AP - 67

STAGE 1 & 2 WORKPLANS

DATE: Dec. 5, 2005

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

December 5, 2005

Wayne Price
NMOCD Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Via E-mail

RE: Junction D-1, T20S, R36E, Section 1, Unit D; NMOCD Case # Not Yet Assigned

Dear Mr. Price,

On behalf of Rice Operating Company, R.T. Hicks Consultants, Ltd. is pleased to submit the Stage I Abatement Plan for the above-referenced site. Text for Rice Operating Company's proposed public notice is attached to this letter. CD copies of this email follow via FedEx. If you have any questions or concerns, please do not hesitate to contact us.

Sincerely,
R.T. Hicks Consultants, Ltd.

Katie Lee

Katie Lee
Staff Scientist

Copy: Hobbs NMOCD office; Rice Operating Company;
R.T. Hicks Consultants Midland office

DRAFT FOR REVIEW

NOTICE OF PUBLICATION

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division

Notice is hereby given that pursuant to New Mexico Oil Conservation Division Regulations, the following Stage 1 Abatement Plan Proposal has been submitted to the Director of the Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

> Rice Operating Company, Carolyn Doran Haynes, Operations Engineer, Telephone (505) 393-9174, 122 West Taylor, Hobbs, New Mexico 88240, has submitted a Stage 1 Abatement Plan Revision Proposal for the Pipeline Junction EME D-1, located in Section 1, Township 20 south, Range 36 east, Lea County, New Mexico, approximately 3 miles west of Monument, New Mexico. Rice Operating Company operates a saltwater disposal pipeline at the site. Soil impacts at the site include chlorides. Groundwater samples exhibit elevated chloride concentrations. The Stage 1 Abatement Plan Proposal presents the following site soil and groundwater investigation activities: Perform a one-mile water well inventory, further delineation of the vertical and lateral extent of soil impact, and investigation of groundwater impacts.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The Stage 1 Abatement Plan Revision Proposal may be viewed at the above address or at the Oil Conservation Division District Office, 1625 N. French Drive, Hobbs, New Mexico 88240, Telephone (505) 393-6161 between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed Stage 1 Abatement Plan, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which written comments may be submitted to him.

December 5, 2005

Stage I Abatement Plan

EME D-1 Junction

R.T. Hicks Consultants, Ltd.

901 Rio Grande Blvd. NW, Suite F-142, Albuquerque, NM 87104

December 5, 2005

STAGE 1 ABATEMENT PLAN

EME D-1 JUNCTION BOX SITE
T20S, R36E, SECTION 1, UNIT LETTER D
LEA COUNTY, NEW MEXICO

Prepared for:

RICE *Operating Company*
122 West Taylor
Hobbs, New Mexico 88240

R. T. HICKS CONSULTANTS, LTD.
1909 Brunson Ave. ▵ Midland, TX 79701-6924 ▵ 432.638.8740 ▵ Fax: 413.403.9968

STAGE 1 ABATEMENT PLAN

EME D-1 JUNCTION BOX SITE

T20S, R36E, SECTION 1, UNIT LETTER D
LEA COUNTY, NEW MEXICO

Prepared for:

RICE *Operating Company*
122 West Taylor
Hobbs, New Mexico 88240

PREPARED BY:

Gilbert J. Van Deventer

GILBERT J. VAN DEVENTER
PROJECT MANAGER

DATE:

DECEMBER 5, 2005

REVIEWED BY:

Randall T. Hicks

RANDALL T. HICKS
PRINCIPAL

DATE:

DECEMBER 5, 2005

TABLE OF CONTENTS

APPENDICES

TABLES

FIGURES

PLATES

APPENDICES

1.0 EXECUTIVE SUMMARY

The D-1 Junction Box site is operated by Rice Operating Company (ROC) and is located in Township 20 South, Range 36 East, Section 1, unit letter D approximately 3 miles west of Monument, NM. This Stage 1 Abatement Plan incorporates the preliminary findings from previous investigations and contents of the previously submitted Investigation and Characterization Plan (ICP) and recommendations for additional assessment activities to satisfy the required elements of a Stage 1 Abatement Plan in accordance with New Mexico Oil Conservation Division (OCD) Rule 19.

Identification of soil and ground water impacts occurred during line replacement being performed as part of the approved Junction Box Upgrade Program in October 2004. Vadose zone samples taken from trenches show a maximum chloride concentration of 9,097 mg/kg at a depth of 12-feet below ground surface (bgs) directly beneath the former junction box. A chloride concentration of 1,120 mg/kg was analyzed from a vadose zone sample collected at 35-feet bgs in monitoring well (MW-1) located approximately 20-feet south of the former junction box, just outside of the excavated area. The depth to ground water at the site is about 35-feet below land surface. The total dissolved solids (TDS) in ground water at the on-site monitoring well is greater than 30,000 mg/L, similar to water quality in certain up gradient monitoring wells at the Climax Chemical site. Chloride, sulfate, and TDS concentrations in monitoring well MW-1 have consistently decreased since the initial sampling event.

We propose the work elements described in detail in Section 7.0 to delineate the extent and magnitude of regulated constituents of concern in the vadose zone and to determine the degree that any migration of constituents have impacted ground water quality relative to documented regional ground water impairment. The constituents of concern are chloride, sulfate, and TDS. Although existing data show that benzene, toluene, ethylbenzene, and xylenes (BTEX) are not present in the vadose zone or ground water, this proposal includes testing for these constituents. The purpose of these work elements is to assist ROC in selecting the soil and/or ground water remedy that is commensurate with any contribution from the D-1 Junction Box site to the documented regional ground water impairment. The proposed work elements are summarized below:

- Define regional ground water flow direction, potential sources of chloride in ground water and ambient ground water chemistry
- Expand our ground water characterization to include evaluation of monitoring data from other ground water investigation sites in the area (Monument Gas Plant, Climax Chemical, etc).
- Install additional soil borings and monitoring wells for evaluation of constituents of concern in the vadose zone and ground water.

When implementing any proposed remedy or investigative work, ROC will confirm that there is a reasonable relationship between the benefits created by the proposed remedy or assessment and the economic and social costs.

ROC is the service provider (operator) for the EME SWD System (The System) and has no ownership of any portion of the pipelines, wells, or facilities. The System is owned by a consortium of oil producers, (System Partners) who provide all operating capital on a percentage ownership/usage basis. Environmental projects of this magnitude require System Partner Authorization for Expenditure (AFE) approval and work begins as funds are received. In general, project funding is not forthcoming until OCD approves the work plan.

