

June 5, 2009

Mr. Mark Riggle  
Project Manager  
Voluntary Cleanup Section  
Texas Commission on Environmental Quality  
Mail Code 221  
12118 North IH 35, Building D  
Austin, Texas 78753

Project No. 0099217

Subject: First Half 2009 Monitoring Data Transmittal  
Former Cameron Iron Works Facility, Houston, Texas  
VCP No. 221



Dear Mr. Riggle:

On behalf of Cameron International Corporation (Cameron), Environmental Resources Management Southwest, Inc. (ERM) is providing the First Half 2009 monitoring results for the Former Cameron Iron Works Facility in Houston, Texas for your review and consideration.

The semiannual ground water and surface water sampling event was completed in April 2009. Based on a review of these results, a slight increase in reported concentrations at MW-59, MW-120, MW-143, and MW-144 was apparent. In accordance with the *Response Action Plan (RAP)*, dated August 28, 2003, confirmation sampling of these wells was completed on May 4, 2009 to confirm the results of the April 2009 semiannual sampling event.

All ground water analytical results collected during the first half of 2009 were compared to the response action obligations outlined in the RAP. The boundary wells are referred to as "trigger wells" because of their position on the plume boundary and purpose to detect the potential for plume movement. Table 1 indicates which trigger wells require a response action and the proposed response action for each. The ground water analytical results for the trigger wells are presented in Table 2, and the analytical results for the non-trigger wells are presented in Table 3.

The reported surface water concentrations, summarized on Table 4, are below both the critical PCLs and 80% of the critical PCLs as established in the *Human Health and Ecological Risk Assessment for Surface Water and Sediment*, dated June 19, 2003.

The laboratory reports and data usability summaries will be provided in the 2009 Annual Ground Water Monitoring Report and Field Activities Summary.

*Conclusions and Recommendations*

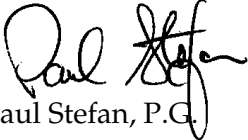
Cameron proposes to undertake the following response actions to meet the requirements of the RAP in the next three months:

- Property owners in the areas of MW-59, MW-143, and MW-144 will be notified by certified mail (three properties on Pinehaven Dr. and one on Silber Rd.);
- MW-170 has had reported detections above the PCL for four consecutive sampling events and will be removed from the list of trigger wells and monitored semiannually. MW-77 and MW-171 will now serve as the trigger wells for this area;
- COC concentrations will be monitored in ground water at MW-59, MW-80, MW-84, MW-143, MW-144, MW-171, MW-172, and MW-173 on a quarterly basis. The next quarterly sampling event is scheduled for July 2009;
- New wells for permanganate injection will be installed along Pinehaven Road and Chatsworth Road to address apparent plume migration;
- MW-59 is located within the ground water capture zone of EW-1 and the potential for affected ground water to be present in this area is addressed by the existing ground water extraction system; and
- An amendment to the RAP will be submitted to address affected ground water in the area of MW-173.

Please contact Mr. Ted Fasting of Cameron International Corporation at (713) 513-3325 with any questions or comments.

Sincerely,

Environmental Resources Management Southwest, Inc.

  
Paul Stefan, P.G.

PAS/skd  
Attachment

cc: Marsha Hill, Texas Commission on Environmental Quality, Region X II  
Ted Fasting, Cameron International Corporation  
Bruce Himmelreich, Cameron International Corporation, (without attachment)  
Bill Deffebach, Stablewood Property Owners Association  
Robin Morse, Crain, Canton, and James, P.C.  
James Elkins III, Houston Trust Company  
Lisa Shelton, Andrews Kurth, LLP  
Brian Weaver, SKA Consulting, L.P.

**Tables**  
*Attachment 1*

*June 5, 2009*  
*Project No. 0099217*

**Environmental Resources Management Southwest, Inc.**  
15810 Park Ten Place, Suite 300  
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(281) 600-1000

TABLE 1

Summary of Response Action Plan Implementation  
First Half 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

| Well   | COCs elevated above MQL   | COCs elevated above PCL               | Need for Additional Notification (Yes or No) | In-situ Treatment (Yes or No) | Sampling Frequency |
|--------|---|---------------------------------------|--|-------------------------------|--------------------|
| MW-59  | 1,1-dichloroethene  | 1,1-dichloroethene                    | yes  | no (a)                        | Quarterly          |
| MW-125 | 1,1-dichloroethene  | 1,1-dichloroethene                    | no (b)                                       | no (c)                        | Quarterly          |
| MW-144 | 1,1-dichloroethene  | 1,1-dichloroethene                    | yes  | no (c)                        | Quarterly          |
| MW-143 | 1,1-dichloroethene  | 1,1-dichloroethene                    | yes  | no (c)                        | Quarterly          |
| MW-170 | 1,1-dichloroethene<br>cis-1,2-dichloroethene<br>trichloroethene | 1,1-dichloroethene<br>trichloroethene | no (b)                                       | no                            | Semiannually       |
| MW-172 | 1,1-dichloroethene  | 1,1-dichloroethene                    | no (b)                                       | no                            | Quarterly          |
| MW-173 | 1,1-dichloroethene  | 1,1-dichloroethene                    | no (b)                                       | no (d)                        | Quarterly          |

## NOTES:

COCs = Chemicals of Concern.

