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Northern and Central California, Nevada, and Utah
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Prepared For

DEPARTMENT OF THE NAVY
Naval Facilities Engineering Command, Southwest Division
San Diego, California

FINAL
JANUARY TO MARCH 2001
SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT
FOR PARCEL B
HUNTERS POINT SHIPYARD
SAN FRANCISCO, CALIFORNIA

DS.0270.17027

June 1, 2001

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Dear BCT members:

Enclosure (1) is provided for your records regarding the sixth quarterly groundwater event for Parcel B, Hunters Point Shipyard. All comments received on the draft report have been incorporated into this document.

Enclosure (2) is provided for your records regarding the Navy responses to agency comments on the final fifth quarterly groundwater sampling report and the draft sixth quarterly groundwater sampling report for Parcel B.

Should you have any questions concerning this information, please contact me at (619) 532-0913.

Sincerely,

RICHARD G. MACH JR., P.E.
BRAC Environmental Coordinator
By direction of the Commander

Enclosure: 1. Final January to March 2001, Sixth Quarterly Groundwater Sampling Report, for Parcel B, Hunters Point Shipyard, June 1, 2001

2. Responses to Agency Comments on Final October to December 2000 Fifth Quarterly Sampling Report, and the Draft January to March 2001 Sixth Quarterly Sampling Report

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ABBREVIATIONS AND ACRONYMS

BCT	Base Realignment and Closure (BRAC) Cleanup Team
btoc	Below top of casing
CA	California
CAP	Corrective action plan
CLP	Contract Laboratory Program
DCE	Dichloroethene
DI	Deionized
EPA	U.S. Environmental Protection Agency
HGAL	Hunters Point Shipyard groundwater ambient level
HPAL	Hunters Point Shipyard ambient level
HPS	Hunters Point Shipyard
IR	Installation Restoration
LUFT	California Leaking Underground Fuel Tank
µg/L	Microgram per liter
mL	Milliliter
mL/min	Milliliter per minute
MP	Micropurge
MSL	Mean sea level
MS/MSD	Matrix spike/matrix spike duplicate
NA	Not applicable
Navy	U.S. Department of the Navy
NAWQC	National Ambient Water Quality Criteria
ND	Not detected
NS	Not sampled
PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
POC	Point of compliance
PP	Peristaltic pump
PRC	PRC Environmental Management, Inc.
Q1	First quarter of first year of groundwater monitoring
Q2	Second quarter of first year of groundwater monitoring
Q3	Third quarter of first year of groundwater monitoring
Q4	Fourth quarter of first year of groundwater monitoring
Q5	First quarter of second year of groundwater monitoring
Q6	Second quarter of second year of groundwater monitoring
Q7	Third quarter of second year of groundwater monitoring

ABBREVIATIONS AND ACRONYMS (Continued)

QAPP	Quality assurance project plan
QA/QC	Quality assurance and quality control
RAMP	Remedial action monitoring plan
RI	Remedial investigation
ROD	Record of decision
RPD	Relative percent difference
SOP	Standard operating procedure
SVOC	Semivolatile organic compound
TCE	Trichloroethene
TIZ	Tidally influenced zone
TOC	Top of casing
TPH	Total petroleum hydrocarbons
TPH-d	Total petroleum hydrocarbons as diesel
TPH-g	Total petroleum hydrocarbons as gasoline
TtEMI	Tetra Tech EM Inc.
VOC	Volatile organic compound

1.0 INTRODUCTION

Tetra Tech EM Inc. (TtEMI) has prepared this quarterly groundwater sampling report for the second quarter of the second year of groundwater monitoring (Q6) at Parcel B of Hunters Point Shipyard (HPS) in San Francisco, California, for the U.S. Department of the Navy (Navy), Naval Facilities Engineering Command, Southwest Division. Q6 groundwater monitoring covers the period from January through March 2001. Fieldwork was conducted on January 15 through 19, 2001, in accordance with the Parcel B Remedial Action Monitoring Plan (RAMP) (TtEMI 1999). Figure 1 provides a facility location map showing Parcel B.

During the remedial investigation (RI) of Parcel B (PRC Environmental Management, Inc. [PRC] 1996a), approximately 98 groundwater monitoring wells at Parcel B were sampled. Of these wells, 16 were included in the Parcel B RAMP. In addition, 11 new wells were installed in accordance with the RAMP. Four of the new wells replace decommissioned wells IR07MWS-2, IR07MWS-4, IR10MW31A1, and IR18MW21A; the four new wells retain the same well identification numbers as documented in the RAMP.

The original 27 RAMP monitoring wells were grouped into six categories. The categories and number of wells in each category are as follows:

- **Point-of-Compliance (POC) Monitoring Wells:** Eight wells located near the high-tide line of the tidally influenced zone (TIZ), which is the POC
- **Sentinel Wells:** Seven wells located near the inland edge of the approximate 5-year buffer zone
- **Post-Remedial Action Monitoring Wells:** Five wells located within the TIZ to monitor the effectiveness of source control at Installation Restoration (IR) sites
- **Volatile Organic Compound (VOC) Monitoring Wells:** Four wells located near IR-10 to monitor the potential degradation of trichloroethene (TCE)
- **On- and Off-Site Migration Monitoring Wells:** Two wells along the western Parcel B boundary to evaluate on- and off-site migration of contaminants in A-aquifer groundwater
- **Utility Line Monitoring Well:** One well located near IR-06 to monitor groundwater at the utility line

In addition, the wells discussed below have been added or deleted from the RAMP program since its inception during the first quarter of the first year of groundwater monitoring (Q1) up until the Q6 sampling event.