2.0 CHRONOLOGY OF EVENTS

September 28, 2004	EME D-1 junction box was removed.
October 1-7, 2004	Subsurface soil investigation with a backhoe, field test for chloride and hydrocarbon levels. This investigation indicated chloride impact to the vadose zone, however no indication of hydrocarbon impact was evident based on field screening with a photoionization detector (all readings were less than 0.1 ppm).
October 25, 2004	Accidental discharge of approximately 205 barrels (bbls) of produced water from the 4-inch pipeline suspended over the excavation. Approximately 180 bbls of produced water was recovered from within the excavation where the release was contained. Also, a temporary 4-inch poly line was installed to bypass the former junction box area.
October 27, 2004	ROC submitted a letter and C-141 Initial Report to the OCD office in Hobbs with a description of the remedial actions taken.
November 19, 2004	The site experienced another release from the pipeline approximately 52 feet north of the junction box where the temporary poly line was coupled to the existing 4-inch PVC line. The volume of this release was approximately 335 bbls and 280 bbls were recovered.
December 8, 2004	A monitoring well was installed a few feet south of the former junction box to further assess if ground water was impacted with chlorides.
December 9, 2004	ROC submitted notification to the OCD office in Hobbs documenting the further actions taken.
January 5, 2005	ROC notified the OCD office in Santa Fe that ground water impact was confirmed based on laboratory results of ground water samples analyzed from the on site monitoring well.
March 9, 2005	A junction box disclosure report was completed and will be submitted with all other 2005 junction box reports by April 1, 2006.
March 10, 2005	The bottom 6-feet of excavation was backfilled with native soil.
April 29, 2005	Trident Environmental submitted an Investigation and Characterization Plan (ICP) to address potential environmental concerns at the above-referenced site.
May 5, 2005	Mr. Daniel Sanchez of the OCD requested that ROC submit an abatement plan to the OCD pursuant to Rule 19.
July 22, 2005	A 12-inch compacted clay liner was installed at 6-feet.
July 26, 2005	The clay liner was covered with the remaining remediated soil to the surface, and contoured to drain rainwater away from the area.

3.0 BACKGROUND

3.1 Site Location and Land Use

The D-1 junction box site and release is located on state-owned land in Township 20 South, Range 36 East, Section 1, unit letter D approximately 3 miles west-southwest of Monument, NM as shown on the attached Site Location Map (Plate 1). Produced water gathered by the EME SWD System in the site area is sent to the I-1 SWD well, which is located approximately 1 mile southeast of the D-1 Junction Box site. Land in the site area is primarily utilized for crude oil, gas production, and cattle ranching. Plate 2 is a recent aerial photograph at the same scale as Plate 1 showing the land use.

According to production data records from the OCD Online database, Amerada Hess Corporation, XTO Energy, Inc., and Dynegy Midstream Services are the most active in crude oil and gas production in the area. According to the State Land Office Data Search website, grazing and agriculture rights for section D, unit letter 1 are assigned to James R. Byrd under permit no. G0-2087-0000. The same database indicates many subsurface pipelines are in the area based on the numerous right-of-way permits for El Paso Natural Gas Company, Versado Gas Processors LLC, Rice Operating Company, Public Service Company of New Mexico, Southwestern Public Service Company, Transwestern Pipeline Company, Highlands Gathering and Processing Company, EOTT Energy Pipeline LP, GPM Gas Company (Duke Energy Field Services), and Climax Chemical Company. Amerada Hess, XTO Energy, and ChevronTexaco operate area crude oil production. Based on the OCD OnGuard database the oil and gas wells listed in Table 1 below are located within a half-mile of the site.

Table 1: Oil, Gas, and Injection Wells Within ½ mile of the Site

OPERATOR	WELL NAME	WELL TYPE
AMERADA HESS CORP	NORTH MONUMENT G/SA UNIT #003	Oil
AMERADA HESS CORP	STATE D #005	Oil
DYNEGY MIDSTREAM SERVICES LTD PTR	LPG STORAGE WELL #001	LPG
AMERADA HESS CORP	NORTH MONUMENT G/SA UNIT #004	Oil
AMERADA HESS CORP	NORTH MONUMENT G/SA UNIT #005	Injection
AMERADA HESS CORP	STATE F GAS COM #002	Gas
AMERADA HESS CORP	NORTH MONUMENT G/SA UNIT #006	Oil
AMERADA HESS CORP	STATE D #006	Oil
AMERADA HESS CORP	NORTH MONUMENT G/SA UNIT #009	Oil
XTO ENERGY, INC	GRAHAM STATE NCT F #003	Oil
AMERADA HESS CORP	NORTH MONUMENT G/SA UNIT #010	Oil
XTO ENERGY, INC	GRAHAM STATE NCT F #004	Gas
DYNEGY MIDSTREAM SERVICES LTD PTR	GRAHAM STATE NCT-F #007	Injection
CHEVRON U S A INC	GRAHAM STATE NCT F #006	Oil
AMERADA HESS CORP	NORTH MONUMENT G/SA UNIT #016	Oil
AMERADA HESS CORP	NORTH MONUMENT G/SA UNIT #032	Oil

3.2 Nature of Release and Summary of Previous Work

As part of the Junction Box Upgrade Program, subsurface soil samples were collected during the removal of the D-1 junction box between October 1, 2004 and October 7, 2004, by excavation with a backhoe and field-tested for chloride and hydrocarbon levels. This investigation indicated chloride impact to the vadose zone, however no indication of hydrocarbon impact was evident based on field screening with a photoionization detector (all readings were less than 0.1 ppm). Soil sample results are depicted in Plate 3.

On October 25, 2004, the site experienced an accidental discharge of approximately 205 barrels (bbls) of produced water from the 4" pipeline suspended over the excavation. Approximately 180 bbls of produced water were recovered from within the excavation where the release was contained. Also, a temporary 4" poly line was installed to bypass the former junction box area. A water sample collected from the excavation recorded a chloride concentration of 55,182 mg/l. ROC submitted a letter and C-141 Initial Report to the OCD office in Hobbs with a description of the remedial actions taken on October 27, 2004.

On November 19, 2004, the site experienced another release from the pipeline approximately 52-feet north of the junction box where the temporary poly line was coupled to the existing 4" PVC line. The volume of this release was approximately 335 bbls and 280 bbls were recovered. On December 9, 2004, ROC submitted notification to the OCD office in Hobbs documenting the further actions taken, which included the installation of a monitoring well located a few feet south of the former junction box on December 8, 2004, to further assess if ground water was impacted with chlorides. The monitoring well (MW-1) has been sampled and analyzed for BTEX, major ions, and TDS on a quarterly basis since December of 2004. On January 5, 2005, ROC notified the OCD office in Santa Fe that ground water impact was confirmed based on laboratory results of ground water samples analyzed from the on site monitoring well.