MQL = Method Quantitation Limit.

PCL = Protective Concentration Level.

(a) MW-59 is within the capture zone of EW-1.

(b) Properties in the vicinity of the affected ground water have been previously notified.

(c) Injection wells located in this area were injected with sodium permanganate in March 2008. This area is being gauged regularly for the presence of permanganate. If there is no presence of permanganate in this area, additional permanganate will be injected.

(d) An amendment to the RAP will be submitted to address the affected ground water in the area of MW-173.

TABLE 2

Summary of Monitor Well Ground Water Data for Trigger Wells  
First Half 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

| Constituent            | MQL    | Critical<br>PCLs (a) | Location:  | MW-71       | MW-72       | MW-74       | MW-77          | MW-80       | MW-81       | MW-84       | MW-85R         | MW-86          |
|------------------------|--------|----------------------|------------|-------------|-------------|-------------|----------------|-------------|-------------|-------------|----------------|----------------|
|                        |        |                      | Depth: (b) | 25          | 24          | 27          | 37             | 38          | 35          | 38          | 29             | 40             |
|                        |        |                      | Date:      | 4/14/2009   | 4/15/2009   | 4/13/2009   | 4/14/2009      | 4/13/2009   | 4/15/2009   | 4/15/2009   | 4/14/2009      | 4/14/2009      |
| 1,1-Dichloroethane     | 0.0050 | 4.9                  |            | 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)    |
| 1,1-Dichloroethene     | 0.0050 | 0.0070               |            | ND (0.0050) | ND (0.0050) | 0.0039 J    | ND (0.0050) UJ | ND (0.0050) | ND (0.0050) | 0.0035 J    | ND (0.0050)    | ND (0.0050)    |
| 1,2-Dichloroethane     | 0.0050 | 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)    | 0.0010 J       |
| cis-1,2-Dichloroethene | 0.0050 | 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)    |
| Tetrachloroethene      | 0.0050 | 0.0050               |            | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) UJ | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) UJ | ND (0.0050) UJ |
| Trichloroethene        | 0.0050 | 0.0050               |            | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) UJ | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050)    | ND (0.0050)    |
| Vinyl Chloride         | 0.0020 | 0.0020               |            | ND (0.0020) | ND (0.0020) | ND (0.0020) | ND (0.0020) UJ | ND (0.0020) | ND (0.0020) | ND (0.0020) | ND (0.0020) UJ | ND (0.0020) UJ |

| Constituent            | MQL    | Critical<br>PCLs (a) | Location:  | MW-93 (c) | MW-95          | MW-97       | MW-98       | MW-117         | MW-119      | MW-122         | MW-123      | MW-125       |
|------------------------|--------|----------------------|------------|-----------|----------------|-------------|-------------|----------------|-------------|----------------|-------------|--------------|
|                        |        |                      | Depth: (b) | 43        | 30             | 33          | 36          | 25             | 28          | 28             | 28          | 32           |
|                        |        |                      | Date:      | 4/13/2009 | 4/14/2009      | 4/16/2009   | 4/16/2009   | 4/14/2009      | 4/15/2009   | 4/14/2009      | 4/15/2009   | 4/15/2009    |
| 1,1-Dichloroethane     | 0.0050 | 4.9                  |            | NS        | ND (0.0050)    | ND (0.0050) | ND (0.0050) | ND (0.0050)    | 0.00086 J   | ND (0.0050)    | ND (0.0050) | ND (0.0050)  |
| 1,1-Dichloroethene     | 0.0050 | 0.0070               |            | NS        | ND (0.0050)    | 0.0026 J    | ND (0.0050) | ND (0.0050) UJ | 0.0032 J    | ND (0.0050)    | ND (0.0050) | ND (0.0050)  |
| 1,2-Dichloroethane     | 0.0050 | 0.0050               |            | NS        | ND (0.0050) UJ | 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 | 0.0050 | 0.070                |            | NS        | 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 | 0.0050               |            | NS        | ND (0.0050)    | ND (0.0050) | ND (0.0050) | ND (0.0050) UJ | ND (0.0050) | ND (0.0050) UJ | ND (0.0050) | <b>0.015</b> |
| Trichloroethene        | 0.0050 | 0.0050               |            | NS        | ND (0.0050)    | ND (0.0050) | ND (0.0050) | ND (0.0050) UJ | ND (0.0050) | 0.0017 J       | ND (0.0050) | ND (0.0050)  |
| Vinyl Chloride         | 0.0020 | 0.0020               |            | NS        | ND (0.0020) UJ | ND (0.0020) | ND (0.0020) | ND (0.0020) UJ | ND (0.0020) | ND (0.0020) UJ | ND (0.0020) | ND (0.0020)  |

