Environmental
Resources
Management

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October 25, 2005

Mr. Mark R. Riggle, P.G., Project Manager
Team 3, Environmental Cleanup Section II
Remediation Division
Texas Commission on Environmental Quality
Mail Code 221
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Austin, Texas 78753

Subject: 2005 Annual Ground Water Monitoring Report and Field Activities Summary, Former Cameron Iron Works Facility, Houston, Texas, VCP No. 221

Dear Mr. Riggle:

On behalf of Cooper Cameron Corporation (Cooper Cameron), Environmental Resources Management (ERM) is providing the above-referenced report for the Former Cameron Iron Works Facility, Houston, Texas (the facility) for your review and approval. In a March 22, 2004 comment letter, the Texas Commission on Environmental Quality (TCEQ) approved a routine ground water monitoring program as part of the response action for the facility. This report is comprehensive and provides a summary of the numerous field activities performed in the second half of 2004 and first half of 2005 in addition to ground water and surface water sampling events and results.

A semiannual ground water and surface water sampling schedule was initiated in September 2003. As part of the reporting program, a data transmittal summarizing the ground water and surface water analytical data collected during the second half of 2004 was submitted to the TCEQ on December 9, 2004.

Based on the data provided in this report, the ground water concentrations have decreased or remain steady throughout the areas of affected ground water with the exception of one area off site (Farish Drive). Six injection wells have been installed on Farish Drive south of MW-125 and a solution of potassium permanganate was injected during September 2005.

The surface water concentrations were reported at concentrations that are below the critical Protective Concentration Levels (PCLs) provided in the *Human Health and Ecological Risk Assessment for Surface Water and Sediment*, dated June 19, 2003 approved by TCEQ on December 2, 2003.

Please contact Mr. Bruce Himmelreich of Cooper Cameron Corporation at (713) 513-3324 with any questions or comments.

Sincerely,

Environmental Resources Management

Gregory J. Wheeler, P.G.

GJW/fr
Enclosure

cc: Bruce Himmelreich, Cooper Cameron Corporation
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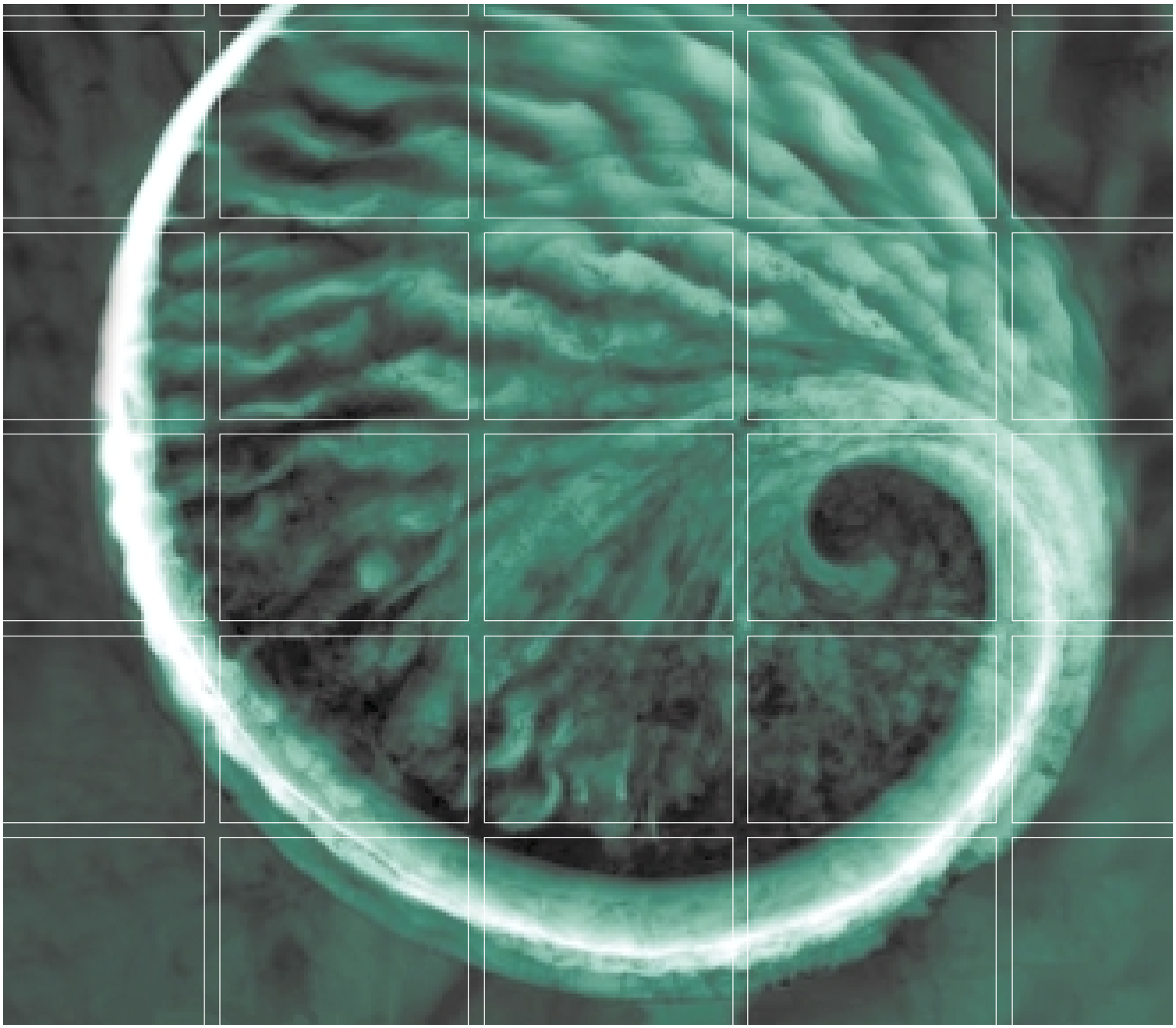

2005 Annual Ground Water Monitoring Report and Field Activities Summary

Former Cameron Iron Works Facility
Houston, Texas

October 25, 2005

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2005 Annual Ground Water Monitoring Report and Field Activities Summary

Former Cameron Iron Works Facility, Houston, Texas

October 25, 2005

Project No. 0031202

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1.0 INTRODUCTION

This report presents a summary of ground water and surface water sampling results for the second half of 2004 and the first half of 2005 at the Former Cameron Iron Works Facility (the facility). The facility is located on Silber Road, northwest of the highway interchange of the Interstate 10 (I-10) and 610 West Loop in Houston, Texas (Figure 1-1). This report was prepared for the Voluntary Cleanup Section (VCP) of the Texas Commission on Environmental Quality (TCEQ) to document the ground water quality and estimated plume extent at the facility and the residential area south of the facility. This report also summarizes recent field activities regarding the plugging and abandonment of monitor wells and the injection of a potassium permanganate solution at selected locations (Figure 1-2).

On March 29, 2000, the TCEQ approved the use of a natural attenuation-based remediation program for ground water. On March 22, 2004 and May 14, 2004, the TCEQ provided additional approval of a semiannual ground water and surface water monitoring program with quarterly ground water sampling from selected wells. The criteria for quarterly sampling were outlined by the VCP in a letter from the TCEQ dated December 30, 2004. The reporting frequency is semiannual unless quarterly samples are collected. A data transmittal is provided after each sampling event and a comprehensive annual ground water monitoring report is provided after the second semiannual event (April of each year).

The semiannual ground water and surface water sampling schedule was initiated in September 2003. Data transmittals summarizing the ground water and surface water analytical data collected during the second half of 2004 and first half of 2005 are as follows:

- *Second Half 2004 Monitoring Data Transmittal,* dated December 9, 2004;
- *Second Half 2004 Confirmation Data Transmittal,* dated January 12, 2005;
- *Response to TCEQ Comments, Dated January 25, 2005 and First Quarter 2005 Data Transmittal,* dated February 22, 2005; and
- *First Half 2005 Monitoring Data Transmittal,* dated June 10, 2005.

This report is the second of the comprehensive annual ground water monitoring reports for the second half of 2004 and first half of 2005.

The field activities in the second half of 2004 were as follows:

- Gauged the hydrocarbon thickness at MW-29;
- From June 1 through June 23, 2004, a potassium permanganate solution was injected into a total of two monitor wells, 31 injection wells, and 14 temporary injection points at the facility and off-site property;
- On July 22, 2004, a total of six monitor wells were sampled to assess whether increasing trends were apparent;

- From October 25 through October 28, 2004, a total of 114 monitor wells were gauged for water level elevation and 85 monitor wells were sampled;
- On October 25, 2004, six surface water samples were collected from the Harris County Flood Control District Ditch (HCFCDD), and
- On December 10, 2004, a total of three wells were sampled to assess whether increasing trends were apparent.

The field activities in the first half of 2005 were as follows:

- Gauged the hydrocarbon thickness at MW-29;
- On January 19 and 20 2005, a potassium permanganate solution was injected into eight monitor wells and nine injection wells at the facility and off-site property;
- On January 26, 2005, a total of three wells were sampled to assess whether increasing trends were apparent;
- From April 25 through April 29, 2005, a total of 114 monitor wells were gauged for water level elevation and 79 monitor wells were sampled;
- On April 25, 2005, six surface water samples were collected from the HCFCDD;
- On May 23 and 24, 2005, 31 monitor well were plugged and abandoned at the facility; and
- On July 27, 2005, MW-83 was sampled to confirm the concentrations that were reported for the First Half 2005 sampling event.

2.0 SUMMARY OF FIELD ACTIVITIES

The field investigation activities performed from July 2004 through July 2005 were consistent with the data collection and response action requirements of the TCEQ-approved *Response Action Plan* (RAP). The purpose of this section is to summarize the field activities and document the progress in conforming to the requirements of the RAP.

2.1 MONITOR WELL GAUGING AND SAMPLING ACTIVITIES

The following gauging and sampling activities were performed as part of the Second Half 2004 ground water monitoring event:

- gauging the hydrocarbon thickness at MW-29;
- collecting ground water samples from a total of six monitor wells on July 22, 2004;
- gauging a total of 114 monitor wells on October 25, 2004;
- collecting ground water samples from a total of 85 monitor wells and six HCFCDD surface water samples October 25 through 29, 2004; and
- collecting ground water samples from a total of three monitor wells on December 10, 2004

The following gauging and sampling activities were performed as part of the First Half 2005 ground water monitoring event:

- gauging the hydrocarbon thickness at MW-29;
- collecting ground water samples from a total of three monitor wells on January 26, 2004;
- gauging a total of 114 monitor wells on April 25, 2005;
- collecting ground water samples from a total of 79 monitor wells and six HCFCDD surface water samples April 25 through 29, 2005; and
- collecting a confirmation ground water sample from MW-83 on July 27, 2005.

Table 2-1 provides a summary of well gauging and sampling locations. Ground water elevations are provided in Table 2-2. A detailed description of the field methods is provided in Appendix A. Figure 1-2 provides a site feature map illustrating the ground water and surface water sample locations.

2.2 *PLUGGING AND ABANDONMENT OF MONITOR WELLS*

Nine monitor wells that were used to monitor the petroleum hydrocarbon plume located beneath the northern portion of the facility and an adjacent property (Integrity Packaging) were plugged and abandoned. These monitor wells were plugged and abandoned because the TCEQ's Leaking Petroleum Storage Tank Division does not require any further action for this plume. The monitor wells that were plugged and abandoned related to the LPST are listed below.

MW-24	MW-25	MW-26	MW-27
MW-27	MW-33	MW-57	MW-103
MW-104	MW-105		

On May 17, 2005, the TCEQ agreed to the plugging and abandonment of 22 monitor wells located on the northern portion of the facility that were not being monitored for ground water or used for the injection of permanganate. The monitor wells that were plugged and abandoned on May 23 or 24, 2005 were as follows:

DW-01	KMW-05	KMW-06	KMW-08
KMW-10	KMW-11	KMW-12	KMW-15
KMW-16	KMW-21	MW-03	MW-19
MW-34	MW-36	MW-39	MW-41
MW-46	MW-47	MW-49	MW-51
MW-55	SW-01		

A description of the field methods used to plug and abandon the monitor wells is provided in Appendix A. Figure 1-2 provides a site feature map illustrating the current monitor well and injection well network. Appendix B provides a copy of the State of Texas Plugging Reports.

2.3 *POTASSIUM PERMANGANATE INJECTION*

From June 1 through 23, 2004, a potassium permanganate solution was injected into two monitor wells (KMW-01 and MW-50) at the facility. At the off-site property, 31 injection wells (IW-16 through IW-46) and 14 temporary injection points (IP-25 through IP-38) a solution of potassium permanganate was injected (Figure 1-2). The solution injected into the monitor wells consisted of 110 lbs potassium permanganate and 350 gallons of City of Houston water. The solution injected into the injection wells and temporary injection points consisted of 220.5 lbs potassium permanganate and between 650 and 700 gallons of City of Houston water.

From January 19 through 21, 2005, a potassium permanganate solution was injected into eight monitor wells (KMW-01, MW-28, MW-35, MW-48, MW-49, MW-50, MW-54, and MW-55) at the facility and nine injection wells (IW-16 through IW-29) at the off-site property (Figure 1-2). The solution injected into the monitor wells consisted of between 55.125 and 441 lbs potassium

permanganate and between 100 to 1,400 gallons of City of Houston water. The solution injected into the injection wells consisted of between 55.125 and 330.75 lbs potassium permanganate and between 100 and 1,050 gallons of City of Houston water.

3.0 DISCUSSION OF RESULTS

3.1 GROUND WATER FLOW CHARACTERISTICS

The ground water flow direction is toward the south from the facility toward Buffalo Bayou. This is illustrated for the second half of 2004 in Figure 3-1 and for the first half of 2005 in Figure 3-2. The data used to construct these figures are presented on Table 2-2. During the second half of 2004, the estimated average ground water flow gradient was approximately 0.0021 feet/foot for the facility and 0.0029 feet/foot for the residential area south of I-10. During the first half of 2005 the flow gradient was estimated at 0.0022 feet/foot for the facility and 0.0032 feet/foot for the residential area south of I-10. These results are consistent with the results reported in previous reports and the *Affected Property Assessment Report for Ground Water* (October 3, 2001).

3.2 GROUND WATER ANALYTICAL RESULTS

The ground water samples collected during the second half of 2004 and first half 2005 were analyzed for the site-specific list of volatile organic constituents (VOCs) using EPA SW-846 Method 8260. As a result of the TCEQ approving the RAP, an on-site and off-site specific list of VOCs were analyzed for the samples collected at the facility (on-site specific list) and off the facility (off-site specific list). The on-site specific list of VOCs consisted of 1,1-DCE, cis-1,2-DCE, PCE, TCE, and vinyl chloride. The off-site specific list of VOCs consisted of 1,1-DCA, 1,1-DCE, 1,2-DCA, cis-1,2-DCE, PCE, TCE, and vinyl chloride. Table 3-1 summarizes the analytical results for constituents reported at least once above the laboratory-reporting limit during the second half of 2004 and first half of2005 sampling events.

A review of these results indicates the following:

- The list of detected constituents includes 1,1-DCA, 1,1-DCE, 1,2-DCA, cis-1,2-DCE, PCE, TCE and vinyl chloride;
- The most prevalent and concentrated constituent reported above the Protective Concentration Levels (PCLs) was 1,1-DCE with a maximum reported concentration of 22 mg/L at MW-50 (located at the facility) on October 28, 2004;
- Of the constituents detected, TCE, 1,1-DCE, cis-1,2-DCE, and vinyl chloride are degradation products; and
- The area of most-elevated concentrations above the default Tier 1 PCLs defined by the Texas Risk Reduction Program (TRRP) occurs within the former facility boundary, north of I-10.

During the October 2004 and April 2005 semiannual sampling events, ground water samples were collected from monitor wells in the area of the injections as well as select monitor wells that received injections to assess the impact of this treatment. A review of Table 3-1 indicates that in many instances concentrations decreased after injection in many of the wells.

The reported concentration of 1.500 mg/L for 1,1-DCE on April 27, 2005 at MW-83 appears to be anomalous. A confirmation sample was collected at MW-83 on July 27, 2005 with a reported concentration of 0.23 mg/L.

The Data Usability Summaries and Laboratory Analytical Reports for ground water samples are provided in Appendix C.

3.3 SURFACE WATER ANALYTICAL RESULTS

The surface water samples collected in October 2004 and April 2005 were analyzed for the off-site specific list of VOCs using EPA SW-846 Method 8260. Figure 1-2 illustrates the surface water sample locations. Table 3-2 is a summary of the analytical results for the surface water samples.

Samples collected from the HCFCDD had reported concentrations of 1,1-DCA, 1,1-DCE, cis-1,2-DCA, PCE, TCE, and vinyl chloride. These concentrations were above the laboratory reporting limit, but below the Critical PCLs. 1,1-DCE is the most concentrated constituent, with a maximum reported concentration of 0.059 mg/L reported at SWD-15. Concentrations decrease to *Not Detected* below the gaining portion of the HCFCDD and above the confluence with Buffalo Bayou.

The Data Usability Summaries and Laboratory Analytical Reports for surface water samples are provided in Appendix C.

3.4 ESTIMATED EXTENT OF AFFECTED GROUND WATER

Figures 3-3, and 3-4 illustrate the extent of affected ground water for the second half of 2004 and first half of 2005. The extent of the plume was changed if concentrations for the second half of 2004 and first half of 2005 coincided. In some areas, direct-push sample results were also used to assist with the delineation effort.

These figures illustrate the concentrations and extent of organic COCs north and south of I-10. As shown on Figure 3-3, the extent of affected ground water extends off site in a limited area north of the facility at Integrity Packaging (where petroleum hydrocarbons are present) and along the southern boundary of the facility (where chlorinated solvents are present). The monitor well results along the western and eastern property lines confirm that off-site migration is not apparent in these areas. In addition, little change to the extent of affected ground water is apparent between the second half of 2004 and first half of 2005 indicating plume stability.

The COC concentrations south of I-10 are illustrated on Figure 3-4. Four separate plumes are apparent:

- The Silber Road/Buckingham Drive Plume extends from the southwestern corner of the facility and follows the sanitary sewer line south. The primary migration pathway is believed to have been the sanitary sewer line;

- The HCFCDD Plume extends south of the southeastern corner of the facility. The primary migration pathway is believed to have been the flood control ditch adjacent to the property;
- The Sandringham Drive Plume extents along southern portion of Sandringham Drive between the HCFCDD and Carnarvon Drive. This plume is presumably associated with the sanitary sewer line along Sandringham Drive or possibly a remnant of the HCFCDD Plume; and
- The Carnarvon Drive Plume extents from the HCFCDD to Sandringham Drive along the sanitary sewer line of Carnarvon Drive. A recent release of tetrachloroethene to the sanitary sewer line in this area is believed to be the source and release mechanism for this plume. As stated in previous reports, the data (ground water and soil vapor) from the Carnarvon Drive Plume indicates that this release is not likely associated with the facility.

3.5 TRIGGERS FOR QUARTERLY SAMPLING

Based on a review of the results reported for the semiannual event in April 2005, MW-70 and MW-93 will continue to be sampled quarterly and SWD-15 will be moved from a semiannual to quarterly monitoring frequency as outlined in the TCEQ's December 30, 2004 letter.

The monitor wells will be sampled quarterly until concentrations are reported below the method quantitation limit. A surface water sample will be collected at SWD-15 quarterly until concentrations are reported below 80% 0f the critical PCL.

3.6 QA/QC SAMPLES

The quality assurance/quality control (QA/QC) samples (i.e. duplicate samples and blanks) were analyzed along with investigative samples as outlined in Appendix A.

26 QA/QC samples were collected during the Second Half 2004 and First Half 2005 monitoring events. The QA/QC duplicate samples and field blanks were analyzed for volatile organic compounds. The reported results for the duplicate samples were similar to those reported for the monitor wells (Table 3-3) indicating that the laboratory was able to reproduce similar concentrations in two samples of the same ground water.

The field blank sample results for the Second Half 2004 and First Half 2005 were reported as *Not Detected* for VOCs.

The Data Usability Summaries and Laboratory Analytical Reports for the Second Half 2004 and First Half 2005 sampling events are provided in Appendix C.

4.0 SUMMARY AND CONCLUSIONS

Two semiannual sampling events were performed in the second half of 2004 and the first half of 2005, along with some additional field activities that were specified in the RAP. The ground water results were used to assess the magnitude of reported concentrations as compared with default TCEQ cleanup levels (critical Tier 1 PCLs), evidence of plume migration, and trends in concentration. The following conclusions can be drawn from this report:

- From June 1 through 23, 2004, a potassium permanganate solution was injected into two monitor wells, 31 injection wells, and 14 temporary injection points at the facility;
- From January 19 through 21, 2005, a potassium permanganate solution was injected into eight monitor wells and nine injection wells at the facility and off-site property;
- A total of 31 monitor wells were plugged and abandoned during the first half of 2005;
- The ground water flow direction is toward the south at an average gradient ranging from 0.0021 feet/foot for the facility and 0.0031 feet/foot for the residential area south of I-10. These results are consistent with previous measurements;
- Of the constituents analyzed and associated with the site, seven VOCs were reported above the PCL in at least one location;
- The most prevalent constituent reported above the PCL was 1,1-DCE;
- Concentrations are stable along the downgradient axis of the plume and are decreasing with time in source areas;
- The plume along Carnarvon Drive appears to have expanded to the southwest towards Farish Drive. This plume is primarily composed of PCE, typical of a recent release to the sanitary sewer and not related to the facility;
- The reported concentrations in surface water do not exceed the critical PCL as described in the *Human Health and Ecological Risk Assessment for Surface Water and Sediment Report*, dated June 2003; and
- MW-70 and MW-93 will continue to be sampled quarterly and SWD-15 will be moved from a semiannual to quarterly monitoring frequency as outlined in the TCEQ's December 30, 2004 letter.