- **Post-Remedial Action Monitoring Wells:** Two wells (IR07MW21A1 and IR07MW25A) have been decommissioned in the process of completing the soil remedial action activities.
- **VOC Monitoring Wells:** Three existing wells (IR10MW12A, IR10MW13A1, and IR10MW14A) were added to the program in the fifth quarter of groundwater monitoring (Q5), and a new well (IR25MW37A) was installed and sampled for the first time in Q6.

All RAMP wells are sampled quarterly except for the sentinel wells, which are sampled bi-annually; the sentinel wells were not sampled during Q6.

During Q6, two RAMP wells, VOC well IR10MW14A and sentinel and VOC well IR25MW17A, were not sampled because they were within 3 feet of open excavations that were filled with rainwater to a depth of 8 feet below ground surface, which is above the top of the well screens. Therefore, water collected from these wells would not likely have been formation water. These wells may have to be abandoned in the future.

Figure 2 shows the IR site locations at Parcel B and the locations of the original 27 RAMP wells, including wells that were subsequently decommissioned, and also wells that have been added to the program.

The groundwater monitoring program for Parcel B has the following purposes:

- Ensure that "trigger-level" concentrations are not exceeded along the inland edge of the TIZ (Trigger levels are concentrations at which additional actions may be necessary.)
- Assess the effect of remedial actions involving contaminated soil on contaminant levels in A-aquifer groundwater at IR-07
- Evaluate the migration of hazardous substances in A-aquifer groundwater from IR-06 and IR-10 to San Francisco Bay
- Evaluate the on- and off-site migration of hazardous substances in A-aquifer groundwater from the area northwest of IR-07 and IR-18
- Monitor the potential degradation of TCE to by-products (including vinyl chloride) in A-aquifer groundwater at IR-10 and IR-24

Section 2.0 provides an overview of the sampling procedures and methods used during the Q6 sampling event. Section 3.0 discusses the results from this sampling event as well as data quality. Section 4.0 presents conclusions based on Q6 results. References used to prepare this report are listed at the end of the report. Tables and figures, respectively, are presented after the references. Appendix A summarizes the analytical results from the sampling event and compares the concentrations with trigger levels. Appendices B and C present monitoring well sampling sheets and chain-of-custody records for the sampling event, respectively. Appendix D includes data validation reports for the Q6 sampling event. Appendix E presents the field duplicate pair results.

2.0 GROUNDWATER SAMPLING PROCEDURES AND METHODS

This section discusses the three basic RAMP tasks at Parcel B: (1) groundwater level measurement, (2) groundwater sampling, and (3) groundwater sample laboratory analysis. Groundwater samples were collected from 20 monitoring wells, of which eighteen were RAMP wells (one well is both a point-of-compliance [POC] and a volatile well). Two volatiles wells (IR10MW12A and IR10MW13A1) added to the program in the fifth quarter were also sampled, in addition to the new well IR25MW37A that was installed and sampled for the first time this quarter. Groundwater level measurements were taken from all RAMP wells plus eleven non-RAMP wells in order to obtain representative groundwater flow patterns at Parcel B. As noted in Section 1.0, groundwater level measurements and groundwater samples were not collected from RAMP wells IR10MW14A (VOC well) or IR25MW17A (sentinel and VOC well) because nearby excavations may have compromised the integrity of the wells.

2.1 GROUNDWATER LEVEL MEASUREMENTS

Groundwater level measurements were collected on January 15, 2001, in accordance with the Parcel B RAMP (TtEMI 1999) and the TtEMI standard operating procedure (SOP) for groundwater sampling (SOP No. 10, Revision 3), which is included in the Parcel B RAMP. Depth to water in each well was measured using an electronic water-level indicator, and the total well depth was measured using a weighted steel tape. Groundwater level measurements were collected during a single day within a 3-hour period starting at low tide in order to minimize tidal influence upon measurements. A summary of the depth to water measurements and calculated groundwater elevations is provided in Table 1.

2.2 GROUNDWATER SAMPLING PROCEDURES

Groundwater samples were collected during Q6 in accordance with the RAMP and the TtEMI SOP for groundwater sampling (SOP No. 10, Revision 3), which is included in the RAMP (TtEMI 1999). A summary of the wells sampled and the analyses performed is provided in Table 2. The purging and sampling methods used in each of the monitoring wells sampled during Q6 are summarized in Table 3.

The RAMP requires that approximately 10 percent of the monitoring wells be sampled using low-flow sampling procedures. A peristaltic pump was used to conduct low-flow groundwater sampling at selected monitoring wells. The wells were purged at approximately 250 milliliters per minute (mL/min). During purging, the discharge water was monitored for dissolved oxygen, pH, oxidation-reduction potential, temperature, specific conductance, and turbidity. Once the parameters had stabilized within the acceptable criteria specified in the quality assurance project plan (QAPP) (see Table 2 of SOP No.10) (TtEMI 2000b), the flow rate was reduced to approximately 100 mL/min and the parameters were

monitored for approximately 3 additional minutes to ensure that the parameters remained within acceptable ranges. The discharge line was then disconnected from the in-line monitoring system, and a representative groundwater sample was collected directly from the purge hose.

The remaining wells were purged of a volume of water equivalent to three well volumes or until the well ran dry, whichever occurred first. This procedure ensured that stagnant water was removed from the well and that a groundwater sample representative of aquifer conditions was collected. Disposable bailers were used to purge the monitoring wells. The groundwater temperature, pH, turbidity, specific conductance, dissolved oxygen, and salinity were measured before purging and then at regular intervals at a rate of two or more times per well casing volume of water removed. Parameters were recorded on monitoring well sampling sheets, which are included in Appendix B of this report. One sampling crew recorded pH values of less than 5 for several wells. These values were probably obtained because a clear protective band was left on the probe due to the field team's unfamiliarity with the probe type. In future events, the field team leader will instruct all sampling crews in the use of the specific type of pH meter; field teams will be briefed on the proper use of the specific probe at the field kick-off meeting.