On March 10, 2005, the bottom 6-feet of excavation was backfilled with blended soil (chloride concentration of 659 mg/kg). Due to lack of availability of clay, capping the remaining excavation with a 12-inch compacted clay liner was postponed until July 22, 2005. The remaining remediated soil was placed above the clay liner on July 26, 2005, and contoured to drain rainwater away from the area above the liner.

Photographs of the site are included in Appendix A.

4.0 GEOLOGY AND HYDROGEOLOGY

4.1 Regional and Local Geology

According to published information (Nicholson and Clebsch, 1961, Barnes, 1976, and Anderson, Jones, and Green, 1997) the site is underlain by Quaternary eolian and piedmont deposits composed of sand, silt, and gravel deposited by slopewash, and talus from the Ogallala Formation. The eolian and piedmont deposits are often calichified (indurated with cemented calcium carbonate) with caliche layers from 1- to 20-feet thick. The lithology of the eolian and piedmont deposits is very similar to that of the Ogallala since the Ogallala is the source of these re-deposited colluvial sediments. The nearest outcropping of the Ogallala Formation occurs approximately one mile north of Monument along what is known as the Llano Estacado (caprock). The thickness of the colluvium deposits and Ogallala Formation is approximately 75-feet, however it varies locally as a result of significant paleo-topography at the top of the underlying Triassic Dockum Group. Since Cretaceous Age rocks in the region have been removed by pre-Tertiary erosion, the colluvial deposits and Ogallala Formation rest unconformably on the Triassic Dockum Group. The uppermost unit of the Dockum Group is the Chinle Formation, which primarily consists of micaceous red clay and shale but also contains thin interbeds of fine-grained sandstone and siltstone. The red clays and shale of the Chinle Formation act as an aquitard beneath the water bearing colluvial deposits and therefore limit the amount of recharge to the underlying Dockum Group. The thickness of the Dockum Group is estimated at approximately 300-feet in the site area although its thickness in southern Lea County varies from 0 to 1,270-feet thick (Nicholson and Clebsch, 1961). Plate 4 shows the surface geology of the site.

Based on the lithologic log descriptions provided by the drilling contractor (Atkins Engineering Associates, Inc.) the subsurface soils are composed of clayey sand (0-4 ft), silty sand with caliche (4-11 ft), clayey sand with caliche (11-22 ft), silty sand with fractured sandstone (23-31 ft), and poorly-graded sand (31-40 ft). A lithologic log is included in the Appendix B.

4.2 Regional and Local Hydrogeology

Potable ground water used in southern Lea County is derived primarily from the Ogallala Formation (including the colluvial deposits) and the Quaternary alluvium. Lower yields have also been provided by water bearing zones within the Triassic Dockum Group in a few scattered areas within southern Lea County. No potable water is known to be derived below the Triassic Dockum Group. Water from the Ogallala and alluvium aquifers in southern Lea County is used for irrigation, stock, domestic, industrial, and public supply purposes.

Nicholsen and Clebsch (1961) found that the regional gradient of the Ogallala and interconnected colluvial aquifer in the site area generally flows toward the southeast

and the hydraulic gradient varies from approximately 0.001 to 0.01 feet/feet. Recent data from ROC sites within a mile from the D-1 junction box site (P-6, N-5, E-5, and M-5) confirm a similar potentiometric surface.

Recharge to the Ogallala aquifer occurs primarily by infiltration of precipitation at a slow rate (typically one quarter to one half inch of water per year) due to the characteristically arid climate of southern Lea County (Nicholson and Clebsch, 1961). In the Monument Area, the colluvium is recharged by both precipitation and by flow from the Ogallala Aquifer into the colluvium. Monument Springs is a surface expression of the connection between the two saturated units.

Hydraulic conductivity values are estimated between 26 and 50-feet per day and specific yields of 0.23 for the Ogallala aquifer near the site area based on limited published information (Hart & McAda, 1985). There are no surface water bodies located within a mile of the site.

Depth to ground water beneath the site area is approximately 34-feet below ground surface.

5.0 VADOSE ZONE CHARACTERISTICS

ROC conducted initial upper vadose zone delineation field activities between September 28 and October 10, 2004, as part of the Junction Box Upgrade Program. Investigation activities were conducted with a backhoe by trenching to 12-feet below ground surface (bgs) at 7 locations within 15-feet of the junction box (Plate 3). Soil samples were analyzed in the field for chlorides using field-adapted Method 9253 (QP-03). Field chlorides ranged from a concentration of 88 parts per million (ppm) at a point 15 feet south of the former junction box and 2 feet deep to 9,097 ppm at a point 12 feet bgs directly beneath the former junction box (Plate 3). Based on headspace readings obtained with a PID there was no indication of hydrocarbon impact (all readings were 0.1 ppm or less). Based on laboratory analysis of a composite soil sample of the excavated soil the chloride concentration was 659 mg/kg.

To further delineate depth of impact in the vadose zone and to assess ground water quality, a monitoring well (MW-1) was installed within a few feet of the former junction box on December 8, 2004, to a depth of 40-feet bgs. Laboratory analytical results for gas range organics (GRO) and diesel range organics (DRO) using EPA Method 8015M of a sample near the interface of the vadose zone and saturated zone indicated a GRO and DRO concentrations of less than 10 milligrams per kilogram (mg/kg) at 35-feet bgs. Chloride concentrations in the boring samples ranged from 113 mg/kg at the surface to 8,865 mg/kg at 15 feet bgs, and then decreasing to 1,113 mg/kg at 35 feet bgs. A more detailed description of the lithology, field chloride tests, and well construction is shown on the boring log in Appendix B.

Copies of the laboratory analytical reports and chain of custody forms are included in Appendix C.

6.0 GROUND WATER QUALITY

6.1 Monitoring Program

Monitoring well (MW-1) has been sampled on a quarterly basis for major ions, TDS, and BTEX. A summary of historical analytical results and ground water elevations is listed in Table 2. Analytical results for the most recent sampling event conducted on October 19, 2005, are also depicted in graphical format in Figure 1. A copy of the laboratory analytical report and chain of custody form for the most recent ground water sampling event is included in Appendix C.