Cameron will continue to perform semiannual ground water monitoring during 2005 for the network of wells outlined in the RAP and quarterly monitoring at selected wells as outlined in the TCEQ's December 30, 2004 letter. In addition, Cameron will continue to collect surface water samples semiannually from the HCFCDD at selected locations (SWD-12, SWD-14, SWD-15, SWD-17, SWD-18, and SWD-20).

Tables

October 25, 2005
Project No. 0031202

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TABLE 2-1

Identification of Monitor Wells for Semiannual Water Level Gauging and Sampling
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

	Second Half 2004		First Half 2005		
Monitor Well ID	Water Level Obtained	Sampled for Constituents	Water Level Obtained	Sampled for Constituents	Notes or Future Sampling Frequency
DW-01	X		X		Plugged and Abandoned (5/24/2005)
DW-02					Plugged and Abandoned by ENSR (12/10/2002)
DW-03					Abandoned - Southern Property Well.
KMW-01	X	X	X	X	Semiannual sampling.
KMW-02					Destroyed
KMW-03					Plugged and Abandoned (11/08/2001)
KMW-04					Destroyed
KMW-05	X		X		Plugged and Abandoned (5/24/2005)
KMW-06	X				Plugged and Abandoned (5/24/2005)
KMW-07	X		X	X	Semiannual sampling.
KMW-08			X		Plugged and Abandoned (5/24/2005)
KMW-09					Plugged and Abandoned LPST Well.
KMW-10					Plugged and Abandoned (5/24/2005)
KMW-11	X	X	X		Plugged and Abandoned (5/24/2005)
KMW-12					Plugged and Abandoned (5/24/2005)
KMW-13	X	X	X	X	Semiannual sampling.
KMW-14	X	X	X	X	Semiannual sampling.
KMW-15	X	X			Plugged and Abandoned (5/23/2005)
KMW-16	X	X	X		Plugged and Abandoned (5/24/2005)
KMW-17	X		X		Water level gauging only.
KMW-18					Abandoned - Northern Property Well.
KMW-19					Abandoned - Northern Property Well.
KMW-20					Abandoned - Northern Property Well.
KMW-21		X	X		Plugged and Abandoned (5/24/2005)
KMW-22					Abandoned - Northern Property Well.
KMW-23					Abandoned - Northern Property Well.
KMW-24					Abandoned - Northern Property Well.
MW-01	X		X		Semiannual sampling.
MW-02	X		X		Semiannual sampling.
MW-03	X		X		Plugged and Abandoned (5/24/2005)
MW-04					Plugged and Abandoned - Southern Property Well.
MW-05					Plugged and Abandoned - Southern Property Well.
MW-06					Excavated - Southern Property Well.
MW-07					Plugged and Abandoned - Southern Property Well.
MW-07R	X	X	X	X	Semiannual sampling.
MW-08					Plugged and Abandoned by ENSR (12/10/2002)
MW-09					Abandoned - Southern Property Well.
MW-10					Plugged and Abandoned by ENSR (12/10/2002)
MW-13R					Plugged and Abandoned by ENSR (12/10/2002)
MW-14					Plugged and Abandoned by ENSR (12/10/2002)
MW-15R	X	X	X	X	Semiannual sampling.
MW-16R	X	X	X	X	Semiannual sampling.
MW-17R	X	X	X	X	Semiannual sampling.
MW-18	X		X		Water level gauging only.
MW-19					Plugged and Abandoned (5/23/2005)
MW-20	X		X		Water level gauging only.
MW-21	X		X		Water level gauging only.
MW-22					Plugged and Abandoned (11/08/2001)
MW-23					Plugged and Abandoned (11/08/2001)
MW-24					Plugged and Abandoned (5/23/2005)
MW-25					Plugged and Abandoned (5/23/2005)
MW-26					Plugged and Abandoned (5/23/2005)
MW-27	X		X		Plugged and Abandoned (5/23/2005)
MW-28					Water level gauging only
MW-29	X		X		Water level gauging only
MW-30					Plugged and Abandoned (11/08/2001)
MW-31					Plugged and Abandoned (11/08/2001)
MW-32					Plugged and Abandoned (11/08/2001)
MW-33			X		Plugged and Abandoned (5/23/2005)
MW-34	X		X		Plugged and Abandoned (5/24/2005)
MW-35	X	X	X		Semiannual sampling.
MW-36	X		X		Plugged and Abandoned (5/24/2005)
MW-37 (formerly TW-Int-1)					Plugged and Abandoned (11/08/2001)

TABLE 2-1 (Cont'd)

Identification of Monitor Wells for Semiannual Water Level Gauging and Sampling
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

	Second Half 2004		First Half 2005		
Monitor Well ID	Water Level Obtained	Sampled for Constituents	Water Level Obtained	Sampled for Constituents	Notes or Future Sampling Frequency
MW-38	X				Water level gauging only
MW-39					Plugged and Abandoned (5/24/2005)
MW-40					Water level gauging only
MW-41					Plugged and Abandoned (5/24/2005)
MW-42	X	X	X	X	Semiannual sampling.
MW-43	X		X		Water level gauging only
MW-44	X		X		Semiannual sampling.
MW-45					Water level gauging only
MW-46					Plugged and Abandoned (5/24/2005)
MW-47					Plugged and Abandoned (5/24/2005)
MW-48	X	X	X	X	Semiannual sampling.
MW-49					Plugged and Abandoned (5/24/2005)
MW-50	X	X	X	X	Semiannual sampling.
MW-51					Plugged and Abandoned (5/24/2005)
MW-52	X	X	X	X	Semiannual sampling.
MW-53					Plugged and Abandoned by ENSR (11/2002)
MW-54	X	X	X		Semiannual sampling.
MW-55	X	X	X		Plugged and Abandoned (5/24/2005)
MW-56 (formerly TW-A1-1)	X		X		Water level gauging only
MW-57 (formerly TW-A8-1)	X				Plugged and Abandoned (5/24/2005)
MW-58 (formerly TW-A8-2)	X		X		Water level gauging only
MW-59	X	X	X	X	Semiannual sampling.
MW-60	X	X	X	X	Semiannual sampling.
MW-61	X	X	X	X	Semiannual sampling.
MW-62	X	X	X	X	Semiannual sampling.
MW-63			X		Water level gauging only
MW-64	X	X	X	X	Semiannual sampling.
MW-65	X	X	X	X	Semiannual sampling.
MW-66	X		X		Water level gauging only
MW-67	X		X		Water level gauging only
MW-68					Plugged and Abandoned (12/09/2003)
MW-69					Plugged and Abandoned (12/09/2003)
MW-70	X	X	X	X	Semiannual sampling.
MW-71	X	X	X	X	Semiannual sampling.
MW-72	X	X	X	X	Semiannual sampling.
MW-73	X	X	X	X	Semiannual sampling.
MW-74	X	X	X	X	Semiannual sampling.
MW-75R	X	X	X	X	Semiannual sampling.
MW-76	X	X	X	X	Semiannual sampling.
MW-77	X	X	X	X	Semiannual sampling.
MW-78	X	X	X	X	Semiannual sampling.
MW-79	X	X	X	X	Semiannual sampling.
MW-80	X	X	X	X	Semiannual sampling.
MW-81	X	X	X	X	Semiannual sampling.
MW-82	X	X	X	X	Semiannual sampling.
MW-83	X	X	X	X	Semiannual sampling.
MW-84	X	X	X	X	Semiannual sampling.
MW-85R	X	X	X	X	Semiannual sampling.
MW-86		X	X	X	Semiannual sampling.
MW-87	X	X	X	X	Semiannual sampling.
MW-88	X		X		Semiannual sampling.
MW-89	X	X	X	X	Semiannual sampling.
MW-90	X	X	X	X	Semiannual sampling.
MW-91	X	X	X	X	Semiannual sampling.
MW-92	X	X	X	X	Semiannual sampling.
MW-93	X	X	X	X	Semiannual sampling.
MW-94	X	X	X	X	Semiannual sampling.
MW-95	X	X	X	X	Semiannual sampling.
MW-96	X	X	X	X	Semiannual sampling.
MW-97	X	X	X	X	Semiannual sampling.
MW-98	X	X	X	X	Semiannual sampling.
MW-99	X	X	X	X	Semiannual sampling.
MW-100	X	X	X	X	Semiannual sampling.

TABLE 2-1 (Cont'd)

Identification of Monitor Wells for Semiannual Water Level Gauging and Sampling
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

	Second Half 2004		First Half 2005		
Monitor Well ID	Water Level Obtained	Sampled for Constituents	Water Level Obtained	Sampled for Constituents	Notes or Future Sampling Frequency
MW-101	X	X	X	X	Semiannual sampling.
MW-102	X	X	X	X	Semiannual sampling.
MW-103					Plugged and Abandoned (5/23/2005)
MW-104					Plugged and Abandoned (5/23/2005)
MW-105					Plugged and Abandoned (5/23/2005)
MW-106	X	X	X	X	Semiannual sampling.
MW-107	X	X	X	X	Semiannual sampling.
MW-108	X	X	X	X	Semiannual sampling.
MW-109	X	X	X	X	Semiannual sampling.
MW-110	X	X	X	X	Semiannual sampling.
MW-111	X	X	X	X	Semiannual sampling.
MW-112	X	X	X	X	Semiannual sampling.
MW-113	X	X	X	X	Semiannual sampling.
MW-114	X	X	X	X	Semiannual sampling.
MW-115	X	X	X	X	Semiannual sampling.
MW-116	X	X	X	X	Semiannual sampling.
MW-117	X	X	X	X	Semiannual sampling.
MW-118	X	X	X	X	Semiannual sampling.
MW-119	X	X	X	X	Semiannual sampling.
MW-120	X	X	X	X	Semiannual sampling.
MW-121	X	X	X	X	Semiannual sampling.
MW-122	X	X	X	X	Semiannual sampling.
MW-123	X	X	X	X	Semiannual sampling.
MW-124	X	X	X	X	Semiannual sampling.
MW-125	X	X	X	X	Semiannual sampling.
MW-126	X	X	X	X	Semiannual sampling.
MW-127	X	X	X	X	Semiannual sampling.
MW-128	X	X	X	X	Semiannual sampling.
MW-129	X	X	X	X	Semiannual sampling.
MW-130	X	X	X	X	Semiannual sampling.
MW-131	X	X	X	X	Semiannual sampling.
MW-02(C)	X	X	X	X	Semiannual sampling.
MW-01(S)	X		X		Water level gauging only.
MW-02(E)					Plugged and Abandoned (2003).
MW-02(S)	X	X	X	X	Semiannual sampling.
MW-03(E)					Plugged and Abandoned (2003).
MW-03(S)	X	X	X	X	Semiannual sampling.
MW-04(S)					Plugged and Abandoned (12/09/2003)
MW-09(E)					Plugged and Abandoned (2003).
SW-01					Plugged and Abandoned (5/24/2005)
SW-02					Plugged and Abandoned by ENSR (12/10/2002)
P-1	X		X		Water level gauging only.
P-2	X		X		Water level gauging only.
P-3	X		X		Water level gauging only.
P-4	X		X		Water level gauging only.
P-5	X		X		Water level gauging only.
P-6	X		X		Water level gauging only.

TABLE 2-2

Summary of Active Monitor Well Completion Details and Ground Water Elevation Measurements
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

	Second Half 2004		First Half 2005	
	October 25, 2004		April 25, 2005	
Monitor Well ID	Depth to Water (ft. bgs.)	Ground Water Elevation (ft. msl)	Depth to Water (ft. bgs.)	Ground Water Elevation (ft. msl)
DW-01	Dry	NA	Dry	NA
KMW-01	17.40	51.39	16.32	52.47
KMW-05	19.85	52.89	18.70	54.04
KMW-06	20.53	52.79	NA	NA
KMW-07	17.74	52.84	16.55	54.03
KMW-08	NA	NA	16.26	53.82
KMW-11	17.80	51.34	16.82	52.32
KMW-12	NA	NA	NA	NA
KMW-13	16.90	51.88	16.87	51.91
KMW-14	17.40	51.60	16.40	52.60
KMW-15	21.22	51.28	NA	NA
KMW-16	19.30	51.75	18.40	52.65
KMW-17	19.83	51.73	19.04	52.52
KMW-21	NA	NA	14.65	NA
MW-01	18.35	50.77	17.31	51.81
MW-02	17.98	50.47	17.05	51.40
MW-03	18.54	50.40	17.70	51.24
MW-07R	18.43	49.33	17.55	50.21
MW-15R	20.37	47.69	19.70	48.36
MW-16R	19.18	47.89	18.45	48.62
MW-17R	20.52	47.74	19.91	48.35
MW-18	16.34	53.10	14.98	54.46
MW-19	NA	NA	NA	NA
MW-20	16.03	53.06	15.01	54.08
MW-21	16.88	52.52	15.87	53.53
MW-24	NA	NA	NA	NA
MW-25	NA	NA	NA	NA
MW-26	NA	NA	NA	NA
MW-27	19.64	53.00	18.55	54.09
MW-28	NA	NA	NA	NA
MW-29	NA	NA	NA	NA
MW-33	NA	NA	17.09	NA
MW-34	18.29	51.03	17.37	51.95
MW-35	17.52	51.31	16.48	52.35
MW-36	18.30	51.11	17.40	52.01
MW-38	17.30	51.92	NA	NA
MW-39	NA	NA	NA	NA
MW-40	NA	NA	NA	NA
MW-41	NA	NA	NA	NA
MW-42	16.35	52.65	15.39	53.61
MW-43	16.89	51.83	15.87	52.85
MW-44	16.70	51.94	15.90	52.74
MW-45	NA	NA	NA	NA
MW-46	NA	NA	NA	NA
MW-47	NA	NA	NA	NA
MW-48	17.40	51.60	16.58	52.42
MW-49	NA	NA	NA	NA

NOTES:

ft. bgs. = feet below ground surface
ft. msl = feet mean sea level
NA = Data Not Available
(a) Due to access issues at MW-52 and MW-128, the depth-to-water measurements were collected on April 29 and April 28, 2005 respectively.

TABLE 2-2 (Cont'd)

Summary of Active Monitor Well Completion Details and Ground Water Elevation Measurements
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

	Second Half 2004		First Half 2005		
	October 25, 2004		April 25, 2005		
Monitor Well ID	Depth to Water (ft. bgs.)	Ground Water Elevation (ft. msl)	Depth to Water (ft. bgs.)		Ground Water Elevation (ft. msl)
MW-50	17.11	51.92	16.51		52.52
MW-51	NA	NA	NA		NA
MW-52	17.62	50.09	16.80	(a)	50.91
MW-54	17.08	51.82	16.02		52.88
MW-55	17.20	51.74	16.20		52.74
MW-56	16.85	51.81	15.70		52.96
MW-57	16.90	52.90	NA		NA
MW-58	16.32	52.42	15.69		53.05
MW-59	17.77	49.14	16.92		49.99
MW-60	17.84	49.90	17.01		50.73
MW-61	17.37	50.22	15.61		51.98
MW-62	17.80	52.04	16.82		53.02
MW-63	NA	NA	NA		NA
MW-64	17.78	50.43	16.96		51.25
MW-65	18.51	49.51	17.73		50.29
MW-66	20.10	48.80	19.22		49.68
MW-67	20.42	48.82	19.69		49.55
MW-70	20.43	47.60	19.70		48.33
MW-71	20.60	45.62	20.11		46.11
MW-72	22.10	44.04	21.75		44.39
MW-73	23.05	42.15	22.75		42.45
MW-74	19.74	46.61	19.01		47.34
MW-75R	26.35	39.04	26.19		39.20
MW-76	21.83	43.59	21.33		44.09
MW-77	20.63	45.57	19.99		46.21
MW-78	21.77	43.73	21.02		44.48
MW-79	22.15	42.02	21.50		42.67
MW-80	23.43	40.94	23.06		41.31
MW-81	20.82	43.60	20.32		44.10
MW-82	22.05	42.15	21.64		42.56
MW-83	23.81	40.31	23.54		40.58
MW-84	25.28	38.20	25.17		38.31
MW-85R	24.15	42.05	23.85		42.35
MW-86	NA	NA	24.90		39.36
MW-87	25.01	40.68	24.80		40.89
MW-88	27.92	37.10	27.85		37.17
MW-89	30.85	34.48	30.63		34.70
MW-90	29.35	35.28	29.23		35.40
MW-91	30.65	33.96	30.60		34.01
MW-92	35.82	29.64	34.66		30.80
MW-93	30.91	31.01	30.72		31.20
MW-94	17.00	50.93	16.02		51.91
MW-95	20.58	46.86	20.02		47.42

NOTES:

ft. bgs. = feet below ground surface
ft. msl = feet mean sea level
NA = Data Not Available
(a) Due to access issues at MW-52 and MW-128, the depth-to-water measurements were collected on April 29 and April 28, 2005 respectively.

TABLE 2-2 (Cont'd)

Summary of Active Monitor Well Completion Details and Ground Water Elevation Measurements
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

	Second Half 2004		First Half 2005		
	October 25, 2004		April 25, 2005		
Monitor Well ID	Depth to Water (ft. bgs.)	Ground Water Elevation (ft. msl)	Depth to Water (ft. bgs.)		Ground Water Elevation (ft. msl)
MW-96	27.75	35.63	27.63		35.75
MW-97	29.81	33.30	29.74		33.37
MW-98	33.53	29.40	33.11		29.82
MW-99	20.10	46.55	19.50		47.15
MW-100	20.80	47.01	20.01		47.80
MW-101	27.59	37.66	27.43		37.82
MW-102	37.24	28.94	37.01		29.17
MW-103	NA	NA	NA		NA
MW-104	NA	NA	NA		NA
MW-105	NA	NA	NA		NA
MW-106	35.19	25.72	35.18		25.73
MW-107	35.53	28.34	35.21		28.66
MW-108	18.97	48.40	18.05		49.32
MW-109	19.92	48.51	19.05		49.38
MW-110	19.15	48.67	18.35		49.47
MW-111	18.74	48.76	18.01		49.49
MW-112	19.06	48.88	18.41		49.53
MW-113	17.99	49.08	17.38		49.69
MW-114	25.60	39.38	25.41		39.57
MW-115	26.67	39.02	26.43		39.26
MW-116	20.95	45.63	20.40		46.18
MW-117	21.03	45.79	20.34		46.48
MW-118	21.85	43.83	21.46		44.22
MW-119	22.10	43.34	21.66		43.78
MW-120	21.99	43.28	21.39		43.88
MW-121	23.90	42.14	23.62		42.42
MW-122	24.10	41.43	23.81		41.72
MW-123	25.40	39.80	25.20		40.00
MW-124	23.11	41.01	22.85		41.27
MW-125	34.01	31.49	33.84		31.66
MW-126	21.02	46.38	20.31		47.09
MW-127	28.43	34.05	24.36		38.12
MW-128	32.80	30.00	32.57	(a)	30.23
MW-129	29.96	34.06	30.02		34.00
MW-130	18.17	49.09	17.53		49.73
MW-131	20.08	47.22	19.70		47.60
MW-02(C)	16.97	52.65	15.85		53.77
MW-01 (S)	18.37	49.97	17.54		50.80
MW-02 (S)	18.67	49.62	17.70		50.59
MW-03 (S)	19.35	49.32	18.72		49.95
MW-04 (S)	NA	NA	NA		NA
SW-01	NA	NA	NA		NA
P-1	19.80	47.65	18.71		48.74
P-2	19.25	48.26	18.26		49.25
P-3	19.30	48.44	18.49		49.25
P-4	19.49	48.51	18.71		49.29
P-5	18.60	49.06	18.00		49.66
P-6	18.44	48.87	17.81		49.50

NOTES:

ft. bgs. = feet below ground surface
ft. msl = feet mean sea level
NA = Data Not Available
(a) Due to access issues at MW-52 and MW-128, the depth-to-water measurements were collected on April 29 and April 28, 2005 respectively.

TABLE 3-1

Summary of Monitor Well Ground Water Data
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
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Constituent	Critical PCLs (a)	Location:	KMW-01 (c, d)		KMW-07		KMW-13		KMW-14		MW-01	
		Depth: (b)	25		25		25		25		25	
		Date:	10/28/2004	4/26/2005	10/25/2004	4/27/2005	10/27/2004	4/26/2005	10/27/2004	4/27/2005	10/25/2004	4/26/2005
1,1-Dichloroethane	2.4		NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0014 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	NS	NS
1,2-Dichloroethane	0.0050		NA	NA	NA	NA	NA	NA	NA	NA	NS	NS
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0012 J	ND (0.0050)	ND (0.0050)	NS	NS
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	NS	NS
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	NS	NS
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	NS	NS

Constituent	Critical PCLs (a)	Location:	MW-02		MW-07R		MW-15R			MW-16R		
		Depth: (b)	25		25		20			20		
		Date:	10/28/2004	4/27/2005	10/25/2004	4/27/2005	7/22/2004	10/27/2004	4/26/2005	7/22/2004	10/27/2004	4/27/2005
1,1-Dichloroethane	2.4		NS	NS	NA	NA	0.037	0.025	0.0087	0.041	0.074	0.021
1,1-Dichloroethene	0.0070		NS	NS	0.062	0.061	0.19	0.15	0.060	0.12	0.56 JH	0.094
1,2-Dichloroethane	0.0050		NS	NS	NA	NA	ND (0.0050)	ND (0.0050)	ND(0.0050)	ND (0.0050)	0.0016 J	ND (0.0050)
cis-1,2-Dichloroethene	0.070		NS	NS	ND (0.0050)	ND (0.0050)	0.019	0.014	0.0061	ND (0.0050)	0.0076	0.0030 J
Tetrachloroethene	0.0050		NS	NS	ND (0.0050)	ND (0.0050)	0.026	0.020	0.0097	0.010	0.016	0.0041 J
Trichloroethene	0.0050		NS	NS	ND (0.0050)	ND (0.0050)	0.029	0.024	0.0092	0.011	0.0063	0.0052
Vinyl Chloride	0.0020		NS	NS	ND (0.0020)	ND (0.0020)	0.0038	ND (0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-17R		MW-35 (d)		MW-42		MW-44		MW-48 (d)	
		Depth: (b)	20		26		23		25		23	
		Date:	10/27/2004	4/26/2005	10/27/2004	4/27/2005	10/25/2004	4/27/2005	10/26/2004	4/28/2005	10/26/2004	4/27/2005
1,1-Dichloroethane	2.4		ND (0.0050)	0.014	NA	NS	NA	NA	NS	NS	NA	NA
1,1-Dichloroethene	0.0070		ND (0.0050)	0.071	ND (0.0050)	NS	0.0041 J	ND (0.0050)	NS	NS	3.3	3.3 J
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	NA	NS	NA	NA	NS	NS	NA	NA
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	NS	ND (0.0050)	ND (0.0050)	NS	NS	0.065	0.030
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	NS	ND (0.0050)	ND (0.0050)	NS	NS	0.26	0.29
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	NS	ND (0.0050)	ND (0.0050)	NS	NS	0.059	0.033
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	NS	ND (0.0020)	ND (0.0020)	NS	NS	0.066	0.016

NOTES:

0.13 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.
The reported concentrations are in mg/L.
NS = Not sampled because of the visual presence of potassium permanganate in ground water extracted from monitor well.
NA = Not Analyzed
ND (0.0050) = *Not Detected* at the Reporting Limit given in parentheses.
(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater PCLs, 30-acre source area, Table 3, table for TRRP Rule dated April 12, 2005.
(b) The sample depths are reported in feet below ground surface.
(c) A solution of potassium permanganate was injected in June 2004.
(d) A solution of potassium permanganate was injected in January 2005.
J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.
UJ = *Not Detected*, sample quantitation limit is estimated.
H = Bias in sample result likely to be high.
L = Bias in sample result likely to be low.