As soon as possible after purging was complete, a groundwater sample was collected using a disposable bailer. When a well was purged dry before three well casing volumes had been removed, VOC samples were collected after a sufficient volume of groundwater had entered the well to allow sample collection in accordance with SOP No. 10 (TtEMI 2000b). The remaining samples were collected as soon as the well had recovered. Samples were collected in order of decreasing sensitivity to volatilization or to oxidation-reduction reactions in the preferred order that is summarized in Table 3 of SOP No. 10 (TtEMI 2000b).

Groundwater samples analyzed for soluble metals were filtered in the field. The filtering procedure consisted of attaching a filter to the outlet of the bailer and decanting the sample directly into the sample bottle. Groundwater samples collected during low-flow purging for total metals were not filtered and were collected directly into laboratory-cleaned, nitric acid-preserved, 500-milliliter (mL) polyethylene bottles.

Water-level sounders used during groundwater sampling activities were decontaminated before each use by washing the probe and the portion of the cable directly above the probe with deionized (DI) water and wiping it clean with a disposable paper towel. Submersible pumps were decontaminated before each use by washing the exterior of each pump with DI water and Liquinox soap solution and then pumping the solution of DI water and Liquinox soap through the pump. The pump was then flushed with DI water. New polyethylene tubing for the submersible and peristaltic pumps was used at each well; therefore, tubing decontamination was not necessary.

Purge water from the wells was placed in U.S. Department of Transportation-approved 55-gallon drums and transferred to holding tanks located at the investigation-derived waste area. Purge water from Q6 is stored in a Baker tank adjacent to Pump Station A on HPS. The water will be discharged into Pump Station A, which discharges to the Southeast Water Pollution Control Plant (TtEMI 1999), after it is tested and meets the discharge criteria established by the City of San Francisco. Historically at HPS, purge water from groundwater sampling events has met the city's discharge requirements.

2.3 LABORATORY ANALYSES

Groundwater samples scheduled for analysis of hexavalent chromium were sent to Curtis & Tompkins, Ltd., in Berkeley, California. The remaining samples were sent to Southwest Laboratory of Oklahoma, Inc. in Broken Arrow, Oklahoma. These laboratories are certified by the State of California and the Naval Facilities Engineering Service Center. The complete chain-of-custody record forms that accompanied the samples collected during Q6 are presented in Appendix C. Groundwater samples were analyzed using the following analytical methods, which are discussed in detail in the basewide QAPP (PRC 1996b):

- **U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP) VOCs** (EPA OLM04.2): POC, post-remedial-action, on- and off-site migration, and utility line monitoring wells
- **EPA CLP Low-Level VOCs** (EPA OLC02.1): VOC monitoring wells
- **CLP Metals and Hexavalent Chromium** (EPA ILM04.0/EPA 7196): POC, post-remedial-action, on- and off-site migration, and utility line monitoring wells
- **Total Petroleum Hydrocarbons (TPH) as Diesel** (California Leaking Underground Fuel Tank [CA LUFT] and EPA 8015): POC, post-remedial-action, on- and off-site migration, and utility line monitoring wells
- **TPH as Gasoline** (CA LUFT and EPA 8015): POC, post-remedial-action, on- and off-site migration, and utility line monitoring wells
- **CLP Semivolatile Organic Compounds (SVOC)** (EPA OLM04.2): On- and off-site migration and utility line monitoring wells
- **CLP Pesticides and Polychlorinated Biphenyls (PCB)** (EPA OLM04.2 modified): On- and off-site migration and utility line monitoring wells

3.0 Q6 GROUNDWATER SAMPLING RESULTS

This section discusses Q6 groundwater levels, analytical results, data quality, and deviations from the QAPP or Parcel B RAMP. As discussed in Section 2.0, groundwater samples were collected from 18 RAMP

wells. Groundwater level measurements were collected from all RAMP wells plus several non-RAMP wells in order to obtain additional data about groundwater flow patterns at Parcel B.

3.1 GROUNDWATER LEVELS

Groundwater level elevation data are collected during each quarterly sampling event. Q6 groundwater levels were measured on January 15, 2001. Groundwater level measurement procedures are discussed in Section 2.1 of this report.

Water level measurements are summarized in Table 1, and groundwater elevation contours for the A-aquifer in Parcel B generated from Q6 groundwater elevations measured on January 15, 2001, are provided in Figure 3. Groundwater generally flows northeast toward San Francisco Bay as indicated by the flow arrows in Figure 3. This finding is consistent with groundwater flow direction during previous sampling events. Water levels were measured in the following non-RAMP wells during Q6: IR06MW22A, IR06MW32A, IR06MW40A, IR06MW46A, IR10MW29A1, IR10MW32A, IR20MW17A, IR25MW16A, IR26MW43A, PA24MW02A, and PA50MW02A. Water levels were measured in these wells to provide more information about groundwater flow in the eastern portion of Parcel B.

According to the groundwater elevation data, groundwater flow in the northwestern part of Parcel B (IR-07) is north-northeast toward the bay. In the central portion of Parcel B, the groundwater flow direction is also interpreted to be north-northeast, also toward the bay. The horizontal hydraulic gradient is steeper in this area than to the west, which may be due to the presence of seawalls along the shoreline or to variations in artificial fill materials. A groundwater mound is present in the area underlying IR-20 and IR-26, as evidenced by groundwater elevations measured at IR20MW17A and IR26MW41A. In the vicinity of the southern reach of IR-26, a radial flow pattern is interpreted from groundwater elevations measured in three wells.