Table 2: Summary of Ground Water Monitoring Results (MW-1)

Sample Date	Depth to Groundwater (feet BTOC)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
12/21/04	37.20	**29,400**	**3,000**	**56,800**	<0.001	<0.001	<0.001	<0.001
02/09/05	36.20	**29,200**	**5,220**	**54,200**	<0.001	<0.001	<0.001	<0.001
05/03/05	35.27	**22,900**	**4,270**	**43,600**	<0.001	<0.001	<0.001	<0.001
08/13/05	37.74	**18,600**	**3,900**	**34,800**	<0.001	<0.001	<0.001	<0.001
10/19/05	34.70	**15,600**	**3,810**	**31,900**	<0.001	<0.001	<0.001	<0.001
WQCC Standards		250	600	1000	0.01	0.75	0.75	0.62

6.2 Hydrocarbons in Ground Water

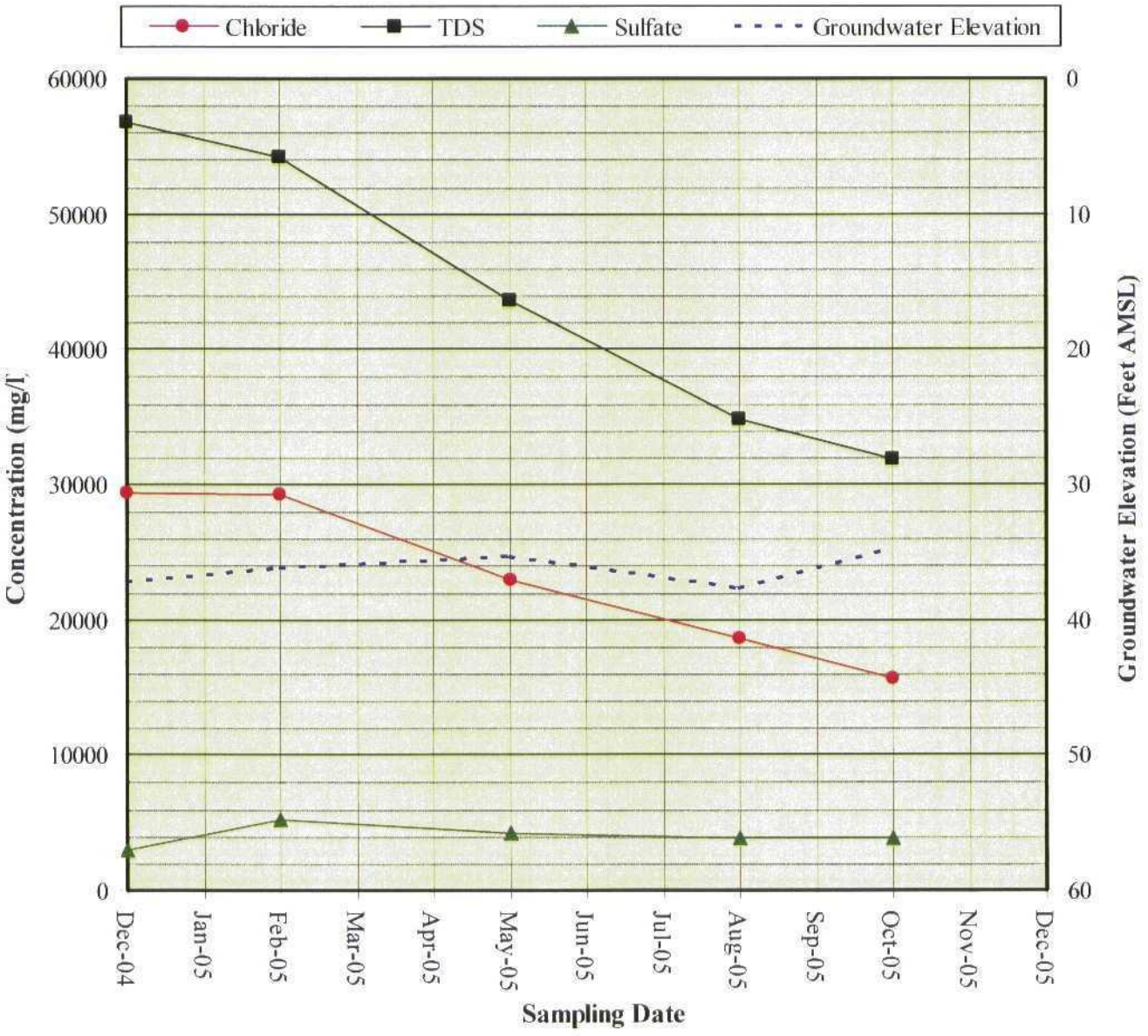
All BTEX concentrations in monitoring well MW-1 have been below the laboratory detection limit of 0.001 mg/L in every sampling event.

6.3 Other Constituents of Concern

- Chloride concentrations in monitoring well MW-1 (15,600 mg/L) exceed the WQCC standard of 250 mg/L.
- Monitoring well MW-1 exceeds the WQCC standard of 600 mg/L for sulfate (3,810 mg/L).
- The TDS concentration in monitoring well MW-1 (31,900 mg/L) exceeds the WQCC standard of 1,000 mg/L.

Background and ambient concentrations of these compounds have not been established at this time. Chloride, sulfate, and TDS concentrations in MW-1 have consistently decreased since the initial sampling event. No correlations between chloride/sulfate/TDS concentrations and changes in ground water levels are evident.

Figure 1
Chloride, Sulfate, TDS, and Groundwater Elevation Values Versus Time (MW-1)



7.0 STAGE 1 ABATEMENT PLAN

We will first determine if the documented releases from the D-1 junction box have caused a measurable ground water impact relative to any regional ground water impairment. If this site caused, contributed to, or could contribute to ground water impairment, we must collect sufficient data to design an appropriate remedy. We propose collecting regional ground water data and a subsequent field program at the site to make this determination and collect the data required for any necessary remedy.

7.1 Evaluate Constituents of Concern in the Vadose Zone

Soil borings will be completed to delineate the lateral and vertical extent of impact to the vadose zone. Soil samples will be collected at regular intervals no less than five feet from ground surface to the water table. We will screen each sample in the field using a PID and field test each sample for chlorides. Soil lithology and the presence of any observed staining or odor will be recorded. The following concentrations of analytes will be used to delineate the lateral and vertical extent of impact to the vadose zone:

- 100 ppm PID, and/or 10 mg/kg benzene, and 50 mg/kg BTEX
- 250 ppm chloride

The number and placement of the soil borings is dependent on determinations made in the field of the delineation parameters listed above.