TABLE 3-1 (Cont'd)

Summary of Monitor Well Ground Water Data
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Constituent	Critical PCLs (a)	Location:	MW-50 (c, d)		MW-52		MW-54 (d)		MW-55 (d)		MW-59	
		Depth: (b)	25		25		23		23		25	
		Date:	10/28/2004	4/27/2005	10/25/2004	4/29/2005	10/27/2004	4/27/2005	10/26/2004	4/28/2005	10/28/2004	4/26/2005
1,1-Dichloroethane	2.4		NA	NA	NA	NA	NA	NS	NA	NS	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		22 JH	20 J	0.056	0.052	0.83	NS	2.6	NS	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		NA	NA	NA	NA	NA	NS	NA	NS	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		0.30	0.50	ND (0.0050)	ND (0.0050)	9.2	NS	0.040	NS	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		0.098	0.16	ND (0.0050)	ND (0.0050)	0.54	NS	0.082	NS	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		0.34	0.33	ND (0.0050)	ND (0.0050)	1.6	NS	0.019	NS	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		0.51	1.1	ND (0.0020)	ND (0.0020)	0.29	NS	1.7	NS	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-60		MW-61		MW-62		MW-64		MW-65	
		Depth: (b)	34		23		25		25		25	
		Date:	10/28/2004	4/26/2005	10/28/2004	4/26/2005	10/26/2004	4/26/2005	10/26/2004	4/26/2005	10/26/2004	4/25/2005
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	0.0024 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0091	0.0086
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.023	0.014	0.0066	0.0055
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0077	0.0053	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0038 J	0.0023 J	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	0.0035 JH	ND (0.0020)	0.0041 JH	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-70				MW-71		MW-72		MW-73	
		Depth: (b)	25				25		24		25	
		Date:	10/26/2004	12/10/2004	1/26/2005	4/28/2005	10/26/2004	4/28/2005	10/26/2004	4/28/2005	10/28/2004	4/28/2005
1,1-Dichloroethane	2.4		0.011	0.011	0.0087	0.011	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0088	0.0074
1,1-Dichloroethene	0.0070		0.015	0.0094	0.0074	0.0067	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.028	0.025
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0015 J
cis-1,2-Dichloroethene	0.070		0.0082	0.0074	0.0078	0.012	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0049 J	0.0050 J
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		0.0018 J	ND (0.0050)	0.0017 J	0.0021 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.033	0.032
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	0.00093 J	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

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TABLE 3-1 (Cont'd)

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Constituent	Critical PCLs (a)	Location:	MW-74		MW-75R		MW-76		MW-77		MW-78	
		Depth: (b)	27		33		31		30		26	
		Date:	10/27/2004	4/26/2005	10/26/2004	4/28/2005	10/27/2004	4/27/2005	10/26/2004	4/27/2005	10/28/2004	4/27/2005
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	0.0035 J	0.0026 J	0.0030 J	0.0028 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	0.019	0.011	0.013	0.015 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0011 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.018	0.019	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	0.0033 J	0.0017 J	0.040	0.049	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.023	0.028	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	0.0022	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-79		MW-80		MW-81		MW-82	
		Depth: (b)	33		31		28		31	
		Date:	10/28/2004	4/27/2005	10/27/2004	4/27/2005	10/27/2004	4/28/2005	10/27/2004	4/27/2005
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0047 J	0.0036 J
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.018	0.015
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.00081 J
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0082	0.0065
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.12	0.11
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.036	0.029
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-83				MW-84		MW-85R		MW-86	
		Depth: (b)	30				31		29		33	
		Date:	7/22/2004	10/27/2004	4/27/2005	7/27/2005	10/26/2004	4/26/2005	10/28/2004	4/28/2005	10/28/2004	4/29/2005
1,1-Dichloroethane	2.4		ND (0.0050)	0.0034 J	0.15	0.027	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		0.011	0.033 JH	1.500	0.23	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	0.0040 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	0.0034 J	0.00052 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	0.0036 J	0.0014 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	0.0054	0.00086 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	0.018	0.0044	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

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Constituent	Critical PCLs (a)	Location:	MW-87			MW-88		MW-89		MW-90		
		Depth: (b)	32			38		37		35		
		Date:	7/22/2004	10/26/2004	4/28/2005	10/27/2004	4/27/2005	10/27/2004	4/29/2005	7/22/2004	10/27/2004	4/27/2005
1,1-Dichloroethane	2.4		ND (0.0050)	0.0041 J	0.0062	NS	NS	0.0023 J	0.0019 J	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		0.012	0.011	0.015	NS	NS	0.011	0.0079	ND (0.0050)	ND (0.0050)	0.0076 J
1,2-Dichloroethane	0.0050		ND (0.0050)	0.0018 J	ND (0.0050)	NS	NS	ND (0.0050) UJL	ND (0.0050)	ND (0.0050)	ND (0.0050) UJL	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	NS	NS	0.013	0.010	ND (0.0050)	0.0029 J	0.0032 J
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	NS	NS	ND (0.0050)	ND (0.0050)	0.31	0.30	0.32
Trichloroethene	0.0050		0.0070	0.0051	0.0059	NS	NS	0.060	0.045	ND (0.0050)	0.0066	0.0066
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	NS	NS	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-91		MW-92		MW-93				MW-94	
		Depth: (b)	37		43		43				25	
		Date:	10/27/2004	4/27/2005	10/28/2004	4/29/2005	10/26/2004	12/10/2004	1/26/2005	4/27/2005	10/28/2004	4/29/2005
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0010 J	ND (0.0050)
1,1-Dichloroethene	0.0070		ND (0.0050)	0.0025 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050) UJL	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		0.0031 J	0.0031 J	0.0024 J	0.0031 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		0.48	0.51	1.1	0.69	0.010	0.016	0.019	0.039	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		0.0090	0.0090	0.0038 J	0.0043 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-95		MW-96		MW-97		MW-98		MW-99	
		Depth: (b)	30		33		38		36		32	
		Date:	10/27/2004	4/26/2005	10/26/2004	4/28/2005	10/26/2004	4/27/2005	10/26/2004	4/28/2005	10/26/2004	4/25/2005
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0039 J	ND (0.0050)
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.023	0.0055
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.00091 J	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

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Constituent	Critical PCLs (a)	Location:	MW-100		MW-101		MW-102		MW-106		MW-107	
		Depth: (b)	31		30		45		42		42	
		Date:	10/26/2004	4/25/2005	10/26/2004	4/27/2005	10/28/2004	4/28/2005	10/26/2004	4/28/2005	10/28/2004	4/29/2005
1,1-Dichloroethane	2.4		0.047	0.024	0.0021 J	0.0020 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		0.060	0.035	0.0053	0.0051	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050) UJL	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		0.0064	0.0012 J	0.0052	0.0048 J	ND (0.0050)	0.00086 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0011 J
Tetrachloroethene	0.0050		0.0013 J	ND (0.0050)	0.29	0.27	0.28	0.35	0.40	0.58	1.2	0.77
Trichloroethene	0.0050		0.0026 J	0.00088 J	0.037	0.035	0.0026 J	0.0027 J	0.0048 J	0.0065	0.017	0.011
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-108		MW-109		MW-110		MW-111		MW-112	
		Depth: (b)	27		26		27		26		26	
		Date:	10/26/2004	4/26/2005	10/26/2004	4/26/2005	10/26/2004	4/26/2005	10/26/2004	4/26/2005	10/26/2004	4/26/2005
1,1-Dichloroethane	2.4		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	0.0070		0.12	0.12	0.14	0.15	0.15	0.11	0.16	0.023	0.18	0.13
1,2-Dichloroethane	0.0050		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	0.086	0.12	0.036	0.019	0.070	0.062	0.91	0.86
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	0.036	0.064	0.0065	0.0024 J	0.0029 J	ND (0.0050)	0.18	0.3
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	0.031	0.032	0.014	0.0095	0.0023 J	0.00075 J	0.025	0.047
Vinyl Chloride	0.0020		0.0019 JH	ND (0.0020)	0.0075 JH	0.0047	0.0097	0.0054	0.0049 JH	0.0070	ND (0.0020)	0.085

Constituent	Critical PCLs (a)	Location:	MW-113		MW-114		MW-115		MW-116		MW-117	
		Depth: (b)	27		32		34		27		25	
		Date:	10/26/2004	4/26/2005	10/25/2004	4/29/2005	10/26/2004	4/28/2005	10/26/2004	4/28/2005	10/26/2004	4/28/2005
1,1-Dichloroethane	2.4		NA	NA	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		0.015	ND (0.0050)	0.0053	0.0046 J	0.078	0.12	0.0022 J	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		NA	NA	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0050 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0017 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	0.020	0.048	0.00091 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	0.0028 J	0.0049 J	0.0029 J	0.0041 J	0.0021 J	0.00094 J	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		0.0034 JH	ND (0.0050)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

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		Depth: (b)	27		28		25			28	
		Date:	10/27/2004	4/28/2005	10/26/2004	4/28/2005	7/22/2004	10/27/2004	4/27/2005	10/28/2004	4/28/2005
1,1-Dichloroethane	2.4		0.0026 J	0.0016 J	ND (0.0050)	ND (0.0050)	0.0061	0.0014 J	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		0.015 JH	0.010	0.0041 J	ND (0.0050)	0.045	0.0060 JH	ND (0.0050)	0.11	0.13
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		0.0060	0.0045 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	0.0038 J	0.0026 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		0.029	0.021	0.002 J	0.0014 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-122		MW-123		MW-124		MW-125	
		Depth: (b)	28		27.5		29		32	
		Date:	10/28/2004	4/28/2005	10/26/2004	4/28/2005	10/27/2004	4/28/2005	10/27/2004	4/28/2005
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	0.0036 J	ND (0.0050)	0.0053	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0011 J	ND (0.0050)	0.0027 J	0.0033 J
Trichloroethene	0.0050		ND (0.0050)	0.00097 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Location:	MW-126				MW-127		MW-128		MW-129	
		Depth: (b)	25				32		40		35	
		Date:	10/27/2004	12/10/2004	1/26/2005	4/29/2005	10/25/2004	4/25/2005	10/26/2004	4/28/2005	10/25/2004	4/27/2005
1,1-Dichloroethane	2.4		0.0093	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.056	0.047
1,1-Dichloroethene	0.0070		0.014 JH	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0093	0.0050	ND (0.0050)	ND (0.0050)	0.38	0.24 J
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0023 J	0.0016 J
cis-1,2-Dichloroethene	0.070		0.0048 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.007	0.0045 J	0.0017 J	0.00094 J	0.0028 J	0.0022 J
Tetrachloroethene	0.0050		0.069	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0085	0.0071
Trichloroethene	0.0050		0.0095	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.044	0.028	0.0081	0.0033 J	0.0084	0.0068
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

NOTES:

0.13 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.
The reported concentrations are in mg/L.
NS = Not sampled because of the visual presence of potassium permanganate in ground water extracted from monitor well.
NA = Not Analyzed
ND (0.0050) = *Not Detected* at the Reporting Limit given in parentheses.
(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater PCLs, 30-acre source area, Table 3, table for TRRP Rule dated April 12, 2005.
(b) The sample depths are reported in feet below ground surface.
(c) A solution of potassium permanganate was injected in June 2004.
(d) A solution of potassium permanganate was injected in January 2005.
J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.
UJ = *Not Detected*, sample quantitation limit is estimated.
H = Bias in sample result likely to be high.
L = Bias in sample result likely to be low.

TABLE 3-1 (Cont'd)

Summary of Monitor Well Ground Water Data
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

		Location:	MW-130		MW-131		MW-02 (C)		MW-02 (S)		MW-03 (S)	
	Critical	Depth: (b)	25		25		23		23		23	
Constituent	PCLs (a)	Date:	10/28/2004	4/27/2005	10/27/2004	4/27/2005	10/25/2004	4/26/2005	10/28/2004	4/27/2005	10/28/2004	4/27/2005
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	NA	NA	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	NA	NA	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

NOTES:

0.13 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.
The reported concentrations are in mg/L.
NS = Not sampled because of the visual presence of potassium permanganate in ground water extracted from monitor well.
NA = Not Analyzed
ND (0.0050) = *Not Detected* at the Reporting Limit given in parentheses.
(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater PCLs, 30-acre source area, Table 3, table for TRRP Rule dated April 12, 2005.
(b) The sample depths are reported in feet below ground surface.
(c) A solution of potassium permanganate was injected in June 2004.
(d) A solution of potassium permanganate was injected in January 2005.
J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.
UJ = *Not Detected*, sample quantitation limit is estimated.
H = Bias in sample result likely to be high.
L = Bias in sample result likely to be low.

TABLE 3-2

Summary of Surface Water Data
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

Constituent	Critical PCLs (a)	Location:	SWD-12		SWD-14		SWD-15	
		Date:	10/25/2004	4/25/2005	10/25/2004	4/25/2005	10/25/2004	4/25/2005
1,1-Dichloroethane	5.13		ND (0.0050)	0.0017 J	0.0013 J	0.0071	0.0022 J	0.0074
1,1-Dichloroethene	0.06		ND (0.0050)	0.0059	0.011	0.050	0.025	**0.059**
1,2-Dichloroethane	0.554		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	9.36		ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0014 J	ND (0.0050)	0.0039 J
Tetrachloroethene	0.790		ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0030 J	0.0095	0.010
Trichloroethene	1.110		ND (0.0050)	0.00094 J	ND (0.0050)	0.0028 J	0.0012 J	0.0039 J
Vinyl Chloride	0.0336		ND (0.0020)	ND (0.0020)	ND (0.0020)	0.0037	ND (0.0020)	0.0051

Constituent	Critical PCLs (a)	Location:	SWD-17		SWD-18		SWD-20	
		Date:	10/25/2004	4/25/2005	10/25/2004	4/25/2005	10/25/2004	4/25/2005
1,1-Dichloroethane	5.13		ND (0.0050)	0.0013 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.06		0.0086	0.0088	0.0074	0.0063	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.554		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	9.36		ND (0.0050)	0.0013 J	ND (0.0050)	0.0011 J	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.790		0.0026 J	0.0037 J	0.0045 J	0.012	ND (0.0050)	0.0022 J
Trichloroethene	1.110		0.0016 J	0.0020 J	0.0012 J	0.0015 J	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0336		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

NOTES:

The reported concentrations are in mg/L.
ND (0.0050) = *Not Detected* at the Reporting Limit given in parentheses.
J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.
Bold values indicate an exceedence of the 80% critical Protective Concentration Level (PCL).
(a) Taken from the critical PCLs calculated in the *Human Health Ecological Risk Assessment for Surface Water and Sediment, dated June 2003.*
SWD = Surface Water Harris County Flood Control Ditch.

TABLE 3-3

Summary of Quality Assurance/Quality Control Data
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

Constituent	Critical PCLs (a)	Event: Location: Date:	Second Half 2004 Duplicates						
			Dup-1 (b) 7/22/2004	Dup-1 (c) 10/27/2004	Dup-1 (d) 12/10/2004	Dup-2 (d) 10/26/2004	Dup-3 (f) 10/27/2004	Dup-4(g) 10/27/2004	Dup-5 (h) 10/25/2004
1,1-Dichloroethane	2.4		0.0059	0.073	0.011	0.0110	NA	0.0016 J	0.0017 J
1,1-Dichloroethene	0.0070		0.042	0.66	0.0099	0.015	ND (0.0050)	0.0055	0.024
1,2-Dichloroethane	0.0050		ND (0.0050)	0.0031 J	ND (0.0050)	ND (0.0050)	NA	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	0.0075	0.0075	0.0082	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	0.016	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0083
Trichloroethene	0.0050		ND (0.0050)	0.0095	ND (0.0050)	0.0018 J	ND (0.0050)	ND (0.0050)	0.0011 J
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Event: Location: Date:	Second Half 2004 Field Blanks						
			FB072204 7/22/2004	FB102504 10/25/2004	FB102604 10/26/2004	FB102704 10/27/2004	FB102804B 10/28/2004	FB102805 10/28/2005	FB121004 12/10/2004
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

NOTES:

0.012 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.
The reported concentrations are in mg/L.
NA = Not Analyzed.
ND (0.0050) = *Not Detected* at the Reporting Limit given in parentheses.
(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater PCLs, 30-acre source area, Table 3, table for TRRP Rule dated April 12, 2005.
(b) Dup-1 (7/22/2004) is a duplicate sample of MW-120.
(c) Dup-1 (10/27/2004) is a duplicate sample of MW-16R
(d) Dup-2 is a duplicate sample for MW-70.
(e) Dup-3 is a duplicate sample of KMW-14.
(f) Dup-4 is a duplicate of sample MW-120.
(g) Dup-5 is a duplicate of sample SWD-15.
(h) Dup-1 is a duplicate sample of MW-70.
(i) Dup-1 is a duplicate sample of MW-70.
(j) Dup-1 is a duplicate sample of MW-17R.
(k) Dup-2 is a duplicate sample of MW-70.
(l) Dup-3 is a duplicate sample of MW-80.
(m) Dup-4 is a duplicate sample of MW-106.
(n) Dup-5 is a duplicate sample of SW-18.
J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.
H = Bias in sample result likely to be high.

TABLE 3-3 (Cont'd)

Summary of Quality Assurance/Quality Control Data
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

Constituent	Critical PCLs (a)	Event: Location: Date:	First Half 2005 Duplicates					
			Dup-1 (i) 1/26/2005	Dup-1 (j) 4/26/2005	Dup-2 (k) 4/28/2005	Dup-3 (l) 4/27/2005	Dup-4(m) 4/28/2005	Dup-5 (n) 4/25/2005
1,1-Dichloroethane	2.4		0.0081	0.014	0.011	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		0.0068	0.068	0.0069	ND (0.0050)	ND (0.0050)	0.0060
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		0.0073	ND (0.0050)	0.013	ND (0.0050)	ND (0.0050)	0.0011 J
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.57	0.011
Trichloroethene	0.0050		0.0013 J	ND (0.0050)	0.0018 J	ND (0.0050)	0.0062	0.0014 J
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	0.00099 J	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	Critical PCLs (a)	Event: Location: Date:	First Half 2005 Field Blanks					
			FB01262005 1/26/2005	FB042505 4/25/2005	FB042605 4/26/2005	FB042705 4/27/2005	FB042805 4/28/2005	FB042905 4/29/2005
1,1-Dichloroethane	2.4		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-Dichloroethene	0.0070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-Dichloroethane	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.070		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Trichloroethene	0.0050		ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020		ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

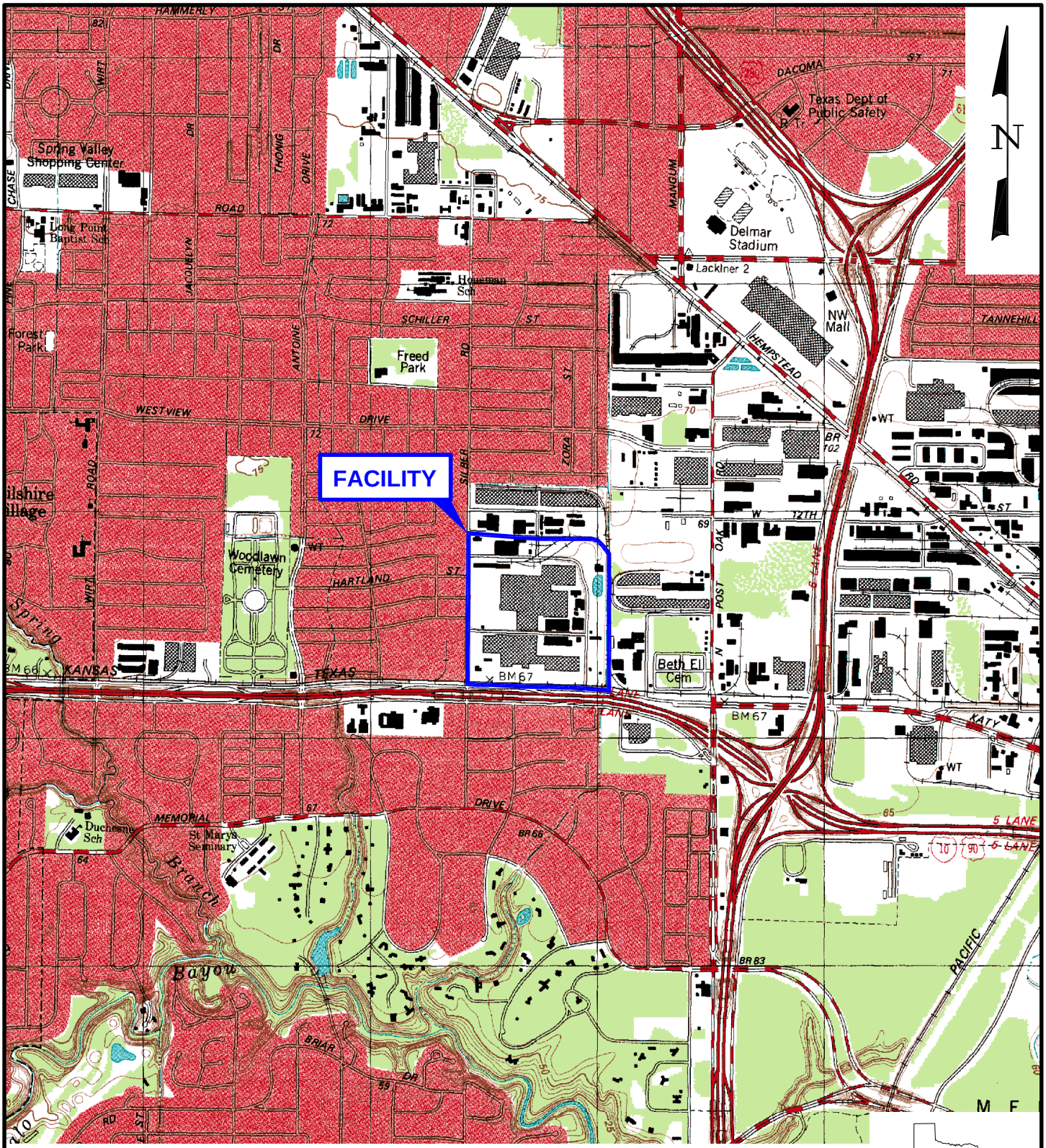
NOTES:

0.012 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.
The reported concentrations are in mg/L.
NA = Not Analyzed.
ND (0.0050) = *Not Detected* at the Reporting Limit given in parentheses.
(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater PCLs, 30-acre source area, Table 3, table for TRRP Rule dated April 12, 2005.
(b) Dup-1 (7/22/2004) is a duplicate sample of MW-120.
(c) Dup-1 (10/27/2004) is a duplicate sample of MW-16R
(d) Dup-2 is a duplicate sample for MW-70.
(e) Dup-3 is a duplicate sample of KMW-14.
(f) Dup-4 is a duplicate of sample MW-120.
(g) Dup-5 is a duplicate of sample SWD-15.
(h) Dup-1 is a duplicate sample of MW-70.
(i) Dup-1 is a duplicate sample of MW-70.
(j) Dup-1 is a duplicate sample of MW-17R.
(k) Dup-2 is a duplicate sample of MW-70.
(l) Dup-3 is a duplicate sample of MW-80.
(m) Dup-4 is a duplicate sample of MW-106.
(n) Dup-5 is a duplicate sample of SW-18.
J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.
H = Bias in sample result likely to be high.

