID Reading	Sample	PID Reading
SS-1	90		
SS-2	339		
SS-3	100		
East Wall Comp	102		
North Wall Comp	127		
South Wall Comp	228		
West Wall Comp	178		

I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Signature: Date: 4/13/07

Ocotillo ENVIRONMENTAL

2425 French Drive Hobbs, NM 88240
Phone:(505) 393-2926
Fax: (505) 393-

VOC Field Test Report Form

PID Meter Reading & Calibration

Model No. M5-BAT01 **Serial No. SM106-002788**

Lot No.415401C **Gas Composition: Isobutylene 100 ppm/ Air: balance**

Fill Date: **Exp. Date: 7/26/2007**

Accuracy: +/- 5% **Calibration Completion: 100%**

Operator	Site Name	Unit	Section	Township	Range
Rice	EME SWD H-20	H	20	20S	37E

Sample	PID Reading	Sample	PID Reading
SS-4	16		
SS-5	5		
SS-6	4		
SS-7	3		
SS-8	2		
Staged Soil #1	42		
Staged Soil #2	177		
Staged Soil #3	55		
Staged Soil #4	21		
Staged Soil #5	28		
Staged Soil #6	22		

I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Signature: Date: 4/16/07

Ocotillo
ENVIRONMENTAL

2425 French Drive Hobbs, NM 88240
Phone:(505) 393-2926
Fax: (505) 393-

VOC Field Test Report Form

PID Meter Reading & Calibration

Model No. M5-BAT01	**Serial No. SM106-002788**
Lot No.415401C	**Gas Composition: Isobutylene 100 ppm/ Air: balance**
Fill Date:	**Exp. Date: 7/26/2007**
Accuracy: +/- 5%	**Calibration Completion: 100%**

Operator	Site Name	Unit	Section	Township	Range
Rice	EME SWD H-20	H	20	20S	37E

Sample	PID Reading	Sample	PID Reading
Staged Soil #7	5		
Staged Soil #8	43		
Staged Soil #9	4		
Staged Soil #10	6		

I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Signature: Date: 5/14/07

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: Well EME14 # 2-D Date: 4/9/07

On-Site Supervisor: Cassie Hobbs

Daily Activities: deepen burial pit, fencing, bury Concrete, cleared areas for soil staging, removed tank bottoms from bottom of excavation; backfill burial pit, transfer contaminated soil to east side of excavation

Safety Subject or Concerns During Workday:

- ☐ Personal Protective Equipment
- ☐ Fall Protection
- ☐ Hydrogen sulfide
- ☐ Lifting/Crane Rigging
- ☐ High Noise Level
- ☒ Trenching/Shoring
- ☐ Permit-Required Confined Space
- ☐ Fire Protection
- ☐ Electrical Hazards
- ☐ Hazardous Materials
- ☐ Lockout/Tagout
- ☐ Respiratory Protection
- ☐ Welding, Cutting/Hotwork
- ☒ Other specify below

Other:
fencing around excavation, discuss project start-up and location of nearby wells.

Employees Present: (Signature)

Diana Martinez

MARVIN LEWIS

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: EME H-20 Date: 4/10/07

On-Site Supervisor: Cindy Crain / Cassie Hobbs

Daily Activities: Excavation, Blending Soil

Safety Subject or Concerns During Workday:

- ☐ Personal Protective Equipment
- ☐ Fall Protection
- ☐ Hydrogen sulfide
- ☐ Lifting/Crane Rigging
- ☐ High Noise Level
- ☑ Trenching/Shoring
- ☐ Permit-Required Confined Space
- ☐ Fire Protection
- ☐ Electrical Hazards
- ☐ Hazardous Materials
- ☐ Lockout/Tagout
- ☐ Respiratory Protection
- ☐ Welding, Cutting/Hotwork
- ☐ Other specify below

Other:

Employees Present: (Signature)

Cindy Crain

Cassie Hobbs

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: Rice - Earth #20 Date: 4/11/07