7.2 Define Regional Ground Water Flow Direction, Potential Sources of Chloride in Ground Water and Ambient Ground Water Chemistry

State records will be examined for evidence of releases up gradient from the D-1 site. We also plan to examine records at the OCD, NMED, Office of the State Engineer (OSE) and the US Geological Survey (USGS) for water quality and water level data. This file search will provide a better understanding of ground water flow and ambient (and possibly background) water chemistry. Plate 5 shows the locations of nearby water supply and monitoring wells obtained from ROC, OCD, NMED, OSE, and USGS databases. Further examination of data for these wells will assist us in understanding the contribution of the D-1 site to the observed regional chemistry. Our characterization of ground water will include evaluation of monitoring data from other ground water investigation sites in the area, including the Monument gas plant and former Climax Chemical facility. The water well inventory will also assist in identifying the location of potential water supply receptors (domestic, irrigation, or livestock wells).

Soil boring samples and ground water samples from the existing monitoring well suggest that the junction box release may have contributed to a release of chlorides and TDS into ground water. For further characterization as to the extent of the release from the junction box, we will construct a second monitoring well between 200-feet and 300-feet down gradient (southeast) from the site. Since regional data is insufficient to determine the ambient, or background, chloride concentration in this area, we will also complete an up gradient monitoring well. We will complete these monitoring wells in accordance with OCD and industry standard methods with 5 feet of well screen above the water table and a minimum of 10 feet of well screen below the water table. We plan to drill to the underlying Triassic red beds (Chinle Formation) for the up gradient monitoring well to define the saturated thickness in the area.

7.3 Corrective Action/Closure

The information gathered from the results of the additional assessment actions described above will be evaluated and utilized to design a soil and, if necessary, a ground water remedy. The remedy that offers the greatest environmental benefit while causing the least environmental impairment will be selected. Such recommendations and findings will be presented to OCD in a subsequent Stage 2 Abatement Plan. When evaluating any proposed remedy or investigative work, ROC will confirm that there is a reasonable relationship between the benefits created by the proposed remedy or assessment and the economic and social costs.

8.0 QUALITY ASSURANCE / QUALITY CONTROL

Sampling and analytical procedures shall be performed in accordance with Title 20 NMAC 6.3107.B and Section 103 of the Water Quality Standards for Interstate and Intrastate Streams in New Mexico (20 NMAC 6.1).

Soil samples will be screened in the field using a PID (QP-07) and field tested for chlorides (QP-03). Soil samples with a PID response of 100 ppm or greater will be submitted to the laboratory for analysis of BTEX. Ten percent (10%) of the soil samples will be submitted for laboratory analysis of chlorides as confirmation of our field analysis.

Ground water samples will be collected in accordance with procedures explained in QP-04 and QP-05, and analyzed for BTEX, major ions, and TDS.

Specific quality procedures for collecting and analyzing soil and ground water samples are included in Appendix D.

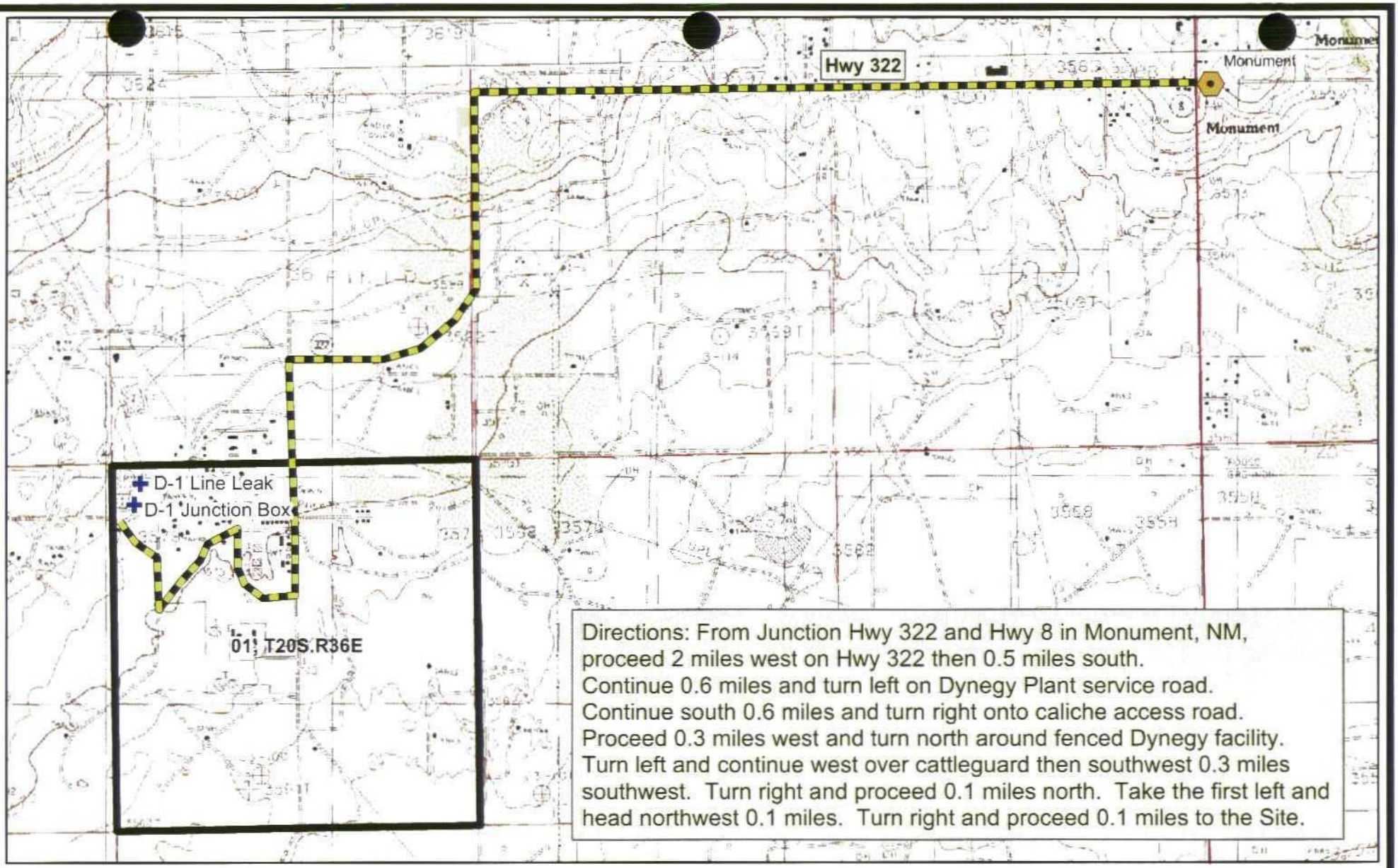
9.0 PROPOSED SCHEDULE OF ACTIVITIES

The proposed schedule of activities is listed in Table 3 below.