| Constituent            | MQL    | Critical<br>PCLs (a) | Location:  | MW-131         | MW-132      | MW-139      | MW-146      | MW-168      | MW-170        | MW-171      | MW-172        | MW-173       |
|------------------------|--------|----------------------|------------|----------------|-------------|-------------|-------------|-------------|---------------|-------------|---------------|--------------|
|                        |        |                      | Depth: (b) | 32             | 30          | 25          | 30          | 35          | 25            | 25          | 25            | 35           |
|                        |        |                      | Date:      | 4/14/2009      | 4/13/2009   | 4/13/2009   | 4/13/2009   | 4/16/2009   | 4/15/2009     | 4/15/2009   | 4/15/2009     | 4/15/2009    |
| 1,1-Dichloroethane     | 0.0050 | 4.9                  |            | ND (0.0050)    | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | 0.0016 J      | 0.0013 J    | 0.0021 J      | 0.0026 J     |
| 1,1-Dichloroethene     | 0.0050 | 0.0070               |            | ND (0.0050)    | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | <b>0.0097</b> | 0.0011 J    | <b>0.0089</b> | <b>0.026</b> |
| 1,2-Dichloroethane     | 0.0050 | 0.0050               |            | ND (0.0050) UJ | 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 | 0.0050 | 0.070                |            | ND (0.0050)    | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | <b>0.0068</b> | 0.00067 J   | 0.0016 J      | ND (0.0050)  |
| Tetrachloroethene      | 0.0050 | 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 | 0.0050               |            | ND (0.0050)    | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | <b>0.0090</b> | ND (0.0050) | ND (0.0050)   | ND (0.0050)  |
| Vinyl Chloride         | 0.0020 | 0.0020               |            | ND (0.0020) UJ | 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:

The reported concentrations are in mg/L.

**0.0088** = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Ground Water critical PCLs.

**Bold** values exceed the MQL.

ND (0.0050) = *Not Detected* at the method quantitation limit given in parentheses.

MQL = Method Quantitation Limit.

(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Ground Water PCLs, Table 3, table for TRRP Rule dated April 2008.

(b) The sample depths are reported in feet below ground surface.

(c) Not sampled due to permanganate in well.

J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.

L = Biased Low.

U = Not detected, the SQL is estimated

TABLE 3

Summary of Monitor Well Ground Water Data  
First Half 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

| Constituent            | Critical PCLs (a) | Location:   |             |             |             |             |             |             |             |             |             |             |             |             |           |             |             |             |           |           |           |
|------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-------------|-------------|-----------|-----------|-----------|
|                        |                   | KMW-07      |             | KMW-13      |             | KMW-14      |             | MW-01       |             | MW-02       |             | MW-07R      |             | MW-15R      |           | MW-16R      |             | MW-17R      |           | MW-35     |           |
|                        |                   | Depth: (b)  | 25          | 25          | 25          | 25          | 25          | 25          | 25          | 25          | 25          | 25          | 20          | 20          | 20        | 20          | 20          | 20          | 20        | 20        | 33        |
| Date:                  | 4/15/2009         | 4/16/2009   | 4/16/2009   | 4/16/2009   | 4/16/2009   | 4/14/2009   | 4/13/2009   | 4/13/2009   | 4/13/2009   | 4/13/2009   | 4/13/2009   | 4/13/2009   | 4/13/2009   | 4/13/2009   | 4/13/2009 | 4/13/2009   | 4/13/2009   | 4/13/2009   | 4/15/2009 | 4/15/2009 |           |
| 1,1-Dichloroethane     | 4.9               | NA          | NA          | NA          | NA          | NA          | NA          | NA          | NA          | NA          | NA          | ND (0.0050) | 0.013       | ND (0.0050) | NA        | ND (0.0050) | 0.013       | ND (0.0050) | NA        | NA        | NA        |
| 1,1-Dichloroethene     | 0.0070            | ND (0.0050) | ND (0.0050) | ND (0.0050) | 0.0015 J    | 0.0099      | 0.0053      | 0.0019 J    | 0.034       | ND (0.0050) | 0.034       | ND (0.0050) | 0.046       | ND (0.0050) | 0.046     | ND (0.0050) | 0.046       | ND (0.0050) | 0.046     | 0.046     | 0.046     |
| 1,2-Dichloroethane     | 0.0050            | NA          | NA          | NA          | NA          | NA          | NA          | NA          | NA          | NA          | NA          | ND (0.0050) | ND (0.0050) | ND (0.0050) | NA        | ND (0.0050) | ND (0.0050) | ND (0.0050) | 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) | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | 0.00077 J   | 0.047       | ND (0.0050) | 0.0027 J  | ND (0.0050) | 0.047       | ND (0.0050) | 0.0027 J  | 0.0027 J  | 0.0027 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) | 0.00077 J   | 0.0075      | ND (0.0050) | 0.0013 J  | ND (0.0050) | 0.0075      | ND (0.0050) | 0.0013 J  | 0.0013 J  | 0.0013 J  |
| 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) | ND (0.0050) | 0.020       | ND (0.0050) | 0.00082 J | ND (0.0050) | 0.020       | ND (0.0050) | 0.00082 J | 0.00082 J | 0.00082 J |
| Vinyl Chloride         | 0.0020            | 0.00072 J   | 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) | 0.0037      | ND (0.0020) | 0.055     | ND (0.0020) | 0.0037      | ND (0.0020) | 0.055     | 0.055     | 0.055     |