At monitoring well IR25MW16A where groundwater mounding was noted during Q5, the water level elevation was lower (1.97 feet above mean sea level [MSL] based on National Geodetic Vertical Datum 1929) during Q6 such that no mounding is apparent at that location. Water line leak repairs were completed by the Navy in the vicinity of this well in January 2001; the lower elevation at IR25MW16A may represent the dissipation of mounding following the repairs. The absence of mounding may be confirmed during the seventh quarterly monitoring event (Q7).

During the next quarter (Q7), water levels will be measured in the same wells as during this quarter as well as in some additional wells to be determined.

A colloidal borescope study combined with a water level study were conducted in March 2001 at four wells near the western boundary of Parcel B to provide more information about groundwater flow direction in that area. The results of the study may be documented in subsequent quarterly reports or in an abbreviated technical memorandum.

3.2 ANALYTICAL RESULTS

This section discusses Q6 analytical results for each type of well sampled and for low-flow groundwater sampling. Analytical results are summarized in Appendix A of this report. The sampling event took place in January during the rainy season.

The trigger levels used for each well type are summarized in Table 4, and chemical-specific trigger levels for each well type are compared in Table 5.

3.2.1 POC Monitoring Wells

Eight POC monitoring wells were sampled during the Q6 event. These wells are located near the inland edge of the TIZ. Groundwater trigger levels were not exceeded in these wells during this sampling event.

3.2.2 Sentinel Monitoring Wells

Sentinel monitoring wells were not sampled during the Q6 event.

3.2.3 Post-Remedial Action Monitoring Wells

Four post-remedial action monitoring wells were sampled during the Q6 event. The wells are located near remediation areas 7-1, 7-3, 7-4, and 7-5. Groundwater trigger levels were not exceeded in these wells during the Q6 sampling event.

3.2.4 VOC Monitoring Wells

Four VOC monitoring wells were sampled during the Q6 event. A summary of the historical detections of TCE; cis-1,2-dichloroethene (DCE); trans-1,2-DCE; total 1,2-DCE; and vinyl chloride in groundwater near IR-10 is presented in Table 6.

TCE was detected in VOC monitoring wells IR10MW13A1, IR10MW28A, and IR10MW33A at concentrations of 5, 32, and 13 micrograms per liter (µg/L), respectively. In IR10MW13A1 and IR10MW33A, cis-1,2-DCE was detected at concentrations of 8 and 10 µg/L, respectively. In IR10MW13A1, trans-1,2-DCE was detected at a concentration of 0.6 µg/L. Vinyl chloride was not

detected in any of the VOC monitoring wells at quantitation limits of 0.5 and 1 µg/L. These detections are consistent with historical results, indicating plume stability. Groundwater trigger levels for VOCs were not exceeded during this sampling event.

3.2.5 On- and Off-Site Migration Monitoring Wells

Two on- and off-site migration monitoring wells were sampled during the Q6 event. These wells are located along the western boundary of Parcel B. Trigger levels in these two monitoring wells were not exceeded.

3.2.6 Utility Line Monitoring Well

One utility line monitoring well was sampled during the Q6 event. Groundwater trigger levels were not exceeded during this sampling event.

3.2.7 Low-Flow Groundwater Sampling

The Parcel B RAMP states the following (TtEMI 1999):

> For the first year of RAMP well sampling, about 10 percent of the RAMP wells will be sampled using low-flow (minimal drawdown) groundwater sampling procedures and samples for metal analysis will not be filtered. The filtered verses unfiltered metal results will be assessed after 1-year (four quarters) to determine whether to continue collecting unfiltered groundwater samples.

During Q1 through Q3, peristaltic pumps were used to purge and sample groundwater at monitoring wells where low-flow groundwater sampling procedures were applied. Both filtered and unfiltered samples were collected using peristaltic pumps.

After Q3, the sampling procedure was changed at the request of the Base Realignment and Closure (BRAC) Cleanup Team (BCT) during a June 29, 2000, meeting. During Q6, peristaltic pumps were used to purge and sample groundwater at monitoring wells where low-flow groundwater sampling procedures were applied. After collection of unfiltered samples, the well was purged again using traditional procedures (submersible pumps or disposable bailers), and a filtered sample for metals analysis was then collected. Analytical results for unfiltered and filtered metals from wells IR07MWS-4, IR10MW31A1, and PA50MW01A are summarized in Table 7.

The low-flow sampling procedure used at wells IR07MWS-4, IR10MW31A1, and PA50MW01A will be followed throughout Year 2 of the RAMP on two to three wells per quarter. Evaluation of the filtered and unfiltered data will be presented in the Year 2 annual report.

3.3 DATA QUALITY

Standard quality assurance and quality control (QA/QC) techniques were implemented in the field and in the laboratory to ensure the quality of data collected during this sampling event. Field QA/QC consisted of collecting field duplicate pairs, equipment rinsate blanks, trip blanks, and matrix spike/matrix spike duplicates (MS/MSD) in accordance with the Parcel B RAMP QAPP (TtEMI 2000b). Four field duplicate pairs were collected for the 18 wells sampled, meeting the minimum duplicate sampling frequency of 10 percent as specified in the QAPP. The field duplicate results for monitoring wells IR07MW20A1, IR10MW12A, IR18MW21A, and PA50MW01A (micropurge) were screened against the trigger levels and are included in Appendix A. Three equipment rinsate blanks and two source blanks were collected during the 5-day sampling event. Trip blanks containing analyte-free water were prepared by the laboratory and included in each of eight coolers containing samples for CLP VOC and TPH as gasoline analyses. Two MS/MSD samples were collected to meet QAPP requirements.