On-Site Supervisor: Cassie Hobbs

Daily Activities: Slope west side of excavation, continue to remove contaminated soil and stage in field North of location. Continue to sample walls at 5' depth intervals to 20'

Safety Subject or Concerns During Workday:

- ☐ Personal Protective Equipment
- ☐ Fall Protection
- ☐ Hydrogen sulfide
- ☐ Lifting/Crane Rigging
- ☐ High Noise Level
- ☐ Trenching/Shoring
- ☐ Permit-Required Confined Space
- ☐ Fire Protection
- ☐ Electrical Hazards
- ☐ Hazardous Materials
- ☐ Lockout/Tagout
- ☐ Respiratory Protection
- ☐ Welding, Cutting/Hotwork
- ☒ Other specify below

Other: Environ. Safety, Fall Safety

Employees Present: (Signature)

Cassie Hobbs

Ocotillo Environmental
P.O. Box 1616 • Hobbs, NM 88241
Phone: (505) 392-6371

Tail-Gate Safety Meeting

Time 8:45 Date 4/11/07

Safety Topic Equipment safety, fall safety

NAME:

Chuck L
Vern Tso
Jerry Flores
Cassie Hobbs
W. Hardy
Tracy Ezz
Robert McClure
Cindy Crain
Tony Ortiz

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: Rice - EME H #20 Date: 4/12/07

On-Site Supervisor: Classie Hector.

Daily Activities: remove impacted soil from tank area. hauled soil to landfarm haul clean soil from landfarm to location

Safety Subject or Concerns During Workday:

- [x] Personal Protective Equipment
- [ ] Fall Protection
- [ ] *Hydrogen sulfide*
- [ ] Lifting/Crane Rigging
- [ ] High Noise Level
- [ ] Trenching/Shoring
- [ ] Permit-Required Confined Space
- [ ] Fire Protection
- [ ] Electrical Hazards
- [ ] *Hazardous Materials*
- [ ] Lockout/Tagout
- [ ] Respiratory Protection
- [ ] Welding, Cutting/Hotwork
- [ ] Other specify below

Other: Drive Safety

Employees Present: (Signature)

[signature]
[signature]
[signature]
[signature]
Wendell Woodruff
[signature]
Edmond [illegible]
Robert [illegible]
[signature]
[signature]

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: EMEH #20 Date: 4/13/17

On-Site Supervisor: Jesse Hobbs

Daily Activities: continue to excavate and haul away contaminated soil to landfarm.

Safety Subject or Concerns During Workday:

- ☐ Personal Protective Equipment
- ☐ Fall Protection
- ☐ Hydrogen sulfide
- ☐ Lifting/Crane Rigging
- ☐ High Noise Level
- ☐ Trenching/Shoring
- ☐ Permit-Required Confined Space
- ☐ Fire Protection
- ☐ Electrical Hazards
- ☐ Hazardous Materials
- ☐ Lockout/Tagout
- ☐ Respiratory Protection
- ☐ Welding, Cutting/Hotwork
- ☒ Other specify below

Other:
working in high wind conditions during with limited visibility and winds gusts of 60-70 mph

Employees Present: (Signature)

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: EMEH #20 Date: 4/16/07

On-Site Supervisor: Cassie Hobbs

Daily Activities: Re-Late staged soil, sample staged soil

Safety Subject or Concerns During Workday:

- ☐ Personal Protective Equipment
- ☐ Fall Protection
- ☐ Hydrogen sulfide
- ☐ Lifting/Crane Rigging
- ☐ High Noise Level
- ☐ Trenching/Shoring
- ☐ Permit-Required Confined Space
- ☐ Fire Protection
- ☐ Electrical Hazards
- ☐ Hazardous Materials
- ☐ Lockout/Tagout
- ☐ Respiratory Protection
- ☐ Welding, Cutting/Hotwork
- ☒ Other specify below

Other: Static Electricity, Safety Belts, people on location while equipment is moving

Employees Present: (Signature)

Penny Lunn

[signature]

[signature]

Cassie Hobbs

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: CMEH #20 Date: 4/16/07

On-Site Supervisor: Cassie Hobbs

Daily Activities: move staged soil, submitted samples to lab

Safety Subject or Concerns During Workday:

- ☐ Personal Protective Equipment
- ☐ Fall Protection
- ☐ Hydrogen sulfide
- ☐ Lifting/Crane Rigging
- ☐ High Noise Level
- ☐ Trenching/Shoring
- ☐ Permit-Required Confined Space
- ☐ Fire Protection
- ☐ Electrical Hazards
- ☐ Hazardous Materials
- ☐ Lockout/Tagout
- ☐ Respiratory Protection
- ☐ Welding, Cutting/Hotwork
- ☒ Other specify below

Other: Working safely outdoors in hot weather (dehydration, heat stroke) & high wind advisory

Employees Present: (Signature)

[signature]

[signature]

RICE OPERATING CO.
DAILY TAILGATE SAFETY MEETING
TAILGATE SAFETY MEETING SHEET TO BE FILLED OUT AND TURNED IN DAILY FOR SITE

Work Site EME H-20 Date 4/30/07

On-Site Supervisor Cindy Crain

Daily Activities Monitoring well installation and development
Bleeding Clean and impacted soil

Safety Subject or Concerns During Workday

(✓) Personal Protective Equipment
( ) Fall Protection
( ) Hydrogen Sulfide
( ) Lifting/Crane Rigging
( ) High Noise Level
( ) Trenching/Shoring
( ) Permit-Required Confined Space
( ) Fire Protection
( ) Electrical Hazards
( ) Hazardous Materials
( ) Lockout/Tagout
( ) Respiratory Protection
( ) Welding/Cutting/Hotwork
( ) Other- Specify Below

Other:

Employees Present (Signature)

Cody Crain

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: FINE SWD H-20 Date: 5/14/07

On-Site Supervisor: Cassie Hobbs

Daily Activities: Back fill excavation with 14' of blended staged soil, compacting every 3' compacted soil and covered with 1.5' clay layer.

Safety Subject or Concerns During Workday:

- ☒ Personal Protective Equipment
- ☐ Fall Protection
- ☐ Hydrogen sulfide
- ☐ Lifting/Crane Rigging
- ☐ High Noise Level
- ☐ Trenching/Shoring
- ☐ Permit-Required Confined Space
- ☐ Fire Protection
- ☐ Electrical Hazards
- ☐ Hazardous Materials
- ☐ Lockout/Tagout
- ☐ Respiratory Protection
- ☐ Welding, Cutting/Hotwork
- ☒ Other specify below

Other:

Equipment Safety, awareness of other people on location

Employees Present: (Signature)

[signature]

[signature]

[signature]

RICE OPERATING CO

DAILY TAIL GATE SAFETY MEETING

TAIL GATE SAFETY MEETING SHEET TO BE FILLED OUT EACH DAY FOR SITE AND TURNED IN DAILY

Work Site: EME SWD #-20 Date: 3/15/07

On-Site Supervisor: Cassie Hobbs

Daily Activities: Crew is worked on completing Clay Liner. Density test was done on Clay Liner. Crew is spread remaining staged, burnded soil across cell.

Safety Subject or Concerns During Workday:

- ☐ Personal Protective Equipment
- ☐ Fall Protection
- ☐ Hydrogen sulfide
- ☐ Lifting/Crane Rigging
- ☐ High Noise Level
- ☐ Trenching/Shoring
- ☐ Permit-Required Confined Space
- ☐ Fire Protection
- ☐ Electrical Hazards
- ☐ Hazardous Materials
- ☐ Lockout/Tagout
- ☐ Respiratory Protection
- ☐ Welding, Cutting/Hotwork
- ☒ Other specify below

Other: Fatigue, Dehydration

Employees Present: (Signature)

Cassie Hobbs

Ocotillo **Environmental**
P.O. Box 1816 • Hobbs, NM 88241
Phone: (505) 393-6371

Tail-Gate Safety Meeting

Time 9:00 Date 5/15/07

Safety Topic Fatigue, Dehydration

NAME:

Cassie Hobbs