| Constituent            | Critical PCLs (a) | Location:   |             |             |           |           |             |           |             |             |             |           |           |             |             |             |             |             |             |             |
|------------------------|-------------------|-------------|-------------|-------------|-----------|-----------|-------------|-----------|-------------|-------------|-------------|-----------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                        |                   | MW-42       |             | MW-43       |           | MW-44     |             | MW-48     |             | MW-50       |             | MW-52     |           | MW-54       |             | MW-56       |             | MW-58       |             |             |
|                        |                   | Depth: (b)  | 25          | 25          | 25        | 30        | 32          | 25        | 30          | 24          | 23          | 25        | 30        | 24          | 23          | 24          | 23          | 23          | 23          |             |
| Date:                  | 4/14/2009         | 4/14/2009   | 4/14/2009   | 4/14/2009   | 4/14/2009 | 4/14/2009 | 4/13/2009   | 4/16/2009 | 4/15/2009   | 4/15/2009   | 4/13/2009   | 4/16/2009 | 4/15/2009 | 4/15/2009   | 4/15/2009   | 4/15/2009   | 4/15/2009   | 4/15/2009   | 4/15/2009   |             |
| 1,1-Dichloroethane     | 4.9               | NA          | NA          | NA          | NA        | NA        | NA          | NA        | NA          | NA          | NA          | NA        | NA        | NA          | NA          | NA          | NA          | NA          | NA          | NA          |
| 1,1-Dichloroethene     | 0.0070            | 0.00090 J   | ND (0.0050) | 0.026       | 0.75 JL   | 3.7       | 0.14        | 0.41      | ND (0.0050) | ND (0.0050) | ND (0.0050) | 0.14      | 0.41      | 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            | NA          | NA          | NA          | NA        | NA        | NA          | NA        | NA          | NA          | NA          | NA        | NA        | NA          | NA          | NA          | NA          | NA          | NA          | NA          |
| cis-1,2-Dichloroethene | 0.070             | ND (0.0050) | ND (0.0050) | ND (0.0050) | 0.012     | 0.11      | ND (0.0050) | 13        | ND (0.0050) | ND (0.0050) | ND (0.0050) | 13        | 13        | 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) | 0.089 J   | 0.0048 J  | ND (0.0050) | 0.16      | ND (0.0050) | ND (0.0050) | ND (0.0050) | 0.16      | 0.16      | 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) | 0.0070    | 0.093     | ND (0.0050) | 1.1       | ND (0.0050) | ND (0.0050) | ND (0.0050) | 1.1       | 1.1       | 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) | 0.0044      | 0.070 J   | 1.1       | 0.011       | 0.16      | ND (0.0020) | ND (0.0020) | ND (0.0020) | 0.16      | 0.16      | 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-59       |             | MW-60       |             | MW-61       |             | MW-62       |             | MW-63       |             | MW-64       |           | MW-65     |             | MW-70     |           | MW-73     |             |
|                        |                   | Depth: (b)  | 25          | 34          | 23          | 25          | 25          | 25          | 25          | 25          | 25          | 25          | 25        | 25        | 25          | 25        | 25        | 25        | 25          |
| Date:                  | 4/13/2009         | 5/4/2009    | 4/13/2009   | 4/13/2009   | 4/15/2009   | 4/15/2009   | 4/15/2009   | 4/15/2009   | 4/15/2009   | 4/15/2009   | 4/13/2009   | 4/13/2009   | 4/13/2009 | 4/13/2009 | 4/15/2009   | 4/15/2009 | 4/15/2009 | 4/14/2009 |             |
| 1,1-Dichloroethane     | 4.9               | 0.0016 J    | 0.0014 J    | ND (0.0050) | ND (0.0050) | NA          | NA          | NA          | NA          | NA          | NA          | NA          | NA        | NA        | 0.035       | 0.035     | 0.035     | 0.035     | 0.0089      |
| 1,1-Dichloroethene     | 0.0070            | 0.011       | 0.0099      | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | 0.0038 J    | 0.026     | 0.026     | 0.026       | 0.026     | 0.026     | 0.026     | 0.038       |
| 1,2-Dichloroethane     | 0.0050            | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | NA          | NA          | NA          | NA          | NA          | NA          | NA          | NA        | NA        | ND (0.0050) | 0.00096 J | 0.00096 J | 0.00096 J | 0.00096 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) | ND (0.0050) | ND (0.0050) | ND (0.0050) | ND (0.0050) | 0.0029 J    | 0.14      | 0.14      | 0.14        | 0.14      | 0.14      | 0.14      | 0.0031 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) | ND (0.0050) | 0.0010 J  | 0.0010 J  | 0.0010 J    | 0.0010 J  | 0.0010 J  | 0.0010 J  | 0.0012 J    |
| 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) | ND (0.0050) | 0.047     | 0.047     | 0.047       | 0.047     | 0.047     | 0.047     | 0.012       |
| 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) | 0.0023      | 0.0023    | 0.0023    | 0.0023      | 0.0023    | 0.0023    | 0.0023    | ND (0.0020) |