EPA collected split samples at several monitoring wells sampled by the Navy during the previous event (Q5). When EPA submits the split sample comparison, it will be included in the next quarterly monitoring report.

ETHIX of Modesto, California, validated the data in accordance with procedures presented in the following documents:

- "USEPA CLP National Functional Guidelines for Organic Data Review" (EPA 1999)
- "USEPA CLP National Functional Guidelines for Inorganic Data Review" (EPA 1994)
- "PRC Data Validation Guidelines for CLP Organic Analyses" (PRC 1997a)
- "PRC Data Validation Guidelines for CLP Inorganic Analyses" (PRC 1997b)
- "PRC Data Validation Guidelines for non-CLP Organic Analyses" (PRC 1997c)
- "PRC Data Validation Guidelines for non-CLP Inorganic and Physical Analyses" (PRC 1997d)
- "TtEMI CLEAN II Analytical Services Statement of Work" (TtEMI 2000a)

Independent data validation reports prepared by ETHIX are included in Appendix D. The reports evaluate QA/QC criteria associated with the data for the following parameters:

- Sample collection, holding times, and blank sample analytical results to assess sample contamination and representativeness

- Sample duplicate and MS/MSD results to assess precision
- Surrogate spike, laboratory control sample, and MS/MSD results to assess accuracy

Some results were qualified as estimated because of analytical problems. No data were rejected. An overall assessment indicates good data quality of high usability.

Relative percent differences (RPD) for field duplicate pair results are presented in Appendix E. RPDs exceeded the suggested ±25% guideline for the following analytes: the dissolved metals beryllium, cadmium, chromium, and sodium in well IR07MW20A1; and the pesticide heptachlor from well IR18MW21A. Because the concentrations of beryllium, cadmium, chromium, and heptachlor in these field duplicate pairs are near the detection limit, the RPDs do not indicate precision problems. The cause of the discrepancy in the results for sodium (1,650,000 and 8,070,000 µg/L) in the sample collected from IR07MW20A1 is not known.

A QC summary report for Year 2 summarizing the data quality results will be presented in the Year 2 annual report.

3.4 DEVIATIONS FROM THE QAPP OR PARCEL B RAMP

The Q6 sampling event was conducted in accordance with procedures specified in the QAPP and Parcel B RAMP (TtEMI 2000b and 1999).

4.0 CONCLUSIONS

The Q6 sampling event took place in January 2001 during the rainy season. The trigger levels were not exceeded at any well.

The low concentrations (less than 40 µg/L) of TCE and 1,2-DCE detected during Q6 in wells around the VOC plumes in IR-10 and IR-24 and the nondetected results for vinyl chloride were consistent with historical data.

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TABLES

TABLE 1

SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS TAKEN ON JANUARY 15, 2001

Monitoring Well No.	Depth to Groundwater (feet btoc)	TOC Elevation (feet above MSL)	Groundwater Level Elevation (feet above MSL)
IR06MW22A*	5.22	10.00	4.78
IR06MW32A*	5.41	9.90	4.49
IR06MW40A*	8.08	10.08	2.00
IR06MW42A	10.25	11.89	1.64
IR06MW45A	8.87	9.92	1.05
IR06MW46A*	5.10[b]	9.46	4.36
IR07MW19A	8.93	9.56	0.63
IR07MW20A1	8.95	9.26	0.31
IR07MW21A1	DECOMISSIONED		
IR07MW23A	13.01	15.76	2.75
IR07MW24A	11.30	13.50	2.20
IR07MW25A	DECOMISSIONED		
IR07MW26A	11.21	12.62	1.41
IR07MW27A	12.94	16.10	3.16
IR07MW28A	9.23	11.92	2.69
IR07MWS-2	10.58	12.62	2.04
IR07MWS-4	13.66	15.83	2.17
IR10MW12A	6.14	9.08	2.94
IR10MW13A1	7.49	9.92	2.43
IR10MW14A	NOT MEASURED[a]		
IR10MW28A	9.73	13.57	3.84
IR10MW29A1*	NOT MEASURED[a]		
IR10MW31A1	10.01	10.29	0.28
IR10MW32A*	7.30	9.77	2.47
IR10MW33A	7.40	10.17	2.77
IR18MW21A	13.91	17.56	3.65
IR20MW17A*	7.08[b]	10.51	3.43
IR25MW16A*	9.05	11.02	1.97
IR25MW17A	NOT MEASURED[a]		
IR25MW37A	6.11	10.09	3.98
IR26MW41A	5.98	10.15	4.17
IR26MW43A*	6.11	7.07	0.96
IR26MW45A	6.55	8.25	1.70

TABLE 1 (Continued)

SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS TAKEN ON JANUARY 15, 2001

Monitoring Well No.	Depth to Groundwater (feet btoc)	TOC Elevation (feet above MSL)	Groundwater Level Elevation (feet above MSL)
IR46MW37A	7.45	9.58	2.13
IR61MW05A	7.26	10.11	2.85
PA24MW02A*	9.00	9.46	0.46
PA50MW01A	7.77	9.18	1.41
PA50MW02A*	7.45[b]	7.76	0.31
UT03MW11A	7.00[b]	9.94	2.94

Notes:

a Groundwater level measurement not taken because of compromised well integrity or lack of access (inside active excavation or remediation zone)

b Vault submerged; however, well cap was tight

* Well not included in RAMP analytical program but included in groundwater level measurements program to assist in contouring

btoc Below top of casing
MSL Mean sea level
RAMP Remedial Action Monitoring Plan
TOC Top of casing