Table 3: Proposed Schedule of Activities

Task	Date of Task Completion
Submission of Progress Reports to OCD	Quarterly beginning 30 days from approval of Stage 1 Abatement Plan by OCD
Ground water Monitoring	Continued on a quarterly basis.
Water well inventory and evaluation of constituents of concern in the vadose zone and ground water.	Within 45 days of Stage 1 Abatement Plan approval by OCD
Submission of a Stage 2 Abatement Plan	Within 45 days of completion of tasks summarized in the Stage 1 Abatement Plan

PLATES



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Site Location Map: D-1 Leak and Jct.	Plate 1
	Rice Operating Company	Nov. 2005

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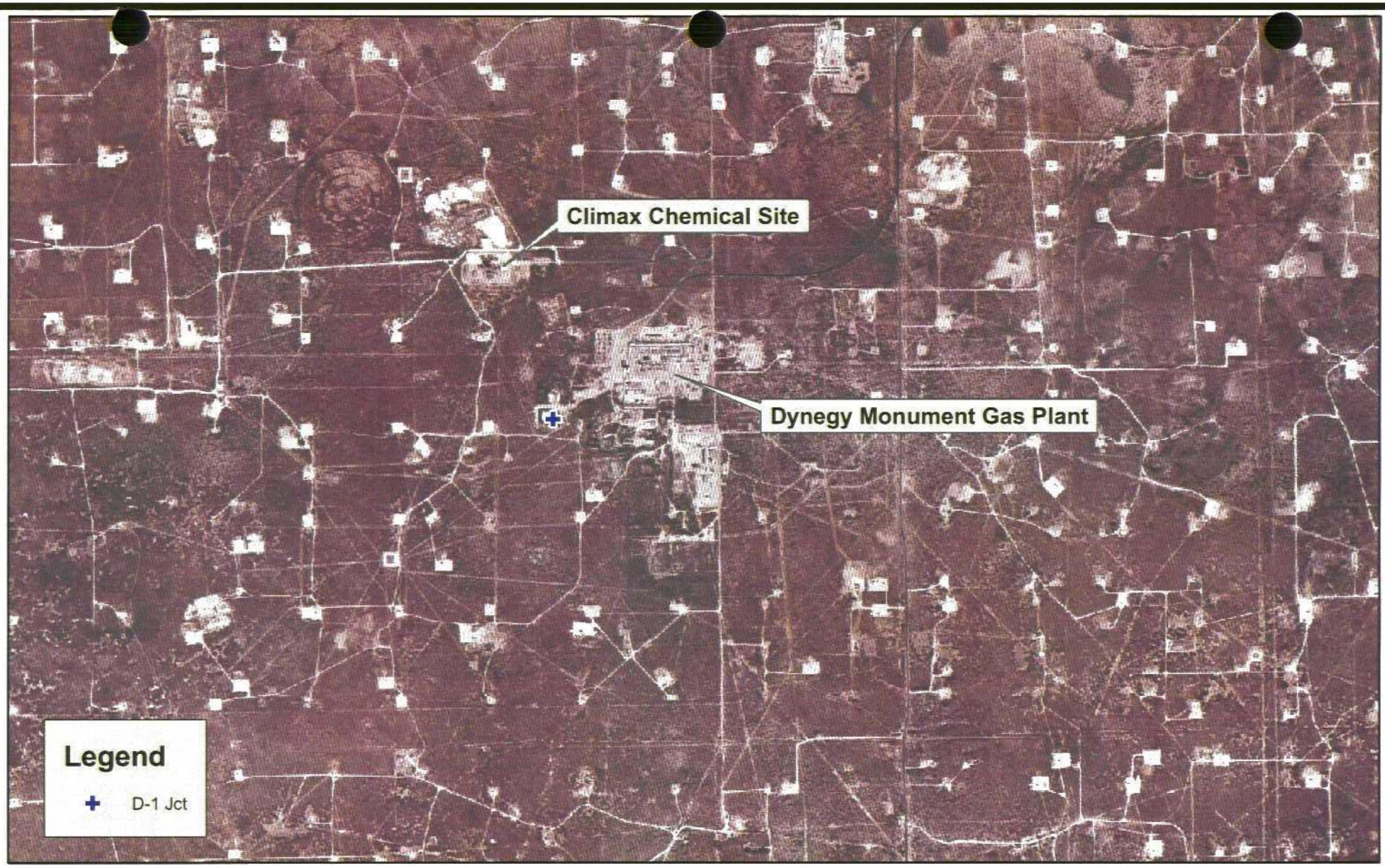

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Aerial Photo: D-1 Stage 1 Abatement Plan	Plate 2
	Rice Operating Company	Nov. 2005