NOTES:

The reported concentrations are in mg/L.

0.028 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.

NA = Not Analyzed.

NS = Not Sampled.

ND (0.0050) = Not Detected at the method quantitation limit given in parentheses.

(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Ground Water PCLs, Table 3, table for TRRP Rule dated March 25, 2009.

(b) The sample depths are reported in feet below ground surface.

(c) Not sampled due to permanganate in well.

J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.

L = Biased Low.

U = Not detected, the SQL is estimated

TABLE 3 (Cont'd)

Summary of Monitor Well Ground Water Data  
First Half 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

| Constituent            | Critical PCLs (a) | Location:                     |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|------------------------|-------------------|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                        |                   | MW-75R                        | MW-76           | MW-78           | MW-79           | MW-82           | MW-83           | MW-87           | MW-88 (c)       | MW-89           | MW-90           |
|                        |                   | Depth: (b)<br>Date: 4/15/2009 | 33<br>4/15/2009 | 31<br>4/15/2009 | 32<br>4/13/2009 | 40<br>4/13/2009 | 31<br>4/15/2009 | 30<br>4/14/2009 | 32<br>4/14/2009 | 38<br>4/13/2009 | 37<br>4/16/2009 |
| 1,1-Dichloroethane     | 4.9               | 0.014                         | ND (0.0050)     | 0.0038 J        | 0.045           | 0.027           | 0.033           | 0.0081          | NS              | 0.0064          | ND (0.0050)     |
| 1,1-Dichloroethene     | 0.0070            | 0.0055                        | ND (0.0050)     | 0.13            | 0.39            | 0.11            | 0.11            | 0.031           | NS              | 0.030           | 0.0066          |
| 1,2-Dichloroethane     | 0.0050            | ND (0.0050)                   | ND (0.0050)     | ND (0.0050)     | 0.00078 J       | 0.00092 J       | 0.00091 J       | 0.0014 J        | NS              | 0.00071 J       | ND (0.0050)     |
| cis-1,2-Dichloroethene | 0.070             | ND (0.0050)                   | ND (0.0050)     | ND (0.0050)     | 0.0034 J        | 0.014           | 0.0024 J        | 0.00075 J       | NS              | 0.0084          | 0.0032 J        |
| Tetrachloroethene      | 0.0050            | ND (0.0050)                   | 0.0021 J        | ND (0.0050)     | ND (0.0050)     | 0.015           | 0.00092 J       | ND (0.0050) UJ  | NS              | 0.00068 J       | 0.28            |
| Trichloroethene        | 0.0050            | ND (0.0050)                   | ND (0.0050)     | ND (0.0050)     | 0.00085 J       | 0.011           | 0.0017 J        | 0.0039 J        | NS              | 0.046           | 0.021           |
| Vinyl Chloride         | 0.0020            | ND (0.0020)                   | ND (0.0020)     | ND (0.0020)     | 0.0095          | ND (0.0020)     | 0.0027 J        | ND (0.0020) UJ  | NS              | ND (0.0020)     | ND (0.0020)     |