Figures

October 25, 2005
Project No. 0031202

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000



SOURCE: U.S.G.S. 7.5' QUADRANGLE, HOUSTON HEIGHTS, TEXAS, 1982 (o29095G4).

ERM-Southwest, Inc.

HOUSTON · NEW ORLEANS · AUSTIN · MOBILE · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

DESIGN: GJW	DRAWN: EFC	CHKD.: PAS
DATE: 10/19/05	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\dwg\J05\0031202a180.dwg, 10/19/2005 2:16:55 PM		

FIGURE 1-1
SITE LOCATION MAP
2005 Annual Ground Water Report
Former Cameron Iron Works Facility
Houston, Texas

ERM®

2.71 ACRES

11.55 ACRES

N

LEGEND

- MW-07 — PLUGGED AND ABANDONED WELL
- MW-35 — INJECTION/MONITOR WELL
- MW-34 — MONITOR WELL
- MW-01(S) — AWTY MONITOR WELL
- P-1 — PIEZOMETER
- SWD-11 — SURFACE WATER SAMPLE LOCATION IN THE HARRIS COUNTY FLOOD CONTROL DISTRICT
- IW-24 — INJECTION WELL
- IP-33 — TEMPORARY INJECTION POINT
- APPROXIMATE LOCATION OF HARRIS COUNTY FLOOD CONTROL DITCH / WOODS BAYOU / BUFFALO BAYOU
- RAILROAD TRACKS
- I-10 RIGHT-OF-WAY EXPANSION
- PROPERTY LINE FOR FORMER CAMERON IRON WORKS
- AWTY SCHOOL PROPERTY LINE
- NORTHERN/SOUTHERN PROPERTY BOUNDARY WITHIN THE FORMER CAMERON IRON WORKS
- 2.71 ACRE TRACT INTERNAL BOUNDARY LINE
- 7.51 ACRE TRACT INTERNAL BOUNDARY LINE
- 11.55 ACRE TRACT INTERNAL BOUNDARY LINE
- FORMER SUMPS/EQUIPMENT LOCATION IN FORGE SHOP
- FORMER BUILDING/AREA
- CURRENT BUILDINGS

NOTES:

1. HISTORICAL BUILDING LOCATIONS AND SITE FEATURES ARE BASED ON CAMERON IRON WORKS DRAWING K-00-N000-0021 AND HARRIS COUNTY APPRAISAL DISTRICT MAPS.
2. THE LOCATIONS OF THE BUILDINGS FOR THE AWTY SCHOOL ARE APPROXIMATE.

0 250 500
SCALE FEET

ERM-Southwest, Inc.

HOUSTON · NEW ORLEANS · AUSTIN · MOBILE · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

FIGURE 1-2
SITE FEATURE MAP
2005 Annual Ground Water Report
Former Cameron Iron Works Facility
Houston, Texas

DESIGN: GJW	DRAWN: EFC	CHKD.: PAS	SHEET NO.
DATE: 10/19/05	SCALE: AS SHOWN	REV.:	of
W.O.NO.: H:\dwg\J05\0031202d180.dwg, 10/19/2005 4:37:56 PM			

2.71 ACRES

11.55 ACRES

53.0

52.0

51.0

50.0

49.0

48.0

47.0

46.0

45.0

44.0

43.0

42.0

41.0

40.0

39.0

38.0

37.0

36.0

35.0

34.0

33.0

32.0

31.0

30.0

29.0

28.0

27.0

26.0

INTERSTATE I-10

BLANDFORD LANE

ALDERNEY DRIVE

HARTLAND AVENUE

NORTHAMPTON WAY

SHAVELSON ST.

ABERCROMBIE BLVD.

KENILWORTH DRIVE

WICKFORD DRIVE

OAKFORD CT.

CHATSWORTH DRIVE

MEMORIAL DRIVE

SANDRINGHAM DRIVE

CARNARVON DRIVE

WINSTON WOODS DR. (PVT.)

SILBER RD.

COLDSTREAM RD.

BUCKINGHAM DRIVE

EAST FRIAR TUCK LANE

HARRIS COUNTY FLOOD CONTROL DITCH

NORTH POST OAK ROAD

NORTH POST OAK LANE

BOLTON PLACE

FONTAINBLEU STREET

LA FONTE STREET

OXFORD DRIVE

PINEHAVEN DRIVE

HOLT ROAD

LIMERICK LANE

MEMORIAL WOOD DRIVE

KENILWORTH DRIVE

FARISH DRIVE

STABLE LANE

HARNESS CREEK LANE

STABLE CREST CT. (PVT.)

STABLE CREST BLVD. (PVT.)

STABLEWOOD BLVD (PVT.)

CRESCENT GATE LANE (PVT.)

PASTURE VIEW LANE

SADDLEBRANCH CT.

LODGE HOLLOW CT.

GABLE LODGE CT.

BRIAR MANOR RD. (PVT.)

Buffalo Bayou

CHAMPAGNE FINE PRINTERS

INTEGRITY PACKAGING

TRAMMEL-CROW

CITY OF HOUSTON FIRE STATION

SCHULZ U S A INC 1127 SILBER RD.

SIGMOR #274 1117 SILBER RD.

DERBY MEWS CONDO 1123 SILBER RD.

CASALE BOB 1109 SILBER RD.

SURBURBAN PARTNERS LTD 1107 SILBER RD.

MIKSH ROBERT J SR 1103 SILBER RD.

SONG TAE BOK 1073 SILBER RD.

HUDSON HARRY H 1051 SILBER RD.

ESTEEM VENTURES LLC 6815 SHAVELSON ST.

GLESBY-MARKS MOTORS CORP. 1031 SILBER RD.

L E STAHLMAN COMPANY 1001 SILBER RD.

SHELL OIL CO. 7703 KATY FWY.

ENTERPRISES HOLDING CO. 7715 KATY FWY. (PUBLIC STORAGE)

FM 1097 LTD PRTSP 7649 KATY FWY.

SILVER HOSPITALITY, LLC 7625 KATY FWY.

WESTHILL, INC. 7613 KATY FWY.

AMERICA'S FIVE STAR, INC. (RAMADA PLAZA HOTEL) 7611 KATY FWY.

BAYOU WOODS CONDO 7575 KATY FWY.

FIRST BAPTIST CHURCH 7401 KATY FWY.

MEMORIAL WOODS CONDO

LEGEND MEMORIAL LTD. 7403 SILBER RD.

LEGEND MEMORIAL LTD. 7313 SILBER RD.

WICKFORD MANOR

BAYOU WOODS CONDO & TOWNHOUSE

8912-8988 CHATSWORTH DRIVE

CHATSWORTH PARK

THE MEMORIAL CONDO

SAMCO CREDIT UNION

CARPENTER SHOP

CRUDE UNDER-GROUND TANKS

ECM SETTLING TANK

ENG. OFFICE

SUMP

TRANSFORM BUILDING

WELL HEAD MANUFACTURING ANN. OFFICES

OIL SEP. AREA

FORMER LAGOON

FORMER AST

DIESEL UST

B054

B265

B290 HAZARDOUS WASTE STORAGE BLDG.

FORMER REFUSE BURN AREA

B062 USED OIL STORAGE BLDG.

B007

DRILLING PROD. MACHINE SHOP NO. 1

DRILLING PRODUCTS MACHINE SHOP NO. 2

DRILLING PRODUCTS MACHINE SHOP NO. 3 (R&D TEST LAB)

CAM-VAC BLDG.

BRICK STORAGE

COOLING TOWER

COOLING POND

PUMP HOUSE

OUTFALL NO. 1

OUTFALL NO. 2

OUTFALL #3

DIE STORAGE AREA

DIE RACKS

SAW SHOP

LARGE DIE STORAGE

FORGE SHOP

SHOWERS/LOCKERS

PARKING LOT

TOOL & SUPPLY

RACKS

ROUGH MACHINING

TRAINING BLDG.

A/C BLDG.

GUARD HOUSE

METALLURGICAL BLDG.

DIE ENG.

FORGE INSPECTION

FIXTURE STORAGE

AREA NORTH OF BORING & EXCAVATION

PIPE CHASE WEST

PIPE CHASE EAST

HEAT TREAT AREA

ACID ETCHING BLDG. B074

MAINT. BLDG.

AUTO MAINT.

WASTEWATER TREATMENT AREA

AIR COMP.

OUTSIDE MAINTENANCE

WELD. SHOP

OIL TOOL OFFICES

GATE VALVE MANUFACTURING

BURN PIT NORTH EXCAVATION

BURN PIT SOUTH EXCAVATION

MAINT. AREA

PAVED PARKING LOT

SOCCER FIELD

PAVED PARKING LOT

AWTY INTERNATIONAL SCHOOL

PLAYGROUND

CLASSROOMS AND ADMINISTRATIVE OFFICES

PLAYING FIELD

BETH EL CEMETERY

RESIDENTIAL

MW-01 51.39
MW-01(S) 49.97
MW-02(C) 52.65
MW-02(E)
MW-02(S) 49.62
MW-03(E)
MW-03(S) 49.32
MW-04 NA
MW-04(S) NA
MW-05 NA
MW-06 NA
MW-07 PARK
MW-07R 49.33
MW-08 48.40
MW-09(E)
MW-10 NA
MW-11 NA
MW-12 NA
MW-13 NA
MW-13R NA
MW-14 51.28
MW-15 NA
MW-15R 47.69
MW-16 51.75
MW-16R 47.89
MW-17 51.73
MW-17R 47.74
MW-18 53.10
MW-19 NA
MW-20 53.06
MW-21 52.52
MW-22 NA
MW-23 NA
MW-24 NA
MW-25 NA
MW-26 NA
MW-27 53.00
MW-28 NA
MW-30 NA
MW-31 NA
MW-33 NA
MW-34 51.03
MW-35 51.31
MW-36 51.11
MW-37 NA
MW-38 51.92
MW-39 NA
MW-40 NA
MW-41 NA
MW-42 52.65
MW-43 51.83
MW-44 51.94
MW-45 NA
MW-46 NA
MW-47 NA
MW-48 51.60
MW-49 NA
MW-50 51.92
MW-51 NA
MW-52 50.09
MW-53 NA
MW-54 51.82
MW-55 51.74
MW-56 51.81
MW-57 52.90
MW-58 52.42
MW-59 49.14
MW-60 49.90
MW-61 50.22
MW-62 52.04
MW-63 NA
MW-64 50.43
MW-65 49.51
MW-66 48.80
MW-67 48.82
MW-68
MW-69
MW-70 47.60
MW-71 45.62
MW-72 44.04
MW-73 42.15
MW-74 46.61
MW-75 39.04
MW-75R 39.04
MW-76 43.59
MW-77 45.57
MW-78 43.73
MW-79 42.02
MW-80 40.94
MW-81 43.60
MW-82 42.15
MW-83 40.31
MW-84 38.20
MW-85 NA
MW-85R 42.05
MW-86 NA
MW-87 40.68
MW-88 37.10
MW-89 34.48
MW-90 35.28
MW-91 33.96
MW-92 29.64
MW-93 31.01
MW-94 50.93
MW-95 46.86
MW-96 35.63
MW-97 33.30
MW-98 29.40
MW-99 46.55
MW-100 47.01
MW-101 37.66
MW-102 28.94
MW-103 NA
MW-104 NA
MW-105 NA
MW-106 25.72
MW-107 28.34
MW-108 48.40
MW-109 48.51
MW-110 48.67
MW-111 48.76
MW-112 48.88
MW-113 49.08
MW-114 39.38
MW-115 39.02
MW-116 45.83
MW-117 45.79
MW-118 43.83
MW-119 43.34
MW-120 43.28
MW-121 42.14
MW-122 41.43
MW-123 39.80
MW-124 41.01
MW-125 31.49
MW-126 46.38
MW-127 34.05
MW-128 30.00
MW-129 34.06
MW-130 49.09
MW-131 47.22
DW-01 NA
DW-02
DW-03
EX-01
EX-02
EX-03
EX-04
EX-05
EX-06
EX-07
EX-08
EX-09
P-1 47.65
P-2 48.26
P-3 48.44
P-4 48.51
P-5 49.06
P-6 48.87
SW-01 NA
SW-02
SWD-12 (35.05)
SWD-14 (29.04)
SWD-15 (29.27)
SWD-17 (23.58)
SWD-18 (19.01)
SWD-20 (15.80)
KMW-01 51.39
KMW-02
KMW-03 NA
KMW-04 NA
KMW-05 52.89
KMW-06 52.79
KMW-07 52.84
KMW-08 NA
KMW-09
KMW-10
KMW-11 51.84
KMW-12 NA
KMW-13 51.88
KMW-14 51.60
KMW-15 51.28
KMW-16 51.75
KMW-17 51.73
KMW-18
KMW-20
KMW-21 NA
KMW-22
JSW-01
NORTHERN/SOUTHERN PROPERTY BOUNDARY WITHIN THE FORMER CAMERON IRON WORKS
2.71 ACRE TRACT INTERNAL BOUNDARY LINE
7.51 ACRE TRACT INTERNAL BOUNDARY LINE
11.55 ACRE TRACT INTERNAL BOUNDARY LINE
FORMER SUMPS/EQUIPMENT LOCATION IN FORGE SHOP
FORMER BUILDING/AREA
CURRENT BUILDINGS

LEGEND

50.0 — EQUIPOTENTIAL LINE (FEET ABOVE MEAN SEA LEVEL, DASHED WHERE INFERRED)

51.55 — GROUND WATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

(29.04) — SURFACE WATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

GROUND WATER FLOW DIRECTION

MW-07 — PLUGGED AND ABANDONED WELL

MW-35 — INJECTION/MONITOR WELL

MW-34 — MONITOR WELL

MW-01(S) — AWTY MONITOR WELL

P-1 — PIEZOMETER

SWD-12 — SURFACE WATER SAMPLE LOCATION IN THE HARRIS COUNTY FLOOD CONTROL DISTRICT

APPROXIMATE LOCATION OF HARRIS COUNTY FLOOD CONTROL DITCH / WOODS BAYOU / BUFFALO BAYOU

RAILROAD TRACKS

PROPOSED I-10 RIGHT-OF-WAY EXPANSION

PROPERTY LINE FOR FORMER CAMERON IRON WORKS

AWTY SCHOOL PROPERTY LINE

NOTES:

1. HISTORICAL BUILDING LOCATIONS AND SITE FEATURES ARE BASED ON CAMERON IRON WORKS DRAWING K-00-N000-0021 AND HARRIS COUNTY APPRAISAL DISTRICT MAPS.

2. THE LOCATIONS OF THE BUILDINGS FOR THE AWTY SCHOOL ARE APPROXIMATE.

3. DUE TO ACCESS ISSUES AT MW-52 AND MW-128, THE DEPTH-TO-WATER MEASUREMENTS WERE NOT COLLECTED UNTIL APRIL 29 AND APRIL 28 RESPECTIVELY, THEREFORE, THE GROUND WATER ELEVATIONS WERE NOT USED TO CREATE THE GROUND WATER MAP.

4. THE REPORTED GROUND WATER ELEVATION AT MW-127 APPEARS TO BE ANOMALOUS AND WAS NOT USED FOR CONTOURING.

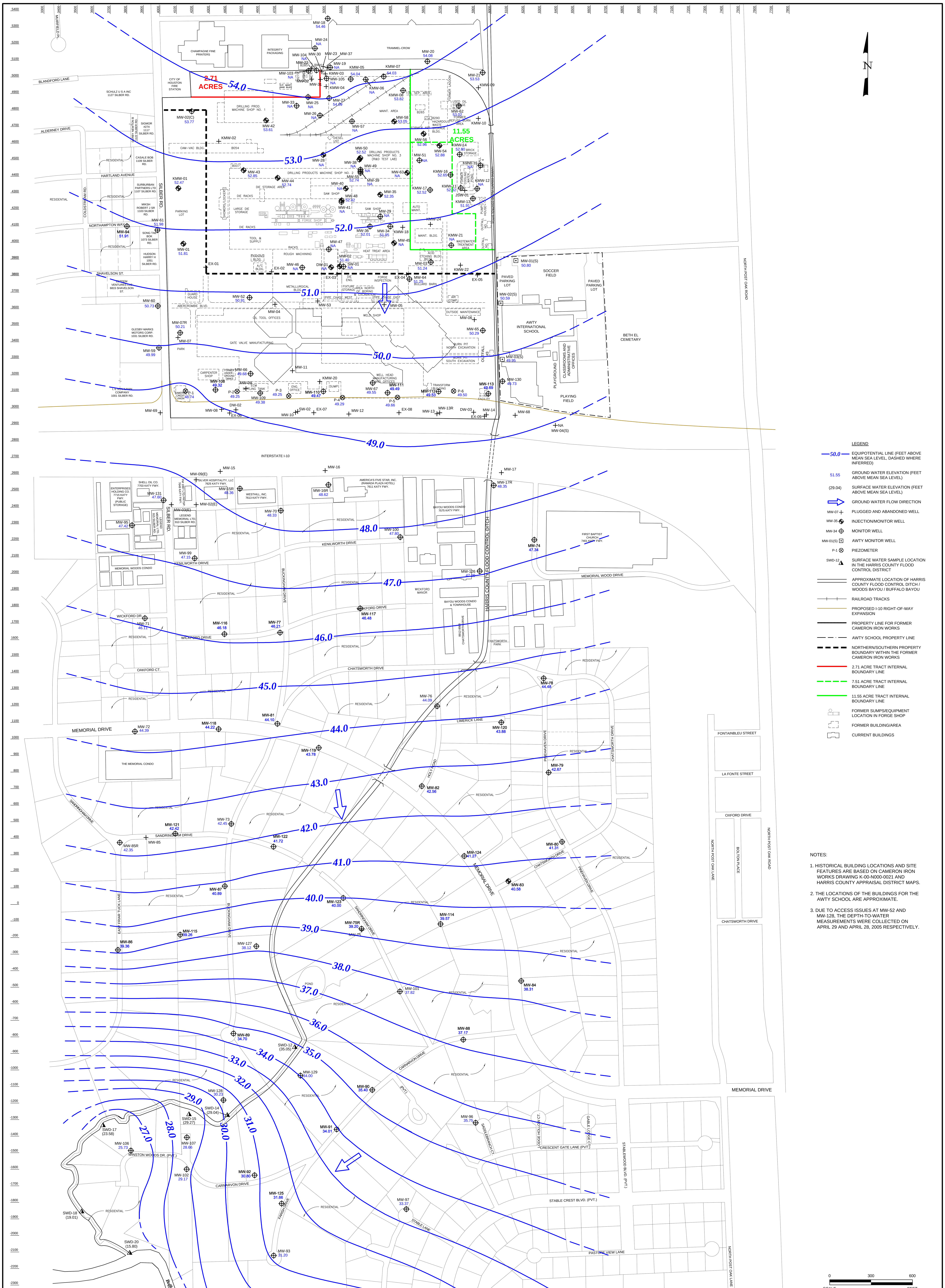
0 300 600
SCALE FEET

ERM-Southwest, Inc.
HOUSTON · NEW ORLEANS · AUSTIN · MOBILE · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

FIGURE 3-1
GROUND WATER GRADIENT MAP - OCTOBER 25, 2004
2005 ANNUAL GROUND WATER REPORT
Former Cameron Iron Works Facility
Houston, Texas

DESIGN: GLW	DRAWN: EFC	CHKD.: PAS
DATE: 10/20/05	SCALE: AS SHOWN	REV.:
W.O.NO.: H:\dwg\J05\0031202d201.dwg, 10/20/2005 1:04:33 PM		

SHEET NO.
of



LEGEND

- 50.0 — EQUIPOTENTIAL LINE (FEET ABOVE MEAN SEA LEVEL, DASHED WHERE INFERRED)
- 51.55 — GROUND WATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- (29.04) — SURFACE WATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- GROUND WATER FLOW DIRECTION
- MW-07 — PLUGGED AND ABANDONED WELL
- MW-35 — INJECTION/MONITOR WELL
- MW-34 — MONITOR WELL
- MW-01(S) — AWTY MONITOR WELL
- P-1 — PIEZOMETER
- SWD-12 — SURFACE WATER SAMPLE LOCATION IN THE HARRIS COUNTY FLOOD CONTROL DISTRICT
- APPROXIMATE LOCATION OF HARRIS COUNTY FLOOD CONTROL DITCH / WOODS BAYOU / BUFFALO BAYOU
- RAILROAD TRACKS
- PROPOSED I-10 RIGHT-OF-WAY EXPANSION
- PROPERTY LINE FOR FORMER CAMERON IRON WORKS
- AWTY SCHOOL PROPERTY LINE
- NORTHERN/SOUTHERN PROPERTY BOUNDARY WITHIN THE FORMER CAMERON IRON WORKS
- 2.71 ACRE TRACT INTERNAL BOUNDARY LINE
- 7.51 ACRE TRACT INTERNAL BOUNDARY LINE
- 11.55 ACRE TRACT INTERNAL BOUNDARY LINE
- FORMER SUMPS/EQUIPMENT LOCATION IN FORGE SHOP
- FORMER BUILDING/AREA
- CURRENT BUILDINGS

NOTES:

1. HISTORICAL BUILDING LOCATIONS AND SITE FEATURES ARE BASED ON CAMERON IRON WORKS DRAWING K-00-N000-0021 AND HARRIS COUNTY APPRAISAL DISTRICT MAPS.
2. THE LOCATIONS OF THE BUILDINGS FOR THE AWTY SCHOOL ARE APPROXIMATE.
3. DUE TO ACCESS ISSUES AT MW-52 AND MW-128, THE DEPTH-TO-WATER MEASUREMENTS WERE COLLECTED ON APRIL 29 AND APRIL 28, 2005 RESPECTIVELY.