TABLE 2

SUMMARY OF WELLS SAMPLED AND ANALYSES PERFORMED

Monitoring Well Type	Monitoring Well No.	CLP VOC (OLM04.2)	CLP Metals (ILM04.0)	Hexavalent Chromium (EPA 7196A)	TPH-d (LUFT and EPA 8015)	TPH-g (LUFT and EPA 8015)	CLP SVOC (OLM04.2)	CLP Pesticides and PCBs (OLM04.2 Modified)	CLP Low-Level VOC (OLC02.1)
Point-of-Compliance	IR07MW19A	X	X	X	X	X			
	IR07MWS-2	X	X	X	X	X			
	IR07MWS-4	X	X	X	X	X			
	IR10MW31A1		X	X	X	X			X
	IR26MW41A	X	X	X	X	X			
	IR26MW45A	X	X	X	X	X			
	IR46MW37A	X	X	X	X	X			
	PA50MW01A		X	X	X	X			X
Post-Remedial Action	IR07MW20A1	X	X	X	X	X			
	IR07MW24A	X	X	X	X	X			
	IR07MW26A	X	X	X	X	X			
VOC	IR10MW12A								X
	IR10MW13A1								X
	IR10MW33A								X
	IR25MW37A								X
On- and Off-Site Migration	IR07MW28A	X	X	X	X	X	X	X	
	IR18MW21A	X	X	X	X	X	X	X	
Utility Line	IR06MW42A	X	X	X	X	X	X	X	
Sentinel/VOC	IR06MW45A								X
	IR10MW28A								X

Notes:

CLP Contract Laboratory Program
EPA U.S. Environmental Protection Agency
LUFT California Leaking Underground Fuel Tank
PCB Polychlorinated biphenyl
SVOC Semivolatile organic compound
TPH-d Total petroleum hydrocarbons as diesel
TPH-g Total petroleum hydrocarbons as gasoline
VOC Volatile organic compound

TABLE 3

SUMMARY OF SAMPLES COLLECTED DURING Q6

Sample No.	Sample Description	Sample Type	Date Sampled	Time Sampled	Purging/ Sampling Method
0103G001	Trip Blank	Field QC	16-Jan-01	7:00	NA
0103F001	Trip Blank	Field QC	16-Jan-01	08:20	NA
0103F002	Source Blank	Field QC	16-Jan-01	09:35	DB/DB
0103F003	Source Blank	Field QC	16-Jan-01	09:45	DB/DB
0103G002	IR06MW42A	Groundwater	16-Jan-01	10:00	DB/DB
0103F004	Equipment Blank[a]	Field QC	16-Jan-01	11:05	NA
0103G004	IR07MW20A1	Groundwater	16-Jan-01	12:00	DB/DB
0103G005	IR07MW20A1	Field Duplicate	16-Jan-01	12:30	DB/DB
0103G006	IR07MW19A	MS/MSD	16-Jan-01	13:15	DB/DB
0103G003	IR06MW45A	Groundwater	16-Jan-01	14:00	DB/DB
0103H001	Trip Blank	Field QC	17-Jan-01	07:00	NA
0103F005	Trip Blank	Field QC	17-Jan-01	08:10	NA
0103F006	PA50MW01A	Groundwater	17-Jan-01	09:30	PP (MP)/PP
0103H002	IR07MWS-2	Groundwater	17-Jan-01	09:40	DB/DB
0103F007	PA50MW01A	Field Duplicate	17-Jan-01	10:05	PP (MP)/PP
0103H003	IR46MW37A	Groundwater	17-Jan-01	10:55	DB/DB
0103F008	IR07MWS-4	Groundwater	17-Jan-01	11:20	PP (MP)/PP
0103H004	IR07MW26A	Groundwater	17-Jan-01	11:50	DB/DB
0103H005	IR07MWS-4	Groundwater	17-Jan-01	12:40	DB/DB
0103H006	Equipment Blank[b]	Field QC	17-Jan-01	13:30	NA
0103F009	IR10MW31A1	Groundwater	17-Jan-01	13:45	PP (MP)/PP
0103H007	Trip Blank	Field QC	18-Jan-01	09:00	NA
0103F010	Trip Blank	Field QC	18-Jan-01	10:20	NA
0103H008	IR18MW21A	Groundwater	18-Jan-01	11:20	DB/DB
0103H009	IR18MW21A	Field Duplicate	18-Jan-01	11:45	DB/DB
0103H010	IR10MW12A	Groundwater	18-Jan-01	12:35	DB/DB
0103F011	PA50MW01A	Groundwater	18-Jan-01	12:45	DB/DB
0103H011	IR10MW12A	Field Duplicate	18-Jan-01	12:50	DB/DB
0103F012	IR10MW28A	Groundwater	18-Jan-01	13:15	DB/DB
0103H012	IR10MW13A1	Groundwater	18-Jan-01	13:25	DB/DB
0103F013	IR07MW28A	Groundwater	18-Jan-01	14:25	DB/DB
0103H013	IR26MW41A	Groundwater	18-Jan-01	14:30	DB/DB
0103H014	IR07MW24A	Groundwater	18-Jan-01	15:25	DB/DB
0103F014	IR10MW31A	Groundwater	18-Jan-01	15:40	DB/DB

TABLE 3 (Continued)

SUMMARY OF SAMPLES COLLECTED DURING Q6

Sample Number	Sample Description	Sample Type	Date Sampled	Time Sampled	Purging/ Sampling Method
0103L003	Trip Blank	Field QC	19-Jan-01	08:00	NA
0103H015	Trip Blank	Field QC	19-Jan-01	08:00	NA
0103L001	IR10MW33A	MS/MSD	19-Jan-01	09:20	DB/DB
0103H016	IR25MW37A	Groundwater	19-Jan-01	10:55	DB/DB
0103H017	IR26MW45A	Groundwater	19-Jan-01	14:25	DB/DB
0103L002	Equipment Blank[b]	Field QC	19-Jan-01	15:00	NA