| Constituent            | Critical PCLs (a) | Location:                     |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|------------------------|-------------------|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                        |                   | MW-91                         | MW-92           | MW-94           | MW-96R          | MW-99           | MW-100          | MW-101          | MW-102          | MW-106          | MW-107          |
|                        |                   | Depth: (b)<br>Date: 4/14/2009 | 37<br>4/13/2009 | 43<br>4/13/2009 | 25<br>4/13/2009 | 33<br>4/16/2009 | 32<br>4/13/2009 | 31<br>4/15/2009 | 30<br>4/15/2009 | 45<br>4/13/2009 | 42<br>4/15/2009 |
| 1,1-Dichloroethane     | 4.9               | ND (0.0050)                   | ND (0.0050)     | ND (0.0050)     | 0.0057          | ND (0.0050)     | 0.0012 J        | 0.0056          | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     |
| 1,1-Dichloroethene     | 0.0070            | 0.0027 J                      | ND (0.0050)     | ND (0.0050)     | 0.080           | 0.0050 J        | 0.0044 J        | 0.026           | 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)     | 0.0011 J        | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     |
| cis-1,2-Dichloroethene | 0.070             | 0.0015 J                      | 0.0020 J        | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | 0.0014 J        | 0.0036 J        | 0.0017 J        | 0.0055          | 0.0034 J        |
| Tetrachloroethene      | 0.0050            | 0.080 J                       | 0.032           | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | 0.0028 J        | 0.076           | 0.45            | 0.20            | 0.88 J          |
| Trichloroethene        | 0.0050            | 0.0029 J                      | 0.0012 J        | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | 0.010           | 0.0025 J        | 0.0023 J        | 0.011           |
| Vinyl Chloride         | 0.0020            | ND (0.0020) UJ                | 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) UJ  |

| Constituent            | Critical PCLs (a) | Location:                     |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|------------------------|-------------------|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                        |                   | MW-108                        | MW-109          | MW-110          | MW-111          | MW-112          | MW-113          | MW-114          | MW-115          | MW-116          | MW-118          |
|                        |                   | Depth: (b)<br>Date: 4/14/2009 | 27<br>4/14/2009 | 26<br>4/14/2009 | 27<br>4/14/2009 | 26<br>4/14/2009 | 26<br>4/13/2009 | 27<br>4/13/2009 | 32<br>4/15/2009 | 34<br>4/15/2009 | 27<br>4/14/2009 |
| 1,1-Dichloroethane     | 4.9               | NA                            | NA              | NA              | NA              | NA              | NA              | 0.0050 J        | ND (0.0050)     | 0.0061          | 0.021           |
| 1,1-Dichloroethene     | 0.0070            | 0.29                          | 0.17            | 0.081           | ND (0.0050)     | 0.071           | 0.00086 J       | 0.043           | 1.1             | 0.076 JL        | 0.17            |
| 1,2-Dichloroethane     | 0.0050            | NA                            | NA              | NA              | NA              | NA              | NA              | 0.0033 J        | 0.011           | ND (0.0050)     | 0.0011 J        |
| cis-1,2-Dichloroethene | 0.070             | 0.011                         | 0.14            | 0.025           | 0.014           | 0.039           | ND (0.0050)     | 0.019           | ND (0.0050)     | 0.0070          | 0.020           |
| Tetrachloroethene      | 0.0050            | 0.0015 J                      | 0.035           | 0.0018 J        | 0.0092          | 0.00086 J       | ND (0.0050)     | 0.68            | 0.00068 J       | 0.0034 J        | 0.015 J         |
| Trichloroethene        | 0.0050            | 0.023                         | 0.021           | 0.0047 J        | 0.020           | 0.0035 J        | ND (0.0050)     | 0.083           | 0.0079          | 0.015 J         | 0.051           |
| Vinyl Chloride         | 0.0020            | 0.052 JL                      | 0.0053 JL       | 0.014 JL        | 0.0024 JL       | ND (0.0020)     | ND (0.0020)     | ND (0.0020)     | ND (0.0020)     | ND (0.0020) UJ  | 0.0011 J        |

NOTES:

The reported concentrations are in mg/L.

0.028 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.

NA = Not Analyzed.

NS = Not Sampled.

ND (0.0050) = *Not Detected* at the method quantitation limit given in parentheses.

(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Ground Water PCLs, Table 3, table for TRRP Rule dated March 25, 2009.

(b) The sample depths are reported in feet below ground surface.

(c) Not sampled due to permanganate in well.

J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.

L = Biased Low.