0 300 600
SCALE FEET

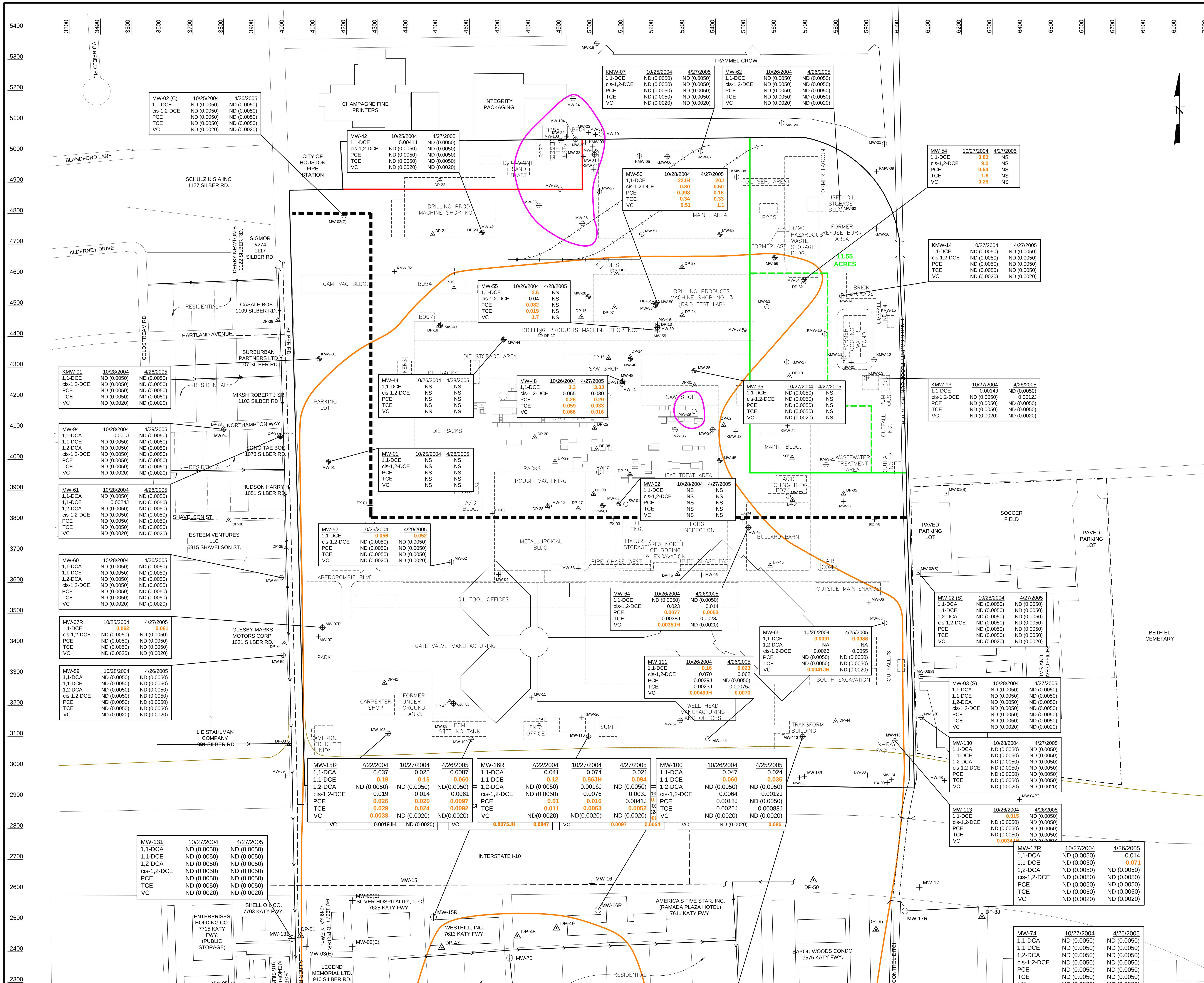
ERM-Southwest, Inc.

HOUSTON · NEW ORLEANS · AUSTIN · MOBILE · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

FIGURE 3-2
GROUND WATER GRADIENT MAP - APRIL 25, 2005
2005 ANNUAL GROUND WATER REPORT
Former Cameron Iron Works Facility
Houston, Texas

ERM

DESIGN: GLW	DRAWN: EFC	CHKD.: PAS	SHEET NO.
DATE: 10/19/05	SCALE: AS SHOWN	REV.:	
W.O.NO.: H:\dwg\J05\0031202d202.dwg, 10/19/2005 4:36:55 PM			of



MW-02 (C)	10/25/2004	4/26/2005
1,1-DCE	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-42	10/25/2004	4/27/2005
1,1-DCE	0.0041J	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

KMW-07	10/25/2004	4/27/2005
1,1-DCE	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-62	10/26/2004	4/26/2005
1,1-DCE	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-50	10/28/2004	4/27/2005
1,1-DCE	22JH	20J
cis-1,2-DCE	0.30	0.50
PCE	0.098	0.16
TCE	0.34	0.33
VC	0.51	1.1

MW-54	10/27/2004	4/27/2005
1,1-DCE	0.83	NS
cis-1,2-DCE	9.2	NS
PCE	0.54	NS
TCE	1.6	NS
VC	0.29	NS

KMW-14	10/27/2004	4/27/2005
1,1-DCE	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-55	10/26/2004	4/28/2005
1,1-DCE	2.6	NS
cis-1,2-DCE	0.04	NS
PCE	0.082	NS
TCE	0.019	NS
VC	1.7	NS

KMW-01	10/28/2004	4/26/2005
1,1-DCE	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-44	10/26/2004	4/28/2005
1,1-DCE	NS	NS
cis-1,2-DCE	NS	NS
PCE	NS	NS
TCE	NS	NS
VC	NS	NS

MW-48	10/26/2004	4/27/2005
1,1-DCE	3.3	3.3J
cis-1,2-DCE	0.065	0.030
PCE	0.26	0.29
TCE	0.059	0.033
VC	0.066	0.016

MW-35	10/27/2004	4/27/2005
1,1-DCE	ND (0.0050)	NS
cis-1,2-DCE	ND (0.0050)	NS
PCE	ND (0.0050)	NS
TCE	ND (0.0050)	NS
VC	ND (0.0020)	NS

KMW-13	10/27/2004	4/26/2005
1,1-DCE	0.0014J	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	0.0012J
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-94	10/28/2004	4/29/2005
1,1-DCA	0.001J	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-01	10/25/2004	4/26/2005
1,1-DCE	NS	NS
cis-1,2-DCE	NS	NS
PCE	NS	NS
TCE	NS	NS
VC	NS	NS

MW-61	10/28/2004	4/26/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	0.0024J	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-02	10/28/2004	4/27/2005
1,1-DCE	NS	NS
cis-1,2-DCE	NS	NS
PCE	NS	NS
TCE	NS	NS
VC	NS	NS

MW-52	10/25/2004	4/29/2005
1,1-DCE	0.056	0.052
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-60	10/28/2004	4/26/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-64	10/26/2004	4/26/2005
1,1-DCE	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.023	0.014
PCE	0.0077	0.0053
TCE	0.0038J	0.0023J
VC	0.0035JH	ND (0.0020)

MW-02 (S)	10/28/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-07R	10/25/2004	4/27/2005
1,1-DCE	0.062	0.061
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-65	10/26/2004	4/25/2005
1,1-DCE	0.0091	0.0086
1,2-DCA	NA	NA
cis-1,2-DCE	0.0066	0.0055
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	0.0041JH	ND (0.0020)

MW-59	10/28/2004	4/26/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-111	10/26/2004	4/26/2005
1,1-DCE	0.16	0.023
cis-1,2-DCE	0.070	0.062
PCE	0.0029J	ND (0.0050)
TCE	0.0023J	0.00075J
VC	0.0049JH	0.0070

MW-03 (S)	10/28/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-130	10/28/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-15R	7/22/2004	10/27/2004	4/26/2005
1,1-DCA	0.037	0.025	0.0087
1,1-DCE	0.19	0.15	0.060
1,2-DCA	ND (0.0050)	ND (0.0050)	ND(0.0050)
cis-1,2-DCE	0.019	0.014	0.0061
PCE	0.026	0.020	0.0097
TCE	0.029	0.024	0.0092
VC	0.0038	ND (0.0020)	ND(0.0020)

MW-16R	7/22/2004	10/27/2004	4/27/2005
1,1-DCA	0.041	0.074	0.021
1,1-DCE	0.12	0.56JH	0.094
1,2-DCA	ND (0.0050)	0.0016J	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	0.0076	0.003J
PCE	0.01	0.016	0.0041J
TCE	0.011	0.0063	0.0052
VC	ND(0.0020)	ND(0.0020)	ND (0.0020)

MW-100	10/26/2004	4/25/2005
1,1-DCA	0.047	0.024
1,1-DCE	0.060	0.035
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.0064	0.0012J
PCE	0.0013J	ND (0.0050)
TCE	0.0026J	0.00088J
VC	ND (0.0020)	ND (0.0020)

MW-113	10/26/2004	4/26/2005
1,1-DCE	0.015	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	0.0034JH	ND (0.0050)

MW-17R	10/27/2004	4/26/2005
1,1-DCA	ND (0.0050)	0.014
1,1-DCE	ND (0.0050)	0.071
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-131	10/27/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-74	10/27/2004	4/26/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

LEGEND

- MW-04(S) — PLUGGED AND ABANDONED WELL
- DP-17 — DIRECT-PUSH TEMPORARY WELL
- MW-35 — INJECTION/MONITOR WELL
- MW-34 — MONITOR WELL
- MW-01(S) — AWTY MONITOR WELL
- APPROXIMATE LOCATION OF HARRIS COUNTY FLOOD CONTROL DITCH / WOODS BAYOU / BUFFALO BAYOU
- RAILROAD TRACKS
- PROPOSED I-10 RIGHT-OF-WAY EXPANSION
- PROPERTY LINE FOR FORMER CAMERON IRON WORKS
- AWTY SCHOOL PROPERTY LINE
- NORTHERN/SOUTHERN PROPERTY BOUNDARY WITHIN THE FORMER CAMERON IRON WORKS
- 2.71 ACRE TRACT INTERNAL BOUNDARY LINE
- 7.51 ACRE TRACT INTERNAL BOUNDARY LINE
- 11.55 ACRE TRACT INTERNAL BOUNDARY LINE
- STORM SEWER LINE (APPROXIMATE LOCATION)
- SANITARY SEWER LINE (APPROXIMATE LOCATION)
- FORMER SUMPS/EQUIPMENT LOCATION IN FORGE SHOP
- FORMER BUILDING/AREA
- CURRENT BUILDINGS
- EXTENT OF CHLORINATED VOC PLUME
- EXTENT OF PETROLEUM HYDROCARBON PLUME
- ND (0.0050) — NOT DETECTED AT REPORTING LIMIT IN PARENTHESES
- NS — NOT SAMPLED BECAUSE OF THE VISUAL PRESENCE OF POTASSIUM PERMANGANATE IN GROUND WATER EXTRACTED FROM MONITOR WELL
- 0.033 — EXCEEDANCE OF TIER 1 PCL
- J — ESTIMATED DATA, THE REPORTED SAMPLE CONCENTRATION IS APPROXIMATED DUE TO EXCEEDANCE OF QC REQUIREMENTS
- H — BIAS IN SAMPLE RESULT LIKELY TO BE HIGH
- L — BIAS IN SAMPLE RESULT LIKELY TO BE LOW

CONSTITUENT ABBREVIATIONS

1,1-DCA	1,1-DICHLOROETHANE
1,1-DCE	1,1-DICHLOROETHENE
1,2-DCA	1,2-DICHLOROETHANE
cis-1,2-DCE	cis-1,2-DICHLOROETHENE
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
VC	VINYL CHLORIDE

NOTES:

1. HISTORICAL BUILDING LOCATIONS AND SITE FEATURES ARE BASED ON CAMERON IRON WORKS DRAWING K-00-N000-0021 AND HARRIS COUNTY APPRAISAL DISTRICT MAPS.
2. THE LOCATIONS OF THE BUILDINGS FOR THE AWTY SCHOOL ARE APPROXIMATE.
3. THE REPORTED CONCENTRATIONS ARE IN mg/L.
4. THE AFFECTED GROUND WATER ON INTEGRITY PACKAGING PROPERTY (NORTH OF THE FORMER CAMERON IRON WORKS FACILITY) IS BEING ADDRESSED UNDER LPST REQUIREMENTS.

SCALE 0 150 300 FEET

ERM-Southwest, Inc.

HOUSTON · NEW ORLEANS · AUSTIN · MOBILE · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

FIGURE 3-3
COC CONCENTRATION MAP NORTH OF I-10
2005 ANNUAL GROUND WATER REPORT
Former Cameron Iron Works Facility
Houston, Texas

DESIGN: GLW	DRAWN: EFC	CHKD.: PAS	SHEET NO.
DATE: 10/19/05	SCALE: AS SHOWN	REV.:	
W.O.NO.: H:\dwg\J05\0031202d203.dwg, 10/19/2005 5:04:30 PM			of

MW-15R	7/22/2004	10/27/2004	4/26/2005
1,1-DCA	0.037	0.025	0.0087
1,1-DCE	0.19	0.15	0.060
1,2-DCA	ND (0.0050)	ND (0.0050)	ND(0.0050)
cis-1,2-DCE	0.019	0.014	0.0061
PCE	0.026	0.020	0.0097
TCE	0.029	0.024	0.0092
VC	0.0038	ND (0.0020)	ND(0.0020)
VC	0.0019JH	ND (0.0020)	

MW-16R	7/22/2004	10/27/2004	4/27/2005
1,1-DCA	0.041	0.074	0.021
1,1-DCE	0.12	0.56JH	0.094
1,2-DCA	ND (0.0050)	0.0016J	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	0.0076	0.003J
PCE	0.01	0.016	0.0041J
TCE	0.011	0.0063	0.0052
VC	ND(0.0020)	ND(0.0020)	ND (0.0020)
VC	0.0075JH	0.0047	

MW-100	10/26/2004	4/25/2005
1,1-DCA	0.047	0.024
1,1-DCE	0.060	0.035
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.0064	0.0012J
PCE	0.0013J	ND (0.0050)
TCE	0.0026J	0.00088J
VC	ND (0.0020)	ND (0.0020)
VC	ND (0.0020)	0.085

MW-131	10/27/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-95	10/27/2004	4/26/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-99	10/26/2004	4/25/2005
1,1-DCA	0.0039J	ND (0.0050)
1,1-DCE	0.023	0.0055
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	0.00091J	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-70	10/26/2004	12/10/2004	1/26/2005	4/28/2005
1,1-DCA	0.011	0.011	0.0087	0.011
1,1-DCE	0.015	0.0094	0.0074	0.0067
1,2-DCA	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.0082	0.0074	0.0078	0.012
PCE	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
TCE	0.0018J	ND (0.0050)	0.0017J	0.0021J
VC	ND (0.0020)	ND (0.0020)	ND (0.0020)	0.00093J

MW-77	10/26/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-117	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-126	10/27/2004	12/10/2004	1/26/2005	4/29/2005
1,1-DCA	0.0093	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-DCE	0.014JH	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.0048J	ND (0.0050)	ND (0.0050)	ND (0.0050)
PCE	0.069	ND (0.0050)	ND (0.0050)	ND (0.0050)
TCE	0.0095	ND (0.0050)	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

MW-130	10/28/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-113	10/26/2004	4/26/2005
1,1-DCE	0.015	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	0.0034J	ND (0.0050)

MW-17R	10/27/2004	4/26/2005
1,1-DCA	ND (0.0050)	0.014
1,1-DCE	ND (0.0050)	0.071
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-74	10/27/2004	4/26/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-71	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-116	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	0.0022J	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	0.0021J	0.00094J
VC	ND (0.0020)	ND (0.0020)

MW-81	10/27/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-72	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-118	10/27/2004	4/28/2005
1,1-DCA	0.0026J	0.0016J
1,1-DCE	0.015JH	0.010
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.006	0.0045J
PCE	ND (0.0050)	ND (0.0050)
TCE	0.029	0.021
VC	ND (0.0020)	ND (0.0020)

MW-121	10/28/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	0.11	0.13
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-73	10/28/2004	4/28/2005
1,1-DCA	0.0088	0.0074
1,1-DCE	0.028	0.025
1,2-DCA	ND (0.0050)	0.0015J
cis-1,2-DCE	0.0049J	0.005J
PCE	ND (0.0050)	ND (0.0050)
TCE	0.033	0.032
VC	ND (0.0020)	ND (0.0020)

MW-119	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	0.0041J	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	0.0038J	0.0026J
TCE	0.002J	0.0014J
VC	ND (0.0020)	ND (0.0020)

MW-122	10/28/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	0.00097J
VC	ND (0.0020)	ND (0.0020)

MW-82	10/27/2004	4/27/2005
1,1-DCA	0.0047J	0.0036J
1,1-DCE	0.018	0.015
1,2-DCA	ND (0.0050)	0.00081J
cis-1,2-DCE	0.0082	0.0065
PCE	0.12	0.11
TCE	0.036	0.029
VC	ND (0.0020)	ND (0.0020)

MW-123	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	0.0036J	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-124	10/27/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	0.0053	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	0.0011J	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-85R	10/28/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-87	7/22/2004	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	0.0041J	0.0062
1,1-DCE	0.012	0.011	0.015
1,2-DCA	ND (0.0050)	0.0018J	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)	ND (0.0050)
TCE	0.0070	0.0051	0.0059
VC	ND (0.0020)	ND (0.0020)	ND (0.0020)

MW-115	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	0.078	0.12
1,2-DCA	ND (0.0050)	0.005J
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	0.00091J	ND (0.0050)
TCE	0.0029J	0.0041J
VC	ND (0.0020)	ND (0.0020)

MW-75R	10/26/2004	4/28/2005
1,1-DCA	0.0035J	0.0026J
1,1-DCE	0.019	0.011
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	0.0033J	0.0017J
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-114	10/25/2004	4/29/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	0.0053	0.0046J
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	0.0017J
PCE	0.020	0.048
TCE	0.0028J	0.0049J
VC	ND (0.0020)	ND (0.0020)

MW-83	7/22/2004	10/27/2004	4/27/2005	7/27/2005
1,1-DCA	ND (0.0050)	0.0034J	0.15	0.027
1,1-DCE	0.011	0.033JH	1.500	0.23
1,2-DCA	ND (0.0050)	ND (0.0050)	0.004J	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)	0.0034J	0.00052J
PCE	ND (0.0050)	ND (0.0050)	0.0036J	0.0014J
TCE	ND (0.0050)	ND (0.0050)	0.0054	0.00086J
VC	ND (0.0020)	ND (0.0020)	0.018	0.0044

MW-80	10/27/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-78	10/28/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-76	10/27/2004	4/27/2005
1,1-DCA	0.0030J	0.0028J
1,1-DCE	0.013	0.015J
1,2-DCA	0.0011J	ND (0.0050)
cis-1,2-DCE	0.018	0.019
PCE	0.040	0.049
TCE	0.023	0.028
VC	0.0022	ND (0.0020)

MW-120	7/22/2004	10/27/2004	4/27/2005
1,1-DCA	0.0061	0.0014J	ND (0.0050)
1,1-DCE	0.045	0.0060JH	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)	ND (0.0020)