Notes:

a Water rinsed through bailer and metals filter
b Water rinsed along depth-to-water meter

DB Disposable bailer
MP Mircropurge
MS/MSD Matrix spike/matrix spike duplicate
NA Not applicable
PP Peristaltic pump
QC Quality control

TABLE 4

SUMMARY OF TRIGGER LEVELS FOR PARCEL B GROUNDWATER SAMPLING RESULTS

Monitoring Well Type	Trigger Levels
POC Monitoring Wells	NAWQCs or HGALs, whichever is higher; TPH trigger levels to be determined during CAP preparation
Sentinel Monitoring Wells	10 times the trigger levels for POC monitoring wells
Post-Remedial Action Monitoring Wells	Same as the trigger levels for POC monitoring wells
VOC Monitoring Wells	Same as the trigger levels for POC monitoring wells for vinyl chloride or 10 times the trigger levels for POC monitoring wells for trichloroethene and cis-1,2-dichloroethene or measured increase in vinyl chloride, whichever occurs first
On- and Off-Site Migration Monitoring Wells	Same as the trigger levels for POC monitoring wells for well IR07MW28A; 10 times the trigger levels for POC monitoring wells for well IR18MW21A
Utility Line Monitoring Well	Southeast Water Pollution Control Plant discharge requirements

Notes:

CAP Corrective action plan
HGAL Hunters Point Shipyard groundwater ambient level
NAWQC National Ambient Water Quality Criterion
POC Point-of-compliance
TPH Total petroleum hydrocarbons
VOC Volatile organic compound

TABLE 5

COMPARISON OF TRIGGER LEVEL CRITERIA

Constituent	HGAL (µg/L)[a]	NAWQC (µg/L)[a]	POC Well Trigger Level (µg/L)[b]	Sentinel Well Trigger Level (µg/L)[c]	VOC Well Trigger Level (µg/L)[d]	Utility Line Well Trigger Level (µg/L)[e]	Parcel B ROD Trigger Level (µg/L)[f]
TPH-g and TPH-d	NA	NA	NA	NA	NA	NA	[p]
PAHs	NA	300	300	3,000	NA	NA	--
PCBs[g]	NA	0.1[h]	0.19	1.9	NA	5,000[i]	--
1,2-Dichloroethene	NA	22,400	85[j]	85[j]	85	NA	85[k]
Trichloroethene	NA	200[l]	114[m]	114[m]	114	NA	114[k]
Vinyl Chloride	NA	55[n]	55	55[o]	55	200	55[k]
Antimony	43.3	500	500	5,000	NA	15,000[i]	500
Arsenic	27.3	36	36	360	NA	4,000	--
Barium	504	NA	504	5,040	NA	100,000[i]	5,000
Beryllium	1.4	NA	1.4	14	NA	750[i]	1.4
Cadmium	5.08	9.3	9.3	93	NA	500	9.3
Chromium	15.7	NA	15.7	157	NA	5,000	1,030
Chromium (VI)	NA	NA	NA	NA	NA	5,000[i]	50
Cobalt	20.8	NA	20.8	208	NA	80,000[i]	--
Copper	28	2.4	28	280	NA	4,000	28.04
Lead	14.4	8.1	14.4	144	NA	1,500	14.44
Manganese	8,140	NA	8,140	81,400	NA	NA	8,140
Mercury	0.6	0.03	0.6	6	NA	50	0.6
Nickel	96.5	8.2	96.5	965	NA	2,000	96.48
Silver	7.43	0.92	7.43	74.3	NA	600	7.43
Thallium	13	NA	13	130	NA	7,000[i]	213
Zinc	75.7	81	81	810	NA	7,000	75.68

TABLE 5 (Continued)

COMPARISON OF TRIGGER LEVEL CRITERIA

Notes:

a Concentrations are listed as reported in Table 5 of the final Parcel B RAMP (TtEMI 1999).

b POC well trigger levels are based on the HGAL or NAWQC, whichever is higher, unless otherwise noted (TtEMI 1999). POC well trigger levels apply to POC wells, post-remedial action wells, and on- and off-site migration well IR07MW28A (TtEMI 1999).

c Sentinel well trigger levels are 10 times the POC well trigger levels, unless otherwise noted (TtEMI 1999). Sentinel well trigger levels apply to sentinel wells and on- and off-site migration well IR18MW21A (TtEMI 1999).

d VOC well trigger levels are based on exceeding numerical criteria or exhibiting a measured increase in the concentration of vinyl chloride, whichever occurs first. VOC well trigger levels apply to well IR10MW33A (TtEMI 1999).

e Utility line well trigger levels are based on Southeast Water Pollution Control Plant discharge requirements (TtEMI 1999).

f Concentrations are listed as reported in Table 10 of the final Parcel B record of decision (PRC 1997e).

g PCBs to which trigger levels apply: Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260

h Great Lakes Water Quality Initiative Tier II level criterion for PCB (TtEMI 1999).

i Soluble Threshold Limit Concentration, *California Code of Regulations*, Title 22, Section 66261.24(a)(2)(A) (TtEMI 1999)

j POC and sentinel well trigger levels for 1,2-dichloroethene were reduced from 22,400 µg/L and 224,000 µg/L, respectively, as listed in the Parcel B RAMP, to 85 µg/L for both because 1,2-dichloroethene criteria are human health-based.