U = Not detected, the SQL is estimated

TABLE 3 (Cont'd)

Summary of Monitor Well Ground Water Data  
First Half 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

| Constituent            | Critical PCLs (a) | Location:           |                 |                 |                |                 |                 |                 |                 |                 |                 |
|------------------------|-------------------|---------------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                        |                   | MW-119              | MW-120          |                 | MW-121         | MW-124          | MW-126          | MW-127          | MW-128          | MW-129          | MW-130          |
|                        |                   | Depth: (b)<br>Date: | 28<br>4/15/2009 | 25<br>4/15/2009 | 25<br>5/4/2009 | 28<br>4/14/2009 | 29<br>4/15/2009 | 32<br>4/13/2009 | 32<br>4/15/2009 | 40<br>4/16/2009 | 35<br>4/15/2009 |
| 1,1-Dichloroethane     | 4.9               | 0.00086 J           | 0.0034 J        | 0.0046 J        | ND (0.0050)    | 0.0045 J        | 0.0013 J        | ND (0.0050)     | ND (0.0050)     | 0.032           | ND (0.0050)     |
| 1,1-Dichloroethene     | 0.0070            | 0.0032 J            | 0.0059          | 0.0083          | 0.090          | 0.016           | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | 0.18            | ND (0.0050)     |
| 1,2-Dichloroethane     | 0.0050            | ND (0.0050)         | ND (0.0050)     | ND (0.0050)     | ND (0.0050)    | 0.00062 J       | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | 0.00085 J       | ND (0.0050)     |
| cis-1,2-Dichloroethene | 0.070             | ND (0.0050)         | 0.0050 J        | 0.0069          | ND (0.0050)    | 0.018           | 0.0014 J        | 0.00065 J       | ND (0.0050)     | 0.0070          | ND (0.0050)     |
| Tetrachloroethene      | 0.0050            | ND (0.0050)         | 0.045           | 0.078           | ND (0.0050) UJ | 0.30            | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | 0.021           | ND (0.0050)     |
| Trichloroethene        | 0.0050            | ND (0.0050)         | 0.0058          | 0.0095          | ND (0.0050)    | 0.046           | ND (0.0050)     | 0.0045 J        | 0.0024 J        | 0.017           | ND (0.0050)     |
| Vinyl Chloride         | 0.0020            | ND (0.0020)         | 0.0018 J        | 0.0024          | ND (0.0020) UJ | 0.0015 J        | 0.0030          | ND (0.0020)     | ND (0.0020)     | ND (0.0020)     | ND (0.0020)     |

| Constituent            | Critical PCLs (a) | Location:           |                 |                 |                 |                 |                 |                 |                |                 |                |
|------------------------|-------------------|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|----------------|
|                        |                   | MW-133              | MW-135          | MW-140          | MW-141          | MW-142 (c)      | MW-143          |                 | MW-144         |                 | MW-145         |
|                        |                   | Depth: (b)<br>Date: | 30<br>4/13/2009 | 25<br>4/14/2009 | 25<br>4/14/2009 | 30<br>4/13/2009 | 33<br>4/14/2009 | 24<br>4/13/2009 | 24<br>5/4/2009 | 25<br>4/13/2009 | 25<br>5/4/2009 |
| 1,1-Dichloroethane     | 4.9               | 0.0024 J            | 0.0022 J        | 0.013           | 0.032           | NS              | ND (0.0050)     | ND (0.0050)     | ND (0.0050)    | 0.00071 J       | ND (0.0050)    |
| 1,1-Dichloroethene     | 0.0070            | 0.0063              | 0.0039 J        | 0.085           | 0.13            | NS              | 0.010           | 0.0097          | 0.031          | 0.041           | ND (0.0050)    |
| 1,2-Dichloroethane     | 0.0050            | ND (0.0050)         | ND (0.0050)     | ND (0.0050)     | 0.00050 J       | NS              | ND (0.0050)     | ND (0.0050)     | ND (0.0050)    | ND (0.0050)     | ND (0.0050)    |
| cis-1,2-Dichloroethene | 0.070             | 0.00059 J           | 0.0024 J        | 0.0017 J        | 0.0071          | NS              | ND (0.0050)     | ND (0.0050)     | ND (0.0050)    | ND (0.0050)     | ND (0.0050)    |
| Tetrachloroethene      | 0.0050            | ND (0.0050)         | 0.022 J         | 0.00060 J       | 0.0029 J        | NS              | ND (0.0050)     | ND (0.0050)     | ND (0.0050)    | ND (0.0050)     | ND (0.0050)    |
| Trichloroethene        | 0.0050            | ND (0.0050)         | 0.0021 J        | 0.00070 J       | 0.0025 J        | NS              | 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) UJ  | 0.0024          | 0.0072          | NS              | ND (0.0020)     | ND (0.0020)     | ND (0.0020)    | ND (0.0020)     | ND (0.0020)    |