MW-79	10/28/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-129	10/25/2004	4/27/2005
1,1-DCA	0.056	0.047
1,1-DCE	0.38	0.24J
1,2-DCA	0.0023J	0.0016J
cis-1,2-DCE	0.0028J	0.0022J
PCE	0.0085	0.0071
TCE	0.0084	0.0068
VC	ND (0.0020)	ND (0.0020)

MW-90	7/22/2004	10/27/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)	0.0076J
1,2-DCA	ND (0.0050)	ND (0.0050)UJL	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	0.0029J	0.0032J
PCE	0.31	0.30	0.32
TCE	ND (0.0050)	0.0066	0.0066
VC	ND (0.0020)	ND (0.0020)	ND (0.0020)

MW-91	10/27/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	0.0025J
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.0031J	0.0031J
PCE	0.48	0.51
TCE	0.0090	0.0090
VC	ND (0.0020)	ND (0.0020)

MW-96	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-88	10/27/2004	4/28/2005
1,1-DCA	NS	NS
1,1-DCE	NS	NS
1,2-DCA	NS	NS
cis-1,2-DCE	NS	NS
PCE	NS	NS
TCE	NS	NS
VC	NS	NS

MW-102	10/28/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)UJL	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	0.00086J
PCE	0.28	0.35
TCE	0.0026J	0.0027J
VC	ND (0.0020)	ND (0.0020)

MW-92	10/28/2004	4/29/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)UJL	ND (0.0050)
cis-1,2-DCE	0.0024J	0.0031J
PCE	1.1	0.69
TCE	0.0038J	0.0043J
VC	ND (0.0020)	ND (0.0020)

MW-125	10/27/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	0.0027J	0.0033J
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-97	10/26/2004	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-84	10/26/2004	4/26/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-86	10/28/2004	4/29/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-107	10/28/2004	4/29/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	0.0011J
PCE	1.2	0.77
TCE	0.017	0.011
VC	ND (0.0020)	ND (0.0020)

MW-106	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	0.40	0.58
TCE	0.0048J	0.0065
VC	ND (0.0020)	ND (0.0020)

MW-89	10/27/2004	4/29/2005
1,1-DCA	0.0023J	0.0019J
1,1-DCE	0.011	0.0079
1,2-DCA	ND (0.0050)UJL	ND (0.0050)
cis-1,2-DCE	0.013	0.01
PCE	ND (0.0050)	ND (0.0050)
TCE	0.060	0.045
VC	ND (0.0020)	ND (0.0020)

MW-128	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.0017J	0.00094J
PCE	ND (0.0050)	ND (0.0050)
TCE	0.0081	0.0033J
VC	ND (0.0020)	ND (0.0020)

MW-101	10/26/2004	4/27/2005
1,1-DCA	0.0021J	0.002J
1,1-DCE	0.0053	0.0051
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	0.0052	0.0048J
PCE	0.29	0.27
TCE	0.037	0.035
VC	ND (0.0020)	ND (0.0020)

MW-98	10/26/2004	4/28/2005
1,1-DCA	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)
PCE	ND (0.0050)	ND (0.0050)
TCE	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)

MW-93	10/26/2004	12/10/2004	1/26/2005	4/27/2005
1,1-DCA	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,1-DCE	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
1,2-DCA	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-DCE	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
PCE	0.010	0.016	0.019	0.039
TCE	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
VC	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

LEGEND

- MW-17 + PLUGGED AND ABANDONED WELL
- DP-57 △ DIRECT-PUSH TEMPORARY WELL
- MW-100 ⊕ MONITOR WELL
- MW-83 ⊕ INJECTION/MONITOR WELL
- APPROXIMATE LOCATION OF HARRIS COUNTY FLOOD CONTROL DITCH / WOODS BAYOU / BUFFALO BAYOU
- PROPOSED I-10 RIGHT-OF-WAY EXPANSION
- PROPERTY LINE FOR FORMER CAMERON IRON WORKS
- AWTY SCHOOL PROPERTY LINE
- STORM SEWER LINE (APPROXIMATE LOCATION)
- SANITARY SEWER LINE (APPROXIMATE LOCATION)
- FORMER BUILDING/AREA
- CURRENT BUILDINGS
- EXTENT OF CHLORINATED VOC PLUME (DASHED WHERE INFERRED)
- ND (0.0050) NOT DETECTED AT REPORTING LIMIT IN PARENTHESES
- NS NOT SAMPLED BECAUSE OF THE VISUAL PRESENCE OF POTASSIUM PERMANGANATE IN GROUND WATER EXTRACTED FROM MONITOR WELL
- 0.036 EXCEEDANCE OF TIER 1 PCL
- J ESTIMATED DATA, THE REPORTED SAMPLE CONCENTRATION IS APPROXIMATED DUE TO EXCEEDANCE OF QC REQUIREMENTS
- H BIAS IN SAMPLE RESULT LIKELY TO BE HIGH
- L BIAS IN SAMPLE RESULT LIKELY TO BE LOW
- UJ NOT DETECTED, SAMPLE QUANTITATION LIMIT IS ESTIMATED

CONSTITUENT ABBREVIATIONS

1,1-DCA	1,1-DICHLOROETHANE
1,1-DCE	1,1-DICHLOROETHENE
1,2-DCA	1,2-DICHLOROETHANE
cis-1,2-DCE	cis-1,2-DICHLOROETHENE
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
VC	VINYL CHLORIDE

NOTES:

1. HISTORICAL BUILDING LOCATIONS AND SITE FEATURES ARE BASED ON CAMERON IRON WORKS DRAWING K-00-N000-0021 AND HARRIS COUNTY APPRAISAL DISTRICT MAPS.
2. THE LOCATIONS OF THE BUILDINGS FOR THE AWTY SCHOOL ARE APPROXIMATE.
3. THE REPORTED CONCENTRATIONS ARE IN mg/L.

0 200 400
SCALE FEET

ERM-Southwest, Inc.
HOUSTON · NEW ORLEANS · AUSTIN · MOBILE · BEAUMONT · BATON ROUGE · CORPUS CHRISTI

FIGURE 3-4
COC CONCENTRATION MAP SOUTH OF I-10
2005 ANNUAL GROUND WATER REPORT
Former Cameron Iron Works Facility
Houston, Texas

DESIGN: GLW	DRAWN: EFC	CHKD.: PAS	SHEET NO.
DATE: 10/19/05	SCALE: AS SHOWN	REV.:	of
W.O.NO.: H:\dwg\J05\0031202d203.dwg, 10/19/2005 4:45:18 PM			

Field Methods

Appendix A

October 25, 2005
Project No. 0031202

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

APPENDIX A

A.1 PLUGGING AND ABANDONMENT OF MONITOR WELLS

The surface completion of the monitor wells was removed with a pneumatic hammer. The PVC well casing was removed to the extent possible with the use of the hydraulic system on the drill rig. Once the surface completion and well casing were removed, the borehole was tremie-grouted from depth to the surface, using a mixture of Type I Portland cement and 5% bentonite gel. A plugging and abandonment report was prepared by the well drillers.

A.2 COLLECTION OF GROUND WATER LEVEL MEASUREMENTS

Ground water level measurements were collected in October 2004 and April 2005 for the monitor wells in the monitor well network. An electronic water-level sounding device was used to measure the depth to ground water in each well. The data were used to calculate the corresponding ground water elevations for the uppermost water-bearing zone (Table 2-2 of this report).

A.3 COLLECTION OF GROUND WATER SAMPLES

Ground water samples were collected from the monitor wells using the following low-flow sampling procedures:

- Clean disposable tubing was inserted into the middle of the well screen for each well with a depth of water measurement less than 30 ft bgs. This tubing was then connected to a non-submersible peristaltic pump for purging.
- Wells with depth of water measurements greater than approximately 35 ft bgs were sampled using a disposable submersible Whale pump. This Whale pump was fitted with disposable tubing and inserted into each well with the intake placed approximately in the middle of the screen interval.
- The pumps were used to purge ground water at a low-flow rate, generally less than approximately 0.5 L/minute (within a range of 100-500 mL per minute).
- The recommended maximum drawdown created by the pump was typically less than the U.S. EPA recommended 0.1 meter (0.33 feet). In instances when drawdown exceeded 0.1 meter (0.33 feet), the purge rate of less than 0.5 L/minute (100-500 mL/min) was sustained.
- Measurement of flow rate, depth to water, pH, temperature, specific conductance, oxidation-reduction potential, dissolved oxygen and turbidity were collected during purging activities. These parameters were measured every three to seven minutes. Stabilization was achieved after the parameters were $\pm$0.1 Standard Units for pH, $\pm$3% for specific conductance, and $\pm$10% for turbidity and/or dissolved oxygen for three consecutive readings. Turbidity was considered stabilized if the reading was less than two nephelometric turbidity units (NTUs). If all the parameters stabilized after 45 minutes except turbidity or dissolved oxygen, a sample was collected.

Ground water samples from the monitor wells were collected immediately after low-flow purging using the disposable tubing. New tubing was used for each well. The submersible Whale pump was decontaminated between each well. Purge water and decon water from the sampling events was placed in a 55-gallon drums and disposed of by Ashland Environmental Services.

The ground water samples were placed in laboratory-supplied containers with the approximate preservatives, stored on ice, and picked up by E-Lab, Inc. in Houston, Texas for analysis.

A.4 COLLECTION OF SURFACE WATER SAMPLES

Surface water samples were collected from the HCFCDD located south of Memorial Drive to Buffalo Bayou by hiking the ditch to each sample location. A surface water grab sample was collected using a new disposal bailer at each location.

The surface water samples were placed in laboratory-supplied containers with the appropriate preservatives, stored on ice, and delivered to e-Lab in Houston, Texas for analysis.

A.5 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

Duplicate samples are those that have been divided into two or more portions at some step in the sampling or measurement process. Each portion is then carried through the remaining steps in the process. Duplication of samples generates information on the precision of the methods involved. Field duplication provides information on the precision of homogeneity, handling, shipping, storage, preparation, and analysis techniques.

Field blank samples were collected at a frequency of 5% by filling a clean, laboratory-supplied sample container with distilled water while on site. This blank provides information on field conditions that may be affecting the analytical results.

State of Texas Plugging Reports

Appendix B

October 25, 2005
Project No. 0031202

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

STATE OF TEXAS PLUGGING REPORT for Tracking #24810

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-6**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 57" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**26 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 15 ft to 26 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 26 ft; Sack(s)/type of cement used: 12 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.#1954**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24810**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24811

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-8**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 24" N**
Well County:	**Harris**	Longitude:	**095° 27' 49" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**26 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 26 ft; Sack(s)/type of cement used: 12 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.# 1946**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24811**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24812

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-10**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 24" N**
Well County:	**Harris**	Longitude:	**095° 27' 44" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**25 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 10 ft to 25 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 25 ft; Sack(s)/type of cement used: 12 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.# 1947**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24812**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24813

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-15**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 19" N**
Well County:	**Harris**	Longitude:	**095° 27' 43" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**27 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 10 ft to 27 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 27 ft; Sack(s)/type of cement used: 13 cement bentonite** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC. P.O. BOX 845 FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.# 1949**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24813**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24814

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-21**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 23" N**
Well County:	**Harris**	Longitude:	**095° 28' 02" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**29 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 10 ft to 29 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 29 ft; Sack(s)/type of cement used: 14 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC. P.O. BOX 845 FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.#1948**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24814**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24815

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-11**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 18" N**
Well County:	**Harris**	Longitude:	**095° 27' 45" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**30 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 30 ft; Sack(s)/type of cement used: 14 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC. P.O. BOX 845 FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.#1950**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking #**24815**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24816

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-12**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 18" N**
Well County:	**Harris**	Longitude:	**095° 27' 44" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**29 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 29 ft; Sack(s)/type of cement used: 14 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.#1951**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking #**24816**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24817

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-16**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 19" N**
Well County:	**Harris**	Longitude:	**095° 27' 46" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**27 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 11 ft to 27 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 27 ft; Sack(s)/type of cement used: 13 cement bentonite** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.#1952**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24818

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-41**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 16" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**55 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 0 ft to 55 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 55 ft; Sack(s)/type of cement used: 27 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
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STATE OF TEXAS PLUGGING REPORT for Tracking #24819

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-39**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 19" N**
Well County:	**Harris**	Longitude:	**095° 27' 52" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**53 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 10 ft to 53 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 53 ft; Sack(s)/type of cement used: 25 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24819**) on your written request.

Texas Department of Licensing & Regulation
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Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24820

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-36**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 16" N**
Well County:	**Harris**	Longitude:	**095° 27' 51" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**35 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 15 ft to 35 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 35 ft; Sack(s)/type of cement used: 17 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

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P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24821

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-34**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 16" N**
Well County:	**Harris**	Longitude:	**095° 27' 55" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**40 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 0 ft to 40 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 40 ft; Sack(s)/type of cement used: 20 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24821**) on your written request.

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P.O. Box 12157
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(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24822

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-3**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 14" N**
Well County:	**Harris**	Longitude:	**095° 27' 47" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**34 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 15 ft to 34 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 34 ft; Sack(s)/type of cement used: 17 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24822**) on your written request.

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STATE OF TEXAS PLUGGING REPORT for Tracking #24823

Owner:	**Cameron Iron Works**	Owner Well #:	**KMW-5**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 52" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**26 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 25 ft; Sack(s)/type of cement used: 12 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data Amended 8/19/05 Ref.# 1953**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24823**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
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(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24824

Owner:	**Cameron Iron Works**	Owner Well #:	**DW-01**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 14" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**4 inches**
Total Depth of Well:	**73 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **4 inches diameter, From 15 ft to 73 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 73 ft; Sack(s)/type of cement used: 35 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24824**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24825

Owner:	**Cameron Iron Works**	Owner Well #:	**SW-01**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 14" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**unknown**
Date Well Drilled:	**No Data**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**4 inches**
Total Depth of Well:	**25 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 25 ft; Sack(s)/type of cement used: 12 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24762

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-24**
Address:	**1128 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1128 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 27" N**
Well County:	**Harris**	Longitude:	**095° 27' 54" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Steve Bender**
Driller's License Number of Original Well Driller:	**2930M**
Date Well Drilled:	**1/9/1998**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**38 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 38 ft; Sack(s)/type of cement used: 19 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24762**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24763

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-25**
Address:	**1100 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1100 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 24" N**
Well County:	**Harris**	Longitude:	**095° 27' 55" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**4624W**
Date Well Drilled:	**3/11/1998**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**39 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 39 ft; Sack(s)/type of cement used: 19 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Amended 6/6/05 Ref# 1604**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking #**24763**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24764

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-26**
Address:	**1100 North Silber Rd. Houston , TX**	Grid #:	**65-13-4**
Well Location:	**1100 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 30" N**
Well County:	**Harris**	Longitude:	**095° 27' 54" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**4624W**
Date Well Drilled:	**3/10/1998**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**39 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 39 ft; Sack(s)/type of cement used: 19 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24764**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24765

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-27**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 24" N**
Well County:	**Harris**	Longitude:	**095° 27' 54" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**4624W**
Date Well Drilled:	**3/3/1998**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**39 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 39 ft; Sack(s)/type of cement used: 19 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24765**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24766

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-33**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 23" N**
Well County:	**Harris**	Longitude:	**095° 27' 57" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Keith Barge**
Driller's License Number of Original Well Driller:	**4786M**
Date Well Drilled:	**10/13/1999**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**4 inches**
Total Depth of Well:	**34 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 34 ft; Sack(s)/type of cement used: 17 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Amended 6/6/05 Ref# 1605**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24766**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24767

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-103**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 26" N**
Well County:	**Harris**	Longitude:	**095° 27' 55" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**4837M**
Date Well Drilled:	**10/7/2002**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**4 inches**
Total Depth of Well:	**32 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 32 ft; Sack(s)/type of cement used: 16 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24767**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24768

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-104**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 54" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**4837M**
Date Well Drilled:	**10/7/2002**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**4 inches**
Total Depth of Well:	**32 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 32 ft; Sack(s)/type of cement used: 16 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**Amended 6/6/05 Ref# 1606**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24768**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24769

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-105**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**4837M**
Date Well Drilled:	**10/7/2002**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**4 inches**
Total Depth of Well:	**32 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 32 ft; Sack(s)/type of cement used: 16 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24769**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24770

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-19**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**L. Bruce Milton**
Driller's License Number of Original Well Driller:	**4926M**
Date Well Drilled:	**1/29/1997**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**40 feet**

Date Well Plugged:	**5/23/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 0 ft to 40 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 40 ft; Sack(s)/type of cement used: 20 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24770**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24771

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-57**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Unknown**
Driller's License Number of Original Well Driller:	**4624W**
Date Well Drilled:	**3/5/1998**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**39 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **none inches diameter, (No Data) ft to (No Data) ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 39 ft; Sack(s)/type of cement used: 20 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24771**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24772

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-46**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Mario Moya**
Driller's License Number of Original Well Driller:	**4990M**
Date Well Drilled:	**3/9/2000**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**30 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 0 ft to 30 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 30 ft; Sack(s)/type of cement used: 15 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner of the person for whom the well was plugged) to keep information in Plugging Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the plugging report's tracking number (Tracking **#24772**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24773

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-47**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Mario Moya**
Driller's License Number of Original Well Driller:	**4990M**
Date Well Drilled:	**3/10/2000**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**30 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 25 ft to 30 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 30 ft; Sack(s)/type of cement used: 15 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24773**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24774

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-49**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 25" N**
Well County:	**Harris**	Longitude:	**095° 27' 53" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Mario Moya**
Driller's License Number of Original Well Driller:	**4990M**
Date Well Drilled:	**3/10/2000**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**30 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 10 ft to 30 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 30 ft; Sack(s)/type of cement used: 15 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24775

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-51**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 22" N**
Well County:	**Harris**	Longitude:	**095° 27' 48" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Keith Barge**
Driller's License Number of Original Well Driller:	**4786M**
Date Well Drilled:	**4/4/2000**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**32 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 8 ft to 32 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 32 ft; Sack(s)/type of cement used: 15 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24775**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #24776

Owner:	**Cameron Iron Works**	Owner Well #:	**MW-55**
Address:	**1000 North Silber Rd. Houston , TX**	Grid #:	**65-13-7**
Well Location:	**1000 North Silber Rd. Houston , TX**	Latitude:	**29° 47' 22" N**
Well County:	**Harris**	Longitude:	**095° 27' 48" W**
		GPS Brand Used:	**Garmin/e-Trex**
Well Type:	**Monitor**		

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**Mario Moya**
Driller's License Number of Original Well Driller:	**4990M**
Date Well Drilled:	**3/10/2000**
Well Report Tracking Number:	**No Data**
Diameter of Well:	**2 inches**
Total Depth of Well:	**30 feet**

Date Well Plugged:	**5/24/2005**
Person Actually Performing Plugging Operation:	**Lawrence Tobola**
License Number of Plugging Operator:	**3026**
Plugging Method:	**Tremmie pipe cement from bottom to top.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **2 inches diameter, From 0 ft to 30 ft** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 0 ft to 30 ft; Sack(s)/type of cement used: 15 cement bentonite grout** 2nd Interval: **No Data** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**BEST DRILLING SERVICES, INC.** **P.O. BOX 845** **FRIENDSWOOD , TX 77549**

Plug Installer License Number:	**3026**
Licensed Plug Installer Signature:	**Lawrence Tobola**
Registered Plug Installer Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Plugging Method Comments:	**No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the plugging report's tracking number (Tracking **#24776**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

Data Usability Summaries and Laboratory Analytical Reports

Appendix C

October 25, 2005
Project No. 0031202

Environmental Resources Management
15810 Park Ten Place, Suite 300
Houston, Texas 77084-5140
(281) 600-1000

APPENDIX C1

Data Usability Summary and Laboratory Report
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

ERM reviewed a laboratory analytical data package (0407282) from e-Lab, Inc. of Houston, Texas for the analysis of 6 ground water samples collected on July 22, 2004 at the Former Cameron Iron Works Facility. Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

Purpose of Sampling Event: Quarterly sampling event of select wells to monitor seven VOCs beneath and downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision and accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the draft TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals were reviewed by ERM:

- Analytical data report and chain-of-custody (COC),
- Laboratory review checklists (LRCs), and
- Associated exception reports (ERs).

The results of supporting quality control (QC) analyses are summarized on the LRCs and ERs, and both were included in this review. The LRCs, associated ERs, and analytical data report are included as attachments to this report.

Introduction

Six ground water samples and one duplicate ground water sample were analyzed for the following volatile organic compounds (VOCs): 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride. One Field Blank was collected and analyzed for the seven select VOCs listed above. Table C1-1 lists the sample identifications cross-referenced to laboratory identifications.

Data Review/Validation Results

Analytical Results

No data were qualified during this review. Non-detected results are reported as less than the value of the sample quantitation limit (SQL) as defined by the TRRP rule.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with most of the paperwork filled out properly. The sample cooler receipt temperature was within the acceptance criteria of 4 +/- 2 degrees C. The samples were preserved in the field as specified in SW-846 Table 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-36. A trip blank was provided to the laboratory, but was not listed on the COC and was not analyzed by the laboratory.

Calibrations

According to the LRCs, initial calibration and continuing calibration data met SW-846 method requirements for VOC analysis. The LRCs also document satisfactory instrument performance calibrations (GC/MS) for VOC analysis.

Blanks

VOCs were reported as not-detected in the method blanks. The Field Blank (FB072204) was reported as not-detected for VOCs. A trip blank was provided to the laboratory, but was not listed on the COC and was not analyzed by the laboratory.

Internal Standard and Surrogate Recoveries

Surrogate recoveries for VOC analysis were within the laboratory-defined acceptable ranges. According to the LRCs, internal standard areas were within SW-846 method acceptance criteria.

Laboratory Control Samples

Laboratory Control Samples (LCS) were analyzed for VOCs. The LCS recoveries were within laboratory defined acceptance limits.