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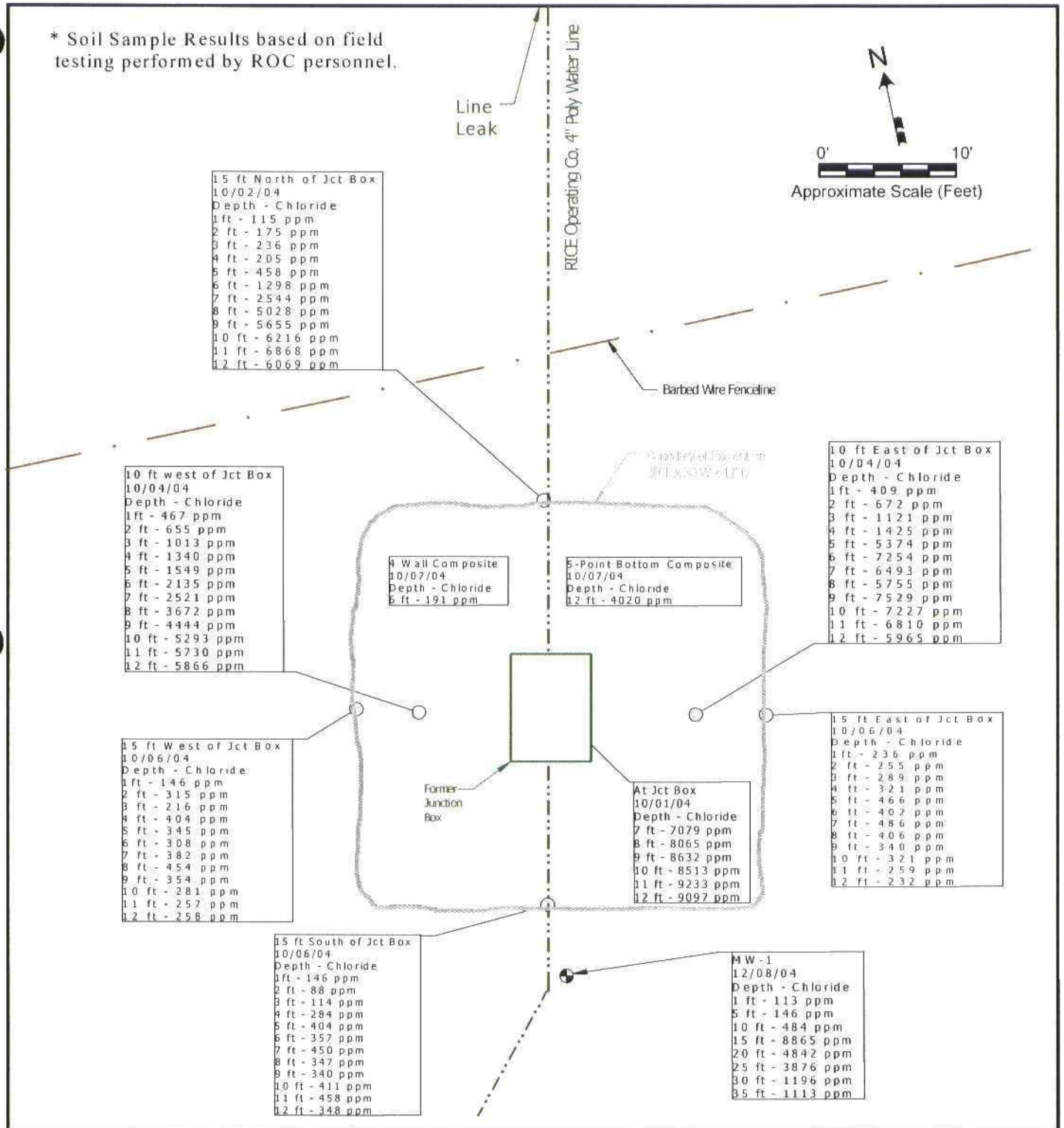
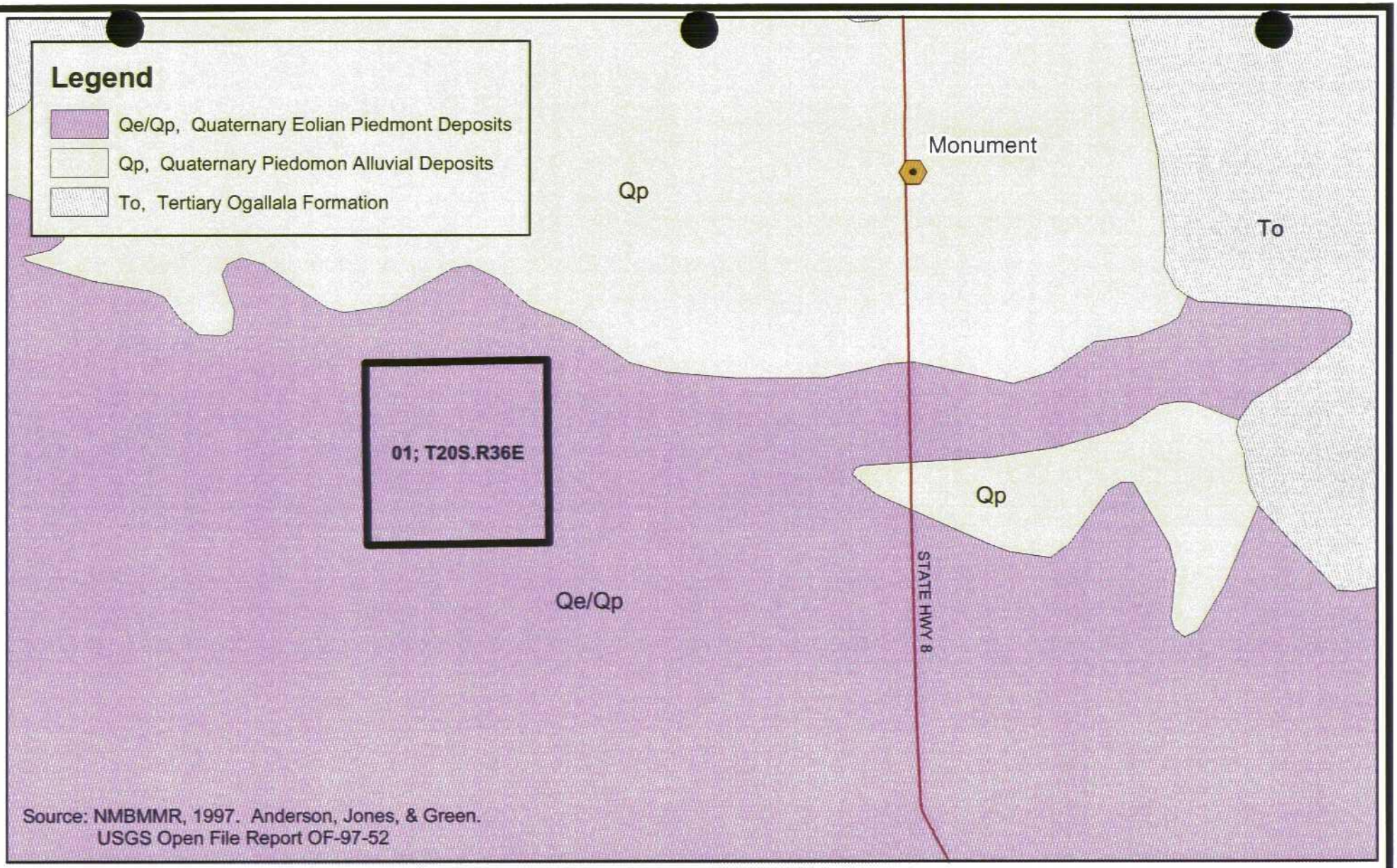


R. T. HICKS CONSULTANTS, LTD. 1909 Brunson Ave., Midland TX 79701	Site: EME D-1 Junction Box Sampling Dates: October & December, 2004 Author: GJV Approximate Scale: 1 inch = 10 feet	PLATE 3 SOIL SAMPLE RESULTS D-1 JUNCTION BOX



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Geologic Map: D-1 Stage 1 Abatement Plan