| Constituent            | Critical PCLs (a) | Location:           |                 |                 |                 |                 |                 |                 |
|------------------------|-------------------|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                        |                   | MW-149              | MW-166          | MW-167          | MW-169          | MW-02(C)        | MW-02(S)        | MW-03(S)        |
|                        |                   | Depth: (b)<br>Date: | 27<br>4/14/2009 | 35<br>4/16/2009 | 38<br>4/16/2009 | 35<br>4/16/2009 | 23<br>4/13/2009 | 23<br>4/16/2009 |
| 1,1-Dichloroethane     | 4.9               | ND (0.0050)         | 0.0023 J        | 0.0041 J        | ND (0.0050)     | NA              | ND (0.0050)     | ND (0.0050)     |
| 1,1-Dichloroethene     | 0.0070            | ND (0.0050)         | 0.030           | 0.034           | 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              | ND (0.0050)     | ND (0.0050)     |
| cis-1,2-Dichloroethene | 0.070             | 0.0012 J            | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     |
| Tetrachloroethene      | 0.0050            | 0.011               | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     | ND (0.0050)     |
| Trichloroethene        | 0.0050            | 0.0030 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)     |

NOTES:

The reported concentrations are in mg/L.

0.028 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.

NA = Not Analyzed.

NS = Not Sampled.

ND (0.0050) = *Not Detected* at the method quantitation limit given in parentheses.

(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Ground Water PCLs, Table 3, table for TRRP Rule dated March 25, 2009.

(b) The sample depths are reported in feet below ground surface.

(c) Not sampled due to permanganate in well.

J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.

L = Biased Low.

U = Not detected, the SQL is estimated.



TABLE 4

Summary of Surface Water Data  
First Half 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

| Constituent            | Critical | 80% Critical | Location: | SWD-12         | SWD-14         | SWD-15      |
|------------------------|----------|--------------|-----------|----------------|----------------|-------------|
|                        | PCLs (a) | PCL (a)      |           | Date:          | 4/14/2009      | 4/14/2009   |
| 1,1-Dichloroethane     | 5.13     | 4.10         |           | 0.0024 J       | 0.0016 J       | 0.0021 J    |
| 1,1-Dichloroethene     | 0.06     | 0.05         |           | 0.0017 JL      | 0.0043 JL      | 0.029 JL    |
| 1,2-Dichloroethane     | 0.554    | 0.443        |           | ND (0.0050)    | ND (0.0050)    | ND (0.0050) |
| cis-1,2-Dichloroethene | 9.36     | 7.49         |           | ND (0.0050)    | 0.00071 J      | 0.0023 J    |
| Tetrachloroethene      | 0.790    | 0.632        |           | ND (0.0050) UJ | 0.00079 J      | 0.0013 J    |
| Trichloroethene        | 1.110    | 0.888        |           | ND (0.0050) UJ | ND (0.0050) UJ | 0.0046 J    |
| Vinyl Chloride         | 0.0336   | 0.0269       |           | ND (0.0020) UJ | ND (0.0020) UJ | 0.0012 J    |

| Constituent            | Critical | 80% Critical | Location: | SWD-17         | SWD-18         | SWD-20         |
|------------------------|----------|--------------|-----------|----------------|----------------|----------------|
|                        | PCLs (a) | PCL (a)      |           | Date:          | 4/14/2009      | 4/14/2009      |
| 1,1-Dichloroethane     | 5.13     | 4.10         |           | ND (0.0050)    | ND (0.0050)    | ND (0.0050)    |
| 1,1-Dichloroethene     | 0.06     | 0.05         |           | 0.0050 JL      | 0.0025 JL      | ND (0.0050)    |
| 1,2-Dichloroethane     | 0.554    | 0.443        |           | ND (0.0050)    | ND (0.0050)    | ND (0.0050)    |
| cis-1,2-Dichloroethene | 9.36     | 7.49         |           | 0.0017 J       | 0.00080 J      | ND (0.0050)    |
| Tetrachloroethene      | 0.790    | 0.632        |           | 0.011 J        | 0.0063 J       | ND (0.0050) UJ |
| Trichloroethene        | 1.110    | 0.888        |           | 0.0010 J       | ND (0.0050) UJ | ND (0.0050)    |
| Vinyl Chloride         | 0.0336   | 0.0269       |           | ND (0.0020) UJ | ND (0.0020) UJ | ND (0.0020) UJ |

## 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.

L = Biased Low.

U = Not detected, the SQL is estimated

(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.