Matrix Spike/Matrix Spike Duplicates

Matrix Spike/Matrix Spike Duplicate (MS/MSD) were analyzed for VOCs. The MS/MSD recoveries were within laboratory defined acceptance limits.

Field Precision

One field duplicate was collected in association with this data package (MW-120 / DUP-1). Both sample and duplicate were reported as detected for 1,1-dichloroethane and 1,1-dichloroethene. The sample/duplicate precision comparison had relative percent difference (RPD) less than the 20% acceptance criteria. Sample/duplicate precision calculations are included in Table C1-2

Laboratory Precision

Laboratory duplicates were not analyzed as part of this laboratory package.

Field Procedures

The samples were collected using documented sampling procedures.

SUMMARY

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

TABLE C1-1

Cross-Reference Field Sample Identifications and Laboratory Identifications (0407282)
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Laboratory Identification
MW-15R	0407282-01
MW-120	0407282-02
DUP-1	0407282-03
MW-87	0407282-04
MW-83	0407282-05
MW-90	0407282-06
MW-16R	0407282-07
FB072204	0407282-08

TABLE C1-2

Field Precision (0407282)
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Sample Result	Duplicate Result	RPD	Qualified
MW-120/DUP-1	1,1-dichloroethane	0.0061	0.0059	3.3333	A
	1,1-dichloroethene	0.045	0.042	6.8966	A

NOTES:

Results reported as mg/L
RPD = ((SR-DR)*200)/(SR+DR)
A = Acceptable data

APPENDIX C2

Data Usability Summary and Laboratory Report
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

ERM reviewed a laboratory analytical data package (0410315) from e-Lab, Inc. of Houston, Texas for the analysis of ground water samples and surface water samples were collected on October 25 and 26, 2004 at the Former Cameron Iron Works Facility. Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

Purpose of Sampling Event: Semiannual sampling event to monitor select VOCs beneath and downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision and accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the draft TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals were reviewed by ERM:

- Analytical data report and chain-of-custody (COC);
- Laboratory review checklists (LRCs); and
- Associated exception reports (ERs).

The results of supporting quality control (QC) analyses are summarized on the LRCs and ERs, and both were included in this review. The LRCs, associated ERs, and analytical data report are included as attachments to this report.

Introduction

Forty-two ground water samples and one duplicate ground water samples were analyzed for five volatile organic compounds (VOCs) (1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride). Twenty-seven ground water samples were also analyzed for the following VOCs: 1,1-dichloroethane, and 1,2-dichloroethane. Two Field Blanks were collected and analyzed for the seven select VOCs listed above in association with the ground water samples. Six surface water samples and one duplicate surface water sample were also collected and analyzed for the seven select VOCs listed above. Table C2-1 lists the sample identifications cross-referenced to laboratory identifications.

Data Review/Validation Results

Analytical Results

Qualified sample data are listed in Table C2-2. Non-detected results are reported as less than the value of the sample quantitation limit (SQL) as defined by the TRRP rule.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with most of the paperwork filled out properly. Sample KMW-07 collected on 10/25/04 at 16:05 was mislabeled as MW-07 on the COC. The laboratory was notified and the sample was reported as KMW-07. Sample receipt temperature was within the acceptance criteria of 4 +/- 2 degrees C for the coolers received by the laboratory. The samples were preserved in the field as specified in SW-846 Table 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-36.

Calibrations

According to the LRCs, initial calibration and continuing calibration data met SW-846 method requirements for VOC analysis. The LRCs also document satisfactory instrument performance calibrations (GC/MS) for VOC analysis.

Blanks

VOCs were reported as not-detected in the method blanks. The Field Blanks (FB-102504 and FB-102604) were reported as not-detected for VOCs.

Internal Standard and Surrogate Recoveries

Surrogate recoveries for VOC analysis were within the laboratory-defined acceptable ranges. According to the LRCs, internal standard areas were within SW-846 method acceptance criteria.

Laboratory Control Samples

Laboratory Control Spikes (LCS) were analyzed for VOCs. The LCS recoveries were within laboratory defined acceptance limits.

Matrix Spike/Matrix Spike Duplicates

VOC MS/MSD batch R24212 had low recovery for two compounds. The sample used for MS/MSD analysis was not associated with this project site, so qualification was not needed.

VOC MS/MSD batch R24258 had elevated recovery for Vinyl Chloride. Of the 18 associated samples, six samples (MW-64, MW-65, MW-108, MW-109, MW-111, MW-113) were reported as detected for vinyl chloride and were qualified as estimated high (JH) due to elevated MS/MSD recovery.

Field Precision

Two field duplicate samples were collected during this sampling event (MW-70 / DUP-2 and SWD-15 / DUP-5). Sample MW-70 and duplicate sample DUP-2 were reported as detected or estimated detected (J flagged) for 1,1-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, and Trichloroethene. The sample/duplicate precision comparison had relative percent difference less than the 20% acceptance criteria for the compounds listed.

Sample SWD-15 and duplicate sample DUP-5 were reported as detected or estimated detected (J flagged) 1,1-Dichloroethane, 1,1-Dichloroethene, Tetrachloroethene, and Trichloroethene. The sample/duplicate precision comparison had relative percent difference less than the 20% acceptance criteria for the compounds listed except for 1,2-Dichloroethane (25.64%). 1,1-Dichloroethane was reported as detected with results less than five times the method quantification limit (MQL) and the difference between sample and duplicate was less than two times the MQL; therefore, qualifiers were not necessary. Sample/duplicate precision calculations are included in Table C2-3.

Field Procedures

The samples were collected using documented sampling procedures.

SUMMARY

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

Qualifiers were added to the original data sheets by applying the most stringent qualifier assigned during the data usability process. When a compound had more than one qualifier assigned due to multiple reasons for qualification (MS/MSD, LCS, surrogates, etc.), the most stringent qualifier was applied to the original data sheets. For example, if benzene were assigned a J flag for calibration and a JL flag for low MS recovery during the review process, a JL flag would have been written on the original laboratory data sheets.

The data user is advised that samples MW-64, MW-65, MW-108, MW-109, MW-111 and MW-113 were qualified as estimated high (JH) for Vinyl Chloride, due to elevated MSD recovery.

TABLE C2-1

Cross-Reference Field Sample Identifications and Laboratory Identifications
Laboratory Package 0410315

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Laboratory Identification	
MW-02 (C)	0410315-01	
KWM-7	0410315-02	
FB-102504	0410315-03	Field Blank
MW-07 ®	0410315-04	
MW-52	0410315-05	
MW-129	0410315-06	
MW-114	0410315-07	
MW-127	0410315-08	
SWD-11	0410315-09	
SWD-12	0410315-10	
SWD-14	0410315-11	
SWD-15	0410315-12	
SWD-17	0410315-13	
SWD-18	0410315-14	
SWD-20	0410315-15	
Dup-5	0410315-16	Field Duplicate
MW-87	0410315-17	
MW-119	0410315-18	
MW-123	0410315-19	
MW-75R	0410315-20	
MW-101	0410315-21	
MW-84	0410315-22	
MW-99	0410315-23	
MW-70	0410315-24	
Dup -2	0410315-25	Field Duplicate
MW-100	0410315-26	
MW-71	0410315-27	
MW-116	0410315-28	
MW-77	0410315-29	
MW-117	0410315-30	
MW-72	0410315-31	
MW-108	0410315-32	
MW-109	0410315-33	
MW-110	0410315-34	
MW-111	0410315-35	
MW-113	0410315-36	
MW-65	0410315-37	
MW-64	0410315-38	
MW-112	0410315-39	
MW-42	0410315-40	
MW-62	0410315-41	
MW-55	0410315-42	
MW-48	0410315-43	
MW-96	0410315-44	
MW-97	0410315-45	
MW-98	0410315-46	
MW-106	0410315-47	
MW-115	0410315-48	
MW-128	0410315-49	
FB-102604	0410315-50	Field Blank

TABLE C2-2

Qualified Analytical Data
Laboratory Package 0410315

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Qualification	Reason for Qualification
MW-64	Vinyl Chloride	JH	MSD %R above specifications
MW-65	Vinyl Chloride	JH	MSD %R above specifications
MW-108	Vinyl Chloride	JH	MSD %R above specifications
MW-109	Vinyl Chloride	JH	MSD %R above specifications
MW-111	Vinyl Chloride	JH	MSD %R above specifications
MW-113	Vinyl Chloride	JH	MSD %R above specifications

NOTES:

J = Estimated data; the reported quantitation limit or sample concentration is appropximated due to exceedance of one or more QC requirements.
H = Bias in sample result likely to be high.

TABLE C2-3

Field Precision
Laboratory Package 0410315

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Sample Result	Duplicate Result	RPD	Qualified
MW-70 / DUP-2	1,1-Dichloroethane	0.011	0.011	0	A
	1,1-Dichloroethene	0.015	0.015	0	A
	cis-1,2-Dichloroethene	0.0082	0.0082	0	A
	Trichloroethene	0.0018	0.0018	0	A
SWD-15 / DUP-5	1,1-Dichloroethane	0.0022	0.0017	25.64	A*
	1,1-Dichloroethene	0.025	0.024	4.08	A
	Tetrachloroethene	0.0095	0.0083	13.48	A
	Trichloroethene	0.0012	0.0011	8.70	A

NOTES:

Results reported as mg/L.
RPD = ((SR-DR)*200)/(SR+DR)
A = Acceptable data.
A* = Acceptable data based on TRRP-13 DUS Table D-2 criteria.

APPENDIX C3

Data Usability Summary and Laboratory Report
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

ERM reviewed a laboratory analytical data package (0410361) from e-Lab, Inc. of Houston, Texas for the analysis of ground water samples collected on October 27 and 28, 2004 at the Former Cameron Iron Works Facility. Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

Purpose of Sampling Event: Semiannual sampling event to monitor select VOCs and metals beneath and downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision and accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

SW-846 6020 – Trace Inductively Couple Plasma (ICP) Metals

Data were reviewed and validated as described in the draft TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals were reviewed by ERM:

- Analytical data report and chain-of-custody (COC);
- Laboratory review checklists (LRCs); and
- Associated exception reports (ERs).

The results of supporting quality control (QC) analyses are summarized on the LRCs and ERs, and both were included in this review. The LRCs, associated ERs, and analytical data report are included as attachments to this report.

Introduction

Forty-nine ground water samples and three duplicate ground water samples were analyzed for five volatile organic compounds (VOCs) (1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride). Forty-two ground water samples were also analyzed for the following VOCs: 1,1-dichloroethane, and 1,2-dichloroethane. Six ground water samples were also analyzed for the following metals: antimony and copper. Three Field Blanks were collected and analyzed for the seven select VOCs listed above in association with

the ground water samples. Table C3-1 lists the sample identifications cross-referenced to laboratory identifications.

Data Review/Validation Results

Analytical Results

Qualified sample data are listed in Table C3-2. Non-detected results are reported as less than the value of the sample quantitation limit (SQL) as defined by the TRRP rule.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with the paperwork filled out properly. Sample receipt temperature was within the acceptance criteria of 4 +/- 2 degrees C for the coolers received by the laboratory. The samples were preserved in the field as specified in SW-846 Table 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-36.

Calibrations

According to the LRCs, initial calibration and continuing calibration data met SW-846 method requirements for VOC and metals analysis. The LRCs also document satisfactory instrument performance calibrations (GC/MS) for VOC analysis.

The LRC indicated that VOC batch R24371 had elevated recoveries for the ICV and CCV for vinyl acetate. Vinyl acetate was not reported for this data package, so no qualification was necessary.

Blanks

VOCs and metals were reported as not-detected in the method blanks. The Field Blanks (FB-102704, FB-102804 and FB-102804B) were reported as not-detected for VOCs.

Internal Standard, Interference Check Samples and Surrogate Recoveries

Surrogate recoveries for VOC analysis were within the laboratory-defined acceptable ranges. According to the LRCs, internal standard areas were within SW-846 method acceptance criteria. The LRCs also indicate the interference check sample (ICS) for metals was within laboratory acceptance limits.

Laboratory Control Samples

Laboratory Control Spike (LCS) was analyzed for VOCs and metals. The LCS recoveries were within laboratory defined acceptance limits.

Matrix Spike/Matrix Spike Duplicates

Metals MS/MSD had elevated relative percent difference (RPD) (15.9%) for antimony. Antimony was reported as not-detected for the six associated samples, so no qualification was necessary.

VOC MS/MSD batch R24371 had elevated 1,1-Dichloroethane recovery. The sample used for MS/MSD analysis was not associated with this project site, so no qualifiers were added to the data.

VOC MS/MSD batch R24386 had elevated MS recovery for 1,1-Dichloroethene. Associated samples reported as detected for 1,1-Dichloroethene (MW-118, MW-120, MW-83, MW-16R, MW-126) were qualified as estimated high (JH). MS/MSD percent RPD was above control limits for 1,1-Dichloroethene. Associated samples reported as detected for 1,1-Dichloroethene (MW-118, MW-120, MW-83, MW-16R, MW-126) were qualified as estimated (J).

VOC MS/MSD batch R24417 had elevated recovery for 1,1-Dichloroethene and low recovery for 1,2-Dichloroethane. Affected sample, MW-50, was flagged JH for detected results. Associated sample MW-50 was qualified as estimated high (JH) for 1,1-Dichloroethene, due to elevated MSD recovery. Associated samples MW-90, MW-89, MW-102 and MW-92 were qualified as non-detect estimated low (UJL) for 1,2-Dichlorothane, due to low MSD recovery. This VOC batch also had elevated RPD for 1,1-Dichlorothene, and sample MW-50 was qualified as estimated (J), due to elevated MS/MSD RPD.

Post Digestion Spike and Serial Dilution

The metals post digestion spikes were within laboratory defined acceptance limits (75-125%) and the serial dilution test RPD was less than the laboratory defined acceptance limit of 10% for Antimony and Copper.

Field Precision

Three field duplicate samples were collected during this sampling event (MW-16R / DUP-1, KMW-14 / DUP-3 and MW-120 / DUP-4). Sample MW-16R and duplicate sample DUP-1 were reported as detected or estimated detected (J flagged) for 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, cis-1,2-Dichloroethene, Tetrachloroethene, and Trichloroethene. The sample/duplicate precision comparison had RPD less than the 20% acceptance criteria for the compounds listed except for 1,2-Dichloroethane (-63.83%) and Trichloroethene (-40.50%). 1,2-Dichlorothane and Trichloroethene had detected results less than five times the method quantitation limit (MQL) and the difference between sample and duplicate was less than two times the MQL; therefore, no qualifiers were necessary for the elevated RPD.

Sample KMW-14 and duplicate sample DUP-3 was reported as not-detected for VOCs, but was reported as detected for copper. The sample/duplicate precision comparison had RPD less than the 20% acceptance criteria for the compounds listed.

Sample MW-120 and duplicate sample DUP-4 were reported as not-detected for metals and VOCs, except 1,1-Dichloroethane, and 1,1-Dichloroethene. The sample/duplicate precision comparison had RPD less than the 20% acceptance criteria for the compounds listed. Sample/duplicate precision calculations are included in Table C3-3.

Laboratory Precision

The laboratory analyzed one metal duplicate sample (0410350-14DUP) and RPD results were less than the laboratory acceptance criteria of 25% difference.

Field Procedures

The samples were collected using documented sampling procedures.

SUMMARY

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

Qualifiers were added to the original data sheets by applying the most stringent qualifier assigned during the data usability process. When a compound had more than one qualifier assigned due to multiple reasons for qualification (MS/MSD, LCS, surrogates, etc.), the most stringent qualifier was applied to the original data sheets. For example, if benzene were assigned a J flag for calibration and a JL flag for low MS recovery during the review process, a JL flag would have been written on the original laboratory data sheets.

The data user is advised that samples MW-118, MW-120, MW-83, MW-16R, MW-126 and MW-50 were qualified as estimated high (JH) for 1,1-Dichloroethene, due to elevated MS/MSD recovery. Samples MW-90, MW-89, MW-102 and MW-92 were qualified as non-detect estimated low (UJL) for 1,2-Dichloroethane, due to low MS/MSD recovery.

TABLE C3-1

Cross-Reference Field Sample Identifications and Laboratory Identifications
Laboratory Package 0410361

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Laboratory Identification	
MW-54	0410361-01	
KMW-14	0410361-02	
KMW-15	0410361-03	
KMW-16	0410361-04	
KMW-11	0410361-05	
KMW-13	0410361-06	
MW-35	0410361-07	
DUP 03	0410361-08	Field Duplicate
MW-124	0410361-09	
MW-90	0410361-10	
MW-89	0410361-11	
MW-91	0410361-12	
MW-93	0410361-13	
MW-125	0410361-14	
FB-102704	0410361-15	Field Blank
MW-118	0410361-16	
MW-81	0410361-17	
MW-82	0410361-18	
MW-76	0410361-19	
MW-120	0410361-20	
MW-83	0410361-21	
MW-80	0410361-22	
DUP-04	0410361-23	Field Duplicate
MW-131	0410361-24	
MW-15R	0410361-25	
MW-95	0410361-26	
MW-16R	0410361-27	
DUP-1	0410361-28	Field Duplicate
MW-126	0410361-29	
MW-17R	0410361-30	
MW-74	0410361-31	
KMW-01	0410361-32	
MW-94	0410361-33	
MW-61	0410361-34	
MW-60	0410361-35	
MW-59	0410361-36	
MW-50	0410361-37	
MW-79	0410361-38	
FB-102804B	0410361-39	Field Blank
MW-78	0410361-40	
MW-85R	0410361-41	
MW-121	0410361-42	
MW-86	0410361-43	
MW-02 (S)	0410361-44	
MW-03 (S)	0410361-45	
MW-130	0410361-46	
FB-102804B	0410361-47	Field Blank
MW-73	0410361-48	
MW-122	0410361-49	
MW-102	0410361-50	
MW-107	0410361-51	
MW-92	0410361-52	

TABLE C3-2

Qualified Analytical Data
Laboratory Package 0410361

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Qualification	Reason for Qualification
MW-118	1,1-Dichloroethene	JH	MS/MSD %REC above specifications
MW-120	1,1-Dichloroethene	JH	MS/MSD %REC above specifications
MW-83	1,1-Dichloroethene	JH	MS/MSD %REC above specifications
MW-16R	1,1-Dichloroethene	JH	MS/MSD %REC above specifications
MW-126	1,1-Dichloroethene	JH	MS/MSD %REC above specifications
MW-50	1,1-Dichloroethene	JH	MS/MSD %REC above specifications
MW-118	1,1-Dichloroethene	J	MS/MSD RPD outside specifications
MW-120	1,1-Dichloroethene	J	MS/MSD RPD outside specifications
MW-83	1,1-Dichloroethene	J	MS/MSD RPD outside specifications
MW-16R	1,1-Dichloroethene	J	MS/MSD RPD outside specifications
MW-126	1,1-Dichloroethene	J	MS/MSD RPD outside specifications
MW-50	1,1-Dichloroethene	J	MS/MSD RPD outside specifications
MW-90	1,2-Dichloroethane	UJL	MS/MSD %REC below specifications
MW-89	1,2-Dichloroethane	UJL	MS/MSD %REC below specifications
MW-102	1,2-Dichloroethane	UJL	MS/MSD %REC below specifications
MW-92	1,2-Dichloroethane	UJL	MS/MSD %REC below specifications

NOTES:

J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.
UJ = *Not Detected*, sample quantitation limit is estimated.
H = Bias in sample result likely to be high.
L = Bias in sample result likely to be low.

TABLE C3-3

Field Precision
Laboratory Package 0410361

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Sample Result	Duplicate Result	RPD	Qualified
MW-16R / DUP-1	1,1-Dichloroethane	0.074	0.073	1.36	A
	1,1-Dichloroethene	0.56	0.66	-16.39	A
	1,2-Dichloroethane	0.0016	0.0031	-63.83	A*
	cis-1,2-Dichloroethene	0.0076	0.0075	1.32	A
	Tetrachloroethene	0.016	0.016	0.00	A
	Trichloroethene	0.0063	0.0095	-40.51	A*
KMW-14 / DUP-3	Copper	0.0003	0.000313	-4.24	A
MW-120 / DUP-4	1,1-Dichloroethane	0.0014	0.0016	-13.33	A
	1,1-Dichloroethene	0.006	0.0055	8.70	A

NOTES:

Results reported as mg/L.
RPD = ((SR-DR)*200)/(SR+DR)
A = Acceptable data.
A* = Acceptable data based on TRRP-13 DUS Table D-2 criteria.

APPENDIX C4

Data Usability Summary and Laboratory Report
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

ERM reviewed a laboratory analytical data package (0412163) from e-Lab, Inc. of Houston, Texas for the analysis of ground water samples collected on December 10, 2004 for the Former Cameron Iron Works Facility. Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

Purpose of Sampling Event: To confirm prior sampling event results of select VOCs downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision and accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the draft TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals were reviewed by ERM:

- Analytical data report and chain-of-custody (COC);
- Laboratory review checklists (LRCs); and
- Associated exception reports (ERs).

The results of supporting quality control (QC) analyses are summarized on the LRCs and ERs, and both were included in this review. The LRCs, associated ERs, and analytical data report are included as attachments to this report.

Introduction

Three ground water samples and one duplicate ground water sample were analyzed for seven volatile organic compounds (VOCs) (1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride). One Field Blank was collected and analyzed for the seven select VOCs listed above in association with the ground water samples. Table C4-1 lists the sample identifications cross-referenced to laboratory identifications.

Data Review/Validation Results

Analytical Results

Non-Detected results are reported as less than the value of the sample quantitation limit (SQL) as defined by the TRRP rule.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with the paperwork filled out properly. Sample receipt temperature was within the acceptance criteria of 4 +/- 2 degrees C for the coolers received by the laboratory. The samples were preserved in the field as specified in SW-846 Table 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-36.

Calibrations

According to the LRCs, initial calibration and continuing calibration data met SW-846 method requirements for VOC analysis. The LRCs also document satisfactory instrument performance calibrations (GC/MS) for VOC analysis.