Rice Operating Company

Plate 4

Nov. 2005

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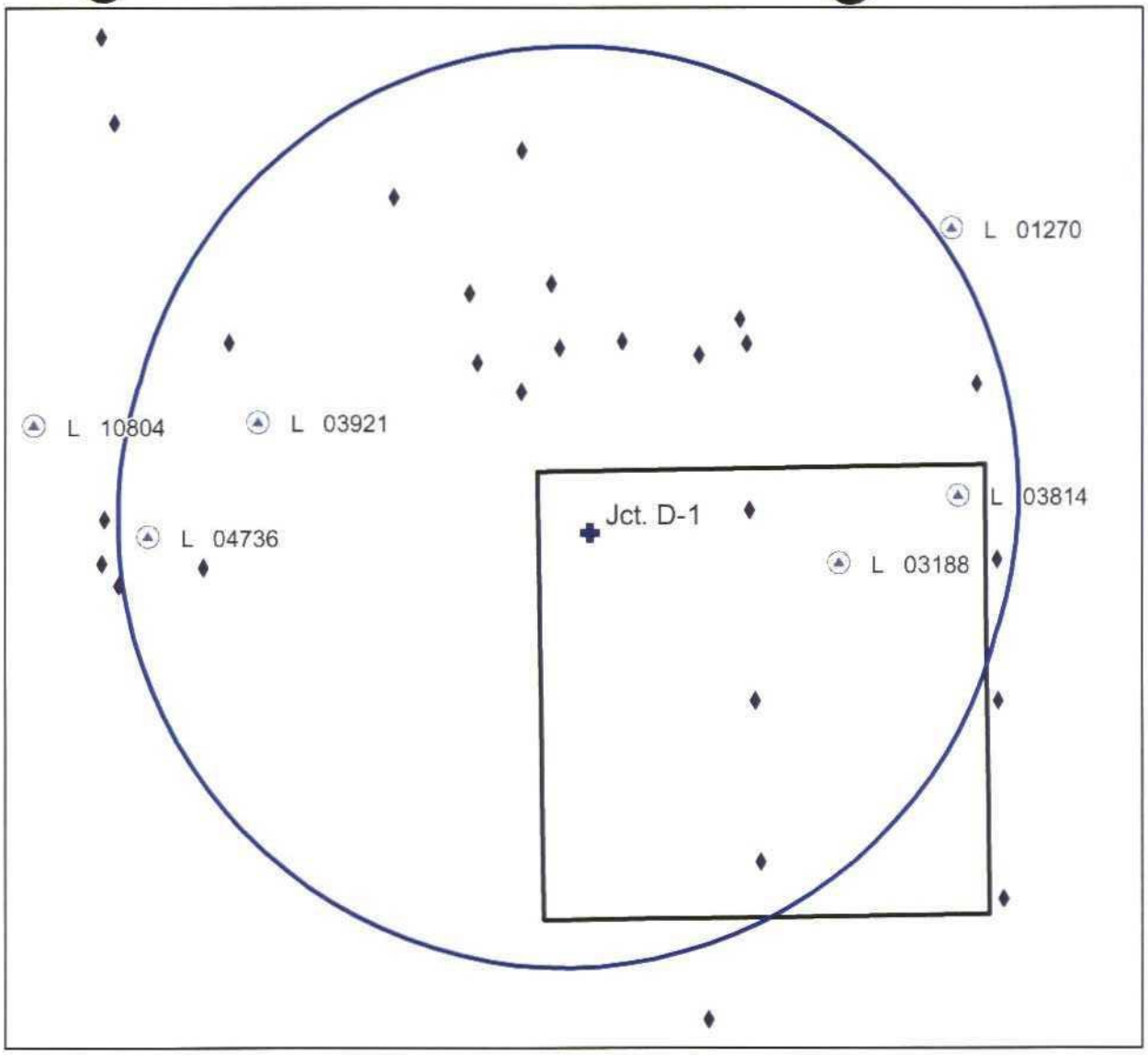

Legend

- Jct. D-1 Site
- NMOSE
- USGS
- NMED (Climax Monitoring Well)
- 1 mile radius from D-1 Site
- T20S,R36E,Sec1

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Well Survey Map: D-1 Site	Plate 5
Rice Operating Company	Nov. 2005

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APPENDICES

APPENDIX A

Lithologic Log (MW-1)

LOG OF BORING
K. Farris Pope
RICE Operating Company

Logger:	Israel Juarez; Mort Bates	Client:	Well ID:
Driller:	Atkins Engineering Associates, Inc.	RICE Operating Company	
Drilling Method:	4.25 in. Hollow Stem Auger	Project Name:	
Start Date:	12/8/04	jct. D-1 leak	MW-1
End Date:	12/8/04	Location:	
Notes:	20 ft southwest of former junction box site TD = 40 ft Groundwater = 31 ft	EME SWD System unit 'D', Sec. 1, T20S, R36E Lea County, NM	

Split Spoon

Depth (feet)	Sample chloride	Sample PID	Description	Lithology	Well Construction
0.0	113	1.6	0 - 4 ft CLAYEY SAND loose, light tan, damp		2-in. sch. 40 PVC casing; grout
5.0	146	5.2	4 - 11 ft SILTY SAND w/CALICHE reddish tan, damp		grout
10.0	484	0.9			grout
15.0	8865	0.5	11 - 22 ft CLAYEY SAND w/CALICHE loose, tan, moist		grout
20.0	4842	4.1			bentonite seal
25.0	3876	0.9	22 - 31 ft SILTY SAND w/BROKEN SANDSTONE reddish tan, damp		sand pack
30.0	1196	2.1			sand pack
35.0	1113	0.9	31 - 40 ft POORLY-GRADED SAND soft, tan, wet	▼ lab = 1120 ppm Cl	sand pack

Photos of EME D-1 Junction Box and Line Leak Site (T20S, R36E, Section 1, Unit Letter D)

View facing east showing excavation at the D-1 junction box with monitoring well MW-1 adjacent to south side.

View facing northeast showing north and east walls of excavation and 4-inch PVC pipeline.

View facing southwest showing south and west walls and floor of excavation.

View facing south showing area of line leak located approximately 150 feet north of D-1 junction box.

View facing north showing area of line leak located near the southwest corner of a tank battery and approx. 50 feet east of lined pond on Dynegy plant property.

View facing northwest showing lined pond on Dynegy plant property located ~150 ft northwest of D-1 junction box. Abandoned Climax Chemical Plant in background.

The rest of the appendices are available on the CD attached to this report.