Blanks

VOCs were reported as *Not-Detected* at the reporting limits in the method blanks. The Field Blank (FB-121004) was reported as *Not-Detected* at the reporting limits for VOCs.

Internal Standard, Interference Check Samples and Surrogate Recoveries

Surrogate recoveries for VOC analysis were within the laboratory-defined acceptable ranges. According to the LRCs, internal standard areas were within SW-846 method acceptance criteria.

Laboratory Control Samples

Laboratory Control Spike (LCS) was analyzed for VOCs. The LCS recoveries were within laboratory defined acceptance limits.

Matrix Spike/Matrix Spike Duplicates

A matrix spike/matrix spike duplicate (MS/MSD) was performed for SW-846 method requirements for VOC analysis. The MS/MSD were within laboratory acceptance criteria.

Field Precision

One field duplicate sample was collected during this sampling event (MW-70/ Dup-1). Sample MW-70 and duplicate sample Dup-1 were reported as detected for 1,1-dichloroethane, 1,1-dichloroethene, and cis-1,2-dichloroethene. The sample/duplicate precision comparison had RPD less than the 20% acceptance criteria for the compounds listed. Sample/duplicate precision calculations are included in Table C4-2.

Field Procedures

The samples were collected using documented sampling procedures.

SUMMARY

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

TABLE C4-1

Cross-Reference Field Sample Identifications and Laboratory Identifications
Laboratory Package 0412163

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Laboratory Identification
MW-126	0412163-01
FB-121004	0412163-02
MW-93	0412163-03
MW-70	0412163-04
Dup-1	0412163-05

TABLE C4-2

Field Precision
Laboratory Package 0412163

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Sample Result	Duplicate Result	RPD	Qualified
MW-70/ DUP-1	1,1-Dichloroethane	0.011	0.011	0.00	A
	1,1-Dichloroethene	0.0094	0.0099	-5.18	A
	cis-1,2-Dichloroethene	0.0074	0.0075	-1.34	A

NOTES:

Results reported as mg/L.
RPD = ((SR-DR)*200)/(SR+DR)
A = Acceptable data.

APPENDIX C5

Data Usability Summary and Laboratory Report
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

ERM reviewed a laboratory analytical data package (0501265) from e-Lab, Inc. of Houston, Texas for the analysis of 3 ground water samples collected on January 26, 2005 at the Former Cameron Iron Works Facility. Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

Purpose of Sampling Event: Quarterly sampling event of select wells to monitor seven VOCs beneath and downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision and accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the draft TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals were reviewed by ERM:

- Analytical data report and chain-of-custody (COC),
- Laboratory review checklists (LRCs), and
- Associated exception reports (ERs).

The results of supporting quality control (QC) analyses are summarized on the LRCs and ERs, and both were included in this review. The LRCs, associated ERs, and analytical data report are included as attachments to this report.

Introduction

Three ground water samples and one duplicate ground water sample were analyzed for the following volatile organic compounds (VOCs): 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride. One Field Blank was collected and analyzed for the seven select VOCs listed above. Table C5-1 lists the sample identifications cross-referenced to laboratory identifications.

Data Review/Validation Results

Analytical Results

Ground water results are reported in mg/L. Non-detected results are reported as less than the value of the sample quantitation limit (SQL) as defined by the TRRP rule.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with most of the paperwork filled out properly. The sample cooler receipt temperature was within the acceptance criteria of 4 +/- 2 degrees C. The samples were preserved in the field as specified in SW-846 Table 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-36. A trip blank was provided to the laboratory, but was not listed on the COC and was not analyzed by the laboratory.

Calibrations

According to the LRCs, initial calibration and continuing calibration data met SW-846 method requirements for VOC analysis. The LRCs also document satisfactory instrument performance calibrations (GC/MS) for VOC analysis.

Blanks

VOCs were reported as not-detected in the method blanks. The Field Blank (FB012605) was reported as not-detected for VOCs. A trip blank was provided to the laboratory, but was put on hold and was not analyzed by the laboratory.

Internal Standard and Surrogate Recoveries

Surrogate recoveries for VOC analysis were within the laboratory-defined acceptable ranges. According to the LRCs, internal standard areas were within SW-846 method acceptance criteria.

Laboratory Control Samples

Laboratory Control Samples (LCS) were analyzed for VOCs. The LCS recoveries were above laboratory defined acceptance limits for 1,1-Dichloroethene, but no samples were associated with this batch, so no qualification was necessary.

Matrix Spike/Matrix Spike Duplicates

Matrix Spike/Matrix Spike Duplicate (MS/MSD) were analyzed for VOCs. The MS/MSD recoveries were above laboratory defined acceptance limits for 1,2-Dichloroethane. 1,2-Dichloroethane was reported as not-detected for the five associated samples, so no qualification was necessary.

Field Precision

One field duplicate was collected in association with this data package (MW-70 / DUP-1). Both sample and duplicate were reported as detected for 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, and trichloroethene. The sample/duplicate precision comparison had relative percent difference (RPD) less than the 20% acceptance criteria for all constituents but trichloroethene. The data was acceptable based on Table D-2 of the TRRP-13 Guidance, therefore no qualification was necessary. Sample/duplicate precision calculations are included in Table C5-2.

Laboratory Precision

Laboratory duplicates were not analyzed as part of this laboratory package.

Field Procedures

The samples were collected using documented sampling procedures.

SUMMARY

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

TABLE C5-1

Cross-Reference Field Sample Identifications and Laboratory Identifications
Laboratory Package 0501265

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Laboratory Identification
DUP-1	0501265-01
MW-93	0501265-02
MW-70	0501265-03
MW-126	0501265-04
FB-012605	0501265-05

TABLE C5-2

Field Precision
Laboratory Package 0501265

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Sample Result	Duplicate Result	RPD	Qualified
MW-70/DUP-1	1,1-dichloroethane	0.0087	0.0081	7.1429	A
	1,1-dichloroethene	0.0074	0.0068	8.4507	A
	cis-1,2-dichloroethene	0.0078	0.0073	6.6225	A
	trichloroethene	0.0017	0.0013	26.6667	A*

NOTES:

Results reported as mg/L.
RPD = ((SR-DR)*200)/(SR+DR)
A = Acceptable data.
A*= Acceptable data based on Table D-2 of the TRRP-13 Guidance.

APPENDIX C6

Data Usability Summary and Laboratory Report
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

ERM reviewed a laboratory analytical data package (0504358) from e-Lab, Inc. of Houston, Texas for the analysis of ground water samples and surface water samples were collected on April 28 and 29, 2005 at the Former Cameron Iron Works Facility. Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

Purpose of Sampling Event: Semiannual sampling event to monitor select VOCs beneath and downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision and accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the draft TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals were reviewed by ERM:

- Analytical data report and chain-of-custody (COC);
- Laboratory review checklists (LRCs); and
- Associated exception reports (ERs).

The results of supporting quality control (QC) analyses are summarized on the LRCs and ERs, and both were included in this review. The LRCs, associated ERs, and analytical data report are included as attachments to this report.

Introduction

Twenty-seven ground water samples and two duplicate ground water samples were analyzed for five volatile organic compounds (VOCs) (1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride). Twenty-eight ground water samples were also analyzed for the following VOCs: 1,1-dichloroethane, and 1,2-dichloroethane. Two Field Blanks were collected and analyzed for the seven select VOCs listed above in association with the ground water samples. Table C6-1 lists the sample identifications cross-referenced to laboratory identifications.

Data Review/Validation Results

Analytical Results

Non-detected results are reported as less than the value of the sample quantitation limit (SQL) as defined by the TRRP rule.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with most of the paperwork filled out properly. Sample receipt temperature was within the acceptance criteria of 4 +/- 2 degrees C for the coolers received by the laboratory. The samples were preserved in the field as specified in SW-846 Table 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-36.

Calibrations

According to the LRCs, initial calibration and continuing calibration data met SW-846 method requirements for VOC analysis. The LRCs also document satisfactory instrument performance calibrations (GC/MS) for VOC analysis.

Blanks

VOCs were reported as not-detected in the method blanks. The Field Blanks (FB-042805 and FB-042905) were reported as not-detected for VOCs.

Internal Standard and Surrogate Recoveries

Surrogate recoveries for VOC analysis were within the laboratory-defined acceptable ranges. According to the LRCs, internal standard areas were within SW-846 method acceptance criteria.

Laboratory Control Samples

Laboratory Control Spikes (LCS) were analyzed for VOCs. The LCS recoveries were within laboratory defined acceptance limits.

Matrix Spike/Matrix Spike Duplicates

VOC MS/MSD batch R28292 had low recovery for one compound. The sample used for MS/MSD analysis was not associated with this project site, so qualification was not needed.

VOC MS/MSD batch R28149 had elevated RPD for 1,1-Dichloroethene. The associated sample was reported as non-detected for 1,1-Dichloroethene; therefore qualification was not needed.

Field Precision

Two field duplicate samples were collected during this sampling event (MW-70/ DUP-2 and MW-106/ DUP-4). Sample MW-70 and duplicate sample DUP-2 were reported as detected for 1,1-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, Trichloroethene, and Vinyl chloride. Sample MW-106 and duplicate sample DUP-4 were reported as detected for Tetrachloroethene, and Trichloroethene. The sample/duplicate precision comparison for both samples had RPD less than the 20% acceptance criteria for the compounds listed. Sample/duplicate precision calculations are included in Table C6-2.

Field Procedures

The samples were collected using documented sampling procedures.

SUMMARY

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

Qualifiers were added to the original data sheets by applying the most stringent qualifier assigned during the data usability process. When a compound had more than one qualifier assigned due to multiple reasons for qualification (MS/MSD, LCS, surrogates, etc.), the most stringent qualifier was applied to the original data sheets. For example, if benzene were assigned a J flag for calibration and a JL flag for low MS recovery during the review process, a JL flag would have been written on the original laboratory data sheets.

TABLE C6-1

Cross Reference Field Sample Identifications and Laboratory Identifications
Laboratory Package 0504358

Former Cameron Iron Works Facility
Houston, Texas

Field ID	Laboratory ID
MW-81	0504358-01
MW-70	0504358-02
MW-71	0504358-03
MW-72	0504358-04
MW-121	0504358-05
MW-85R	0504358-06
MW-75R	0504358-07
MW-123	0504358-08
DUP-2	0504358-09
MW-73	0504358-10
MW-122	0504358-11
MW-87	0504358-12
MW-115	0504358-13
MW-118	0504358-14
MW-119	0504358-15
MW-124	0504358-16
MW-117	0504358-17
MW-116	0504358-18
FB-042805	0504358-19
MW-98	0504358-20
MW-96	0504358-21
MW-125	0504358-22
MW-128	0504358-23
MW-102	0504358-24
MW-106	0504358-25
DUP-4	0504358-26
MW-52	0504358-27
MW-94	0504358-28
MW-89	0504358-29
MW-92	0504358-30
MW-107	0504358-31
FB-042905	0504358-32
MW-86	0504358-33
MW-114	0504358-34
MW-126	0504358-35

TABLE C6-2

Field Precision
Laboratory Package 0504358

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Sample Result	Duplicate Result	RPD	Qualified
MW-70/ DUP-2	1,1-Dichloroethane	0.011	0.011	0	A
	1,1-Dichloroethene	0.0067	0.0069	-2.94	A
	cis-1,2-Dichloroethene	0.012	0.013	-8.00	A
	Trichloroethene	0.0021	0.0018	15.38	A
	Vinyl chloride	0.00093	0.00099	-6.25	A
MW-106/ DUP-4	Tetrachloroethene	0.58	0.57	1.74	A
	Trichloroethene	0.0065	0.0062	4.72	A

NOTES:

Results reported as mg/L.
RPD = ((SR-DR)*200)/(SR+DR)
A = Acceptable data.

APPENDIX C7

Data Usability Summary and Laboratory Report
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

ERM reviewed a laboratory analytical data package (0504273) from e-Lab, Inc. of Houston, Texas for the analysis of ground water samples and surface water samples were collected on April 25, 26, and 27, 2005 at the Former Cameron Iron Works Facility. Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

Purpose of Sampling Event: Semiannual sampling event to monitor select VOCs beneath and downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision and accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the draft TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals were reviewed by ERM:

- Analytical data report and chain-of-custody (COC);
- Laboratory review checklists (LRCs); and
- Associated exception reports (ERs).

The results of supporting quality control (QC) analyses are summarized on the LRCs and ERs, and both were included in this review. The LRCs, associated ERs, and analytical data report are included as attachments to this report.

Introduction

Nineteen ground water samples and three duplicate ground water samples were analyzed for five volatile organic compounds (VOCs) (1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride). Thirty-eight ground water samples were also analyzed for the following VOCs: 1,1-dichloroethane, and 1,2-dichloroethane. Three Field Blanks were collected and analyzed for the seven select VOCs listed above in association with the ground water samples. Six surface water samples and one duplicate surface water sample were also collected and analyzed for the seven select VOCs listed above. Table C7-1 lists the sample identifications cross-referenced to laboratory identifications.

Data Review/Validation Results

Analytical Results

Qualified sample data are listed in Table C7-2. Non-detected results are reported as less than the value of the sample quantitation limit (SQL) as defined by the TRRP rule.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with most of the paperwork filled out properly. Sample DUP-5 collected on 4/25/2005 at 00:00 was mislabeled as DUP-1 on the COC. The laboratory was notified and the sample was reported as DUP-5. Sample receipt temperature was within the acceptance criteria of 4 +/- 2 degrees C for the coolers received by the laboratory. The samples were preserved in the field as specified in SW-846 Table 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 Table 2-36.

Calibrations

According to the LRCs, initial calibration and continuing calibration data met SW-846 method requirements for VOC analysis. The LRCs also document satisfactory instrument performance calibrations (GC/MS) for VOC analysis.

Blanks

VOCs were reported as not-detected in the method blanks. The Field Blanks (FB-042505, FB-042605 and FB-042705) were reported as not-detected for VOCs.

Internal Standard and Surrogate Recoveries

Surrogate recoveries for VOC analysis were within the laboratory-defined acceptable ranges. According to the LRCs, internal standard areas were within SW-846 method acceptance criteria.

Laboratory Control Samples

Laboratory Control Spikes (LCS) were analyzed for VOCs. The LCS recoveries were within laboratory defined acceptance limits.

Matrix Spike/Matrix Spike Duplicates

VOC MS/MSD batch R28149 had an elevated RPD for 1,1-Dichloroethene. Of the 13 associated samples, six samples (MW-48, MW-50, MW-76, MW-90, MW-91, and MW-129) were reported as detected for 1,1-Dichloroethene and were qualified as estimated (J) due to elevated MS/MSD RPD.

Field Precision

Three field duplicate samples were collected during this sampling event (MW-17R / DUP-1, MW-80 / DUP-3 and SWD-15 / DUP-5). Sample MW-17R and duplicate sample DUP-1 were reported as detected for 1,1-Dichloroethane, 1,1-Dichloroethene. SWD-15 and duplicate sample DUP-5 we reported as detected for 1,1-Dichloroethene, cis-1,2-Dichloroethene, Tetrachloroethene, and Trichloroethene. The sample/duplicate precision comparison for both samples had RPD less than the 20% acceptance criteria for the compounds listed; therefore, qualifiers were not necessary. Sample/duplicate precision calculations are included in Table C7-3.

Sample MW-80 and duplicate sample DUP-3 were reported as not-detected, so a field precision calculation was not needed.

Field Procedures

The samples were collected using documented sampling procedures.

SUMMARY

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

Qualifiers were added to the original data sheets by applying the most stringent qualifier assigned during the data usability process. When a compound had more than one qualifier assigned due to multiple reasons for qualification (MS/MSD, LCS, surrogates, etc.), the most stringent qualifier was applied to the original data sheets. For example, if benzene were assigned a J flag for calibration and a JL flag for low MS recovery during the review process, a JL flag would have been written on the original laboratory data sheets.

The data user is advised that samples MW-48, MW-50, MW-76, MW-90, MW-91 and MW-129 were qualified as estimated (J) for 1,1-Dichloroethene, due to an elevated RPD.

TABLE C7-1

Cross Reference Field Sample Identifications and Laboratory Identifications
Laboratory Package 0504273

Former Cameron Iron Works Facility
Houston, Texas

Field ID	Laboratory ID	Field ID	Laboratory ID
SWD-12	0504273-01	MW-62	0504273-31
SWD-14	0504273-02	KMW-01	0504273-32
SWD-15	0504273-03	MW-2(C)	0504273-33
SWD-17	0504273-04	MW-131	0504273-34
SWD-18	0504273-05	MW-02(S)	0504273-35
DUP-5	0504273-06	MW-03(S)	0504273-36
SWD-20	0504273-07	MW-130	0504273-37
FB-042505	0504273-08	MW-120	0504273-38
MW-65	0504273-09	MW-07R	0504273-39
MW-100	0504273-10	DUP-3	0504273-40
MW-127	0504273-11	MW-83	0504273-41
MW-99	0504273-12	MW-80	0504273-42
MW-64	0504273-13	MW-79	0504273-43
MW-61	0504273-14	MW-78	0504273-44
FB-042605	0504273-15	MW-16R	0504273-45
MW-60	0504273-16	MW-82	0504273-46
MW-59	0504273-17	MW-76	0504273-47
MW-15R	0504273-18	MW-77	0504273-48
MW-17R	0504273-19	MW-42	0504273-49
MW-74	0504273-20	KMW-07	0504273-50
MW-84	0504273-21	KMW-14	0504273-51
DUP-1	0504273-22	FB042705	0504273-52
MW-111	0504273-23	MW-48	0504273-53
MW-112	0504273-24	MW-50	0504273-54
MW-113	0504273-25	MW-101	0504273-55
MW-110	0504273-26	MW-90	0504273-56
MW-109	0504273-27	MW-91	0504273-57
MW-108	0504273-28	MW-93	0504273-58
MW-95	0504273-29	MW-129	0504273-59
KMW-13	0504273-30	MW-97	0504273-60

TABLE C7-2

Qualified Analytical Data

Laboratory Package 0504273
Former Cameron Iron Works Facility

Field Identification	Analyte	Qualification	Reason for Qualification
MW-48	1,1-Dichloroethene	J	%RPD above specifications
MW-50	1,1-Dichloroethene	J	%RPD above specifications
MW-76	1,1-Dichloroethene	J	%RPD above specifications
MW-90	1,1-Dichloroethene	J	%RPD above specifications
MW-91	1,1-Dichloroethene	J	%RPD above specifications
MW-129	1,1-Dichloroethene	J	%RPD above specifications

NOTES:

J = Estimated data; the reported quantitation limit or sample concentration is approximated due to exceedance of one or more QC requirements.

TABLE C7-3

Field Precision

Laboratory Package 0504273
Former Cameron Iron Works Facility

Field Identification	Analyte	Sample Result	Duplicate Result	RPD	Qualified
MW-17R/ DUP-1	1,1-Dichloroethane	0.014	0.014	0	A
	1,1-Dichloroethene	0.071	0.068	4.31654676	A
SWD-18/ DUP-5	1,1-Dichloroethene	0.0063	0.006	4.87804878	A
	cis-1,2-Dichloroethene	0.0011	0.0011	0	A
	Tetrachloroethene	0.012	0.011	8.69565217	A
	Trichloroethene	0.0015	0.0014	6.89655172	A

NOTES:

Results reported as mg/L
RPD = ((SR-DR)*200)/(SR+DR)
A = Acceptable data

APPENDIX C8

Data Usability Summary and Laboratory Report
2005 Annual Ground Water Monitoring Report

Former Cameron Iron Works Facility
Houston, Texas

Environmental Resources Management Southwest, Inc. (ERM) reviewed a laboratory analytical data package (0507382) from e-Lab Analytical, Inc. of Houston, Texas for the analysis of one water sample collected on July 27, 2005 at the Former Cameron Iron Works Site in Houston, Texas (the facility). Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

Purpose of Sampling Event: To provide confirmation of the reported concentration in April, in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

The data generated were evaluated in terms of representativeness, precision, accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS).

Introduction

One ground water sample was collected and analyzed for volatile organic compounds (VOCs). A trip blank was provided to the laboratory but was not analyzed per ERM's request. Rinsate, field and equipment blanks were not provided to the laboratory for analysis. Table C8-1 lists the sample identifications cross-referenced to laboratory identifications.

Data Review / Validation Results

Analytical Results

Sample data is reported in mg/L for ground water samples. *Not Detected* results are reported as less than the value of the sample quantitation limit as defined by the TRRP rule. Method detection limits (MDLs) and method quantitation limits (MQLs) were also provided as part of the analytical results.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with the paperwork filled out properly. Sample receipt temperature was within the acceptance criteria of 4 +/- 2 degrees C. The samples were preserved in the field as specified in SW-846 TABLE 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 TABLE 2-36.

Calibrations and Tunes

Initial and continuing calibration verification was within method acceptance limits for VOC. The LRC also documents satisfactory instrument performance calibrations (GC/MS tunes) for VOC analyses.

Blanks

VOCs were reported as *Not Detected* in the method blank and the field blank.

Surrogate Recoveries

VOC sample surrogate recoveries were within the laboratory control limits.

Internal Standards

According to the LRC, the internal standards were within method-required limits.

Laboratory Control Samples

The laboratory control sample/ laboratory control sample duplicates (LCS/LCSD) recoveries met the laboratory-defined acceptable ranges for VOCs.

Matrix Spike/Matrix Spike Duplicates

Two VOC MS/MSDs were included in this laboratory package.

Batch R30268 MS/MSD sample was not project related, so the MS/MSD data was not evaluated.

Batch R30289 MS/MSD sample was within the laboratory control limits.

Field Precision

A field duplicate was not provided to the laboratory; therefore the field precision comparison was not completed.

Field Procedures

The samples were collected using documented sampling procedures.

SUMMARY

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the Former Cameron Iron Works Facility.

TABLE C8-1

Cross Reference Field Sample Identifications and Laboratory Identifications

Field ID	Laboratory ID
MW-83	0507382-01
Trip Blank	0507382-02

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