k Human health-based criteria were developed for VOCs that may represent a human health risk to a future resident at Parcel B. Concentrations of these VOCs in groundwater correspond to an excess lifetime cancer risk of 10^{-6} and were selected as a groundwater remedial action objective for protection of human health based on groundwater-to-indoor-air modeling analysis (PRC 1997e).

l NAWQC for these VOCs are 1/10th acute exposures based on additional toxicity information for aquatic life (TtEMI 1999).

m POC and sentinel well trigger levels for trichloroethene were reduced from 200 µg/L and 2,000 µg/L, respectively, as listed in the Parcel B RAMP, to 114 µg/L because trichloroethene criteria are human health-based.

n Because no NAWQC has been specified for dense nonaqueous-phase liquid vinyl chloride, a value of 55 µg/L was used based on the human health risk assessment for VOCs (TtEMI 1999).

o The sentinel well trigger level for vinyl chloride was reduced from 550 µg/L, as listed in the Parcel B RAMP, to 55 µg/L because the vinyl chloride criterion is human health-based.

p There is no trigger level for total petroleum hydrocarbons because it is not a Comprehensive Environmental Response, Compensation, and Liability Act contaminant. A trigger level of 1,250 ug/L was included in the RAMP for screening purposes.

--	Concentration not listed in original table
HGAL	Hunters Point Shipyard groundwater ambient level for metal in A-aquifer groundwater
µg/L	Microgram per liter
NAWQC	National Ambient Water Quality Criterion
PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
POC	Point-of-compliance
ROD	Record of decision
TPH-d	Total petroleum hydrocarbons as diesel
NA	Not applicable
TPH-g	Total petroleum hydrocarbons as gasoline
VOC	Volatile organic compound

TABLE 6

HISTORICAL RESULTS FOR TCE, DCE, AND VINYL CHLORIDE AT MONITORING WELLS NEAR IR-10 VOC GROUNDWATER PLUME[a]

	RI	RI	RI	RI	RI	RI	RI	RI	Q1	Q2	Q3	Q4	Q5	Q6
IR10MW12A														
Sampling Date	3/9/89	8/21/90	7/12/91	1/15/92	11/9/93	2/17/94	5/12/94	8/30/94	NS	NS	NS	NS	10/11/00	1/18/01
1,2-DCE (total)	5 ND	0.5 ND	0.5 ND	5 ND	NS	NS	NS	NS					NS	NS
cis-1,2-DCE	NS	NS	NS	NS	1 ND	1 ND	0.5 ND	0.5 ND					0.5 ND	0.5 ND
trans-1,2-DCE	NS	NS	NS	NS	1 ND	1 ND	0.5 ND	0.5 ND					0.5 ND	0.5 ND
TCE	5 ND	0.5 ND	0.5 ND	5 ND	1 ND	1 ND	0.5 ND	0.5 ND					0.5 ND	0.5 ND
Vinyl Chloride	10 ND	1 ND	1 ND	10 ND	1 ND	1 ND	0.5 ND	0.5 ND					0.5 ND	0.5 ND
IR10MW13A1														
Sampling Date	3/9/89	8/22/90	7/12/91	1/13/92	11/9/93	2/17/94	5/12/94	8/31/94	NS	NS	NS	NS	10/13/00	1/18/01
1,2-DCE (total)	66	27	19	11	NS	NS	NS	NS					NS	NS
cis-1,2-DCE	NS	NS	NS	NS	9	8	10	15					9	8
trans-1,2-DCE	NS	NS	NS	NS	1	0.6	0.8	1					0.6	0.6
TCE	31	13	0.5 ND	9	10	8	8	8					8	5
Vinyl Chloride	3	1 ND	1 ND	10 ND	1 ND	1 ND	0.5 ND	0.5 ND					0.5	0.5 ND
IR10MW14A														
Sampling Date	3/9/89	8/22/90	7/12/91	1/13/92	11/9/93	2/17/94	5/12/94	8/31/94	NS	NS	NS	NS	10/13/00	NS
1,2-DCE (total)	5 ND	0.5 ND	4	5 ND	NS	NS	NS	NS					NS	
cis-1,2-DCE	NS	NS	NS	NS	1	1 ND	0.5 ND	0.5 ND					0.3	
trans-1,2-DCE	NS	NS	NS	NS	2	1	0.5 ND	0.5 ND					0.4	
TCE	5 ND	0.6	3.6	2	4	2	0.5 ND	0.5 ND					2	
Vinyl Chloride	10 ND	1 ND	1 ND	10 ND	1 ND	1 ND	0.5 ND	0.5 ND					0.5 ND	

TABLE 6 (Continued)

HISTORICAL RESULTS FOR TCE, DCE, AND VINYL CHLORIDE AT MONITORING WELLS NEAR IR-10 VOC GROUNDWATER PLUME[a]

	RI	RI	RI	RI	RI	RI	RI	RI	Q1	Q2	Q3	Q4	Q5	Q6
IR10MW28A														
Sampling Date	10/31/91	1/13/92	11/9/93	2/22/94	5/16/94	8/22/94	NA	NA	9/3/99	1/12/00	NA	NA	10/11/00	1/18/01
1,2-DCE (total)	5 ND	5 ND	NS	NS	NS	NS			NS	NS			NS	NS
cis-1,2-DCE	NS	NS	1 ND	2 ND	1 ND	1 ND			3 ND	0.6			3 ND	1 ND
trans-1,2-DCE	NS	NS	1 ND	2 ND	1 ND	1 ND			3 ND	2 ND			3 ND	1 ND
TCE	38	28	27	30	42	45			54	40			40	32
Vinyl Chloride	10 ND	10 ND	1 ND	2 ND	1 ND	1 ND			2 ND	1 ND			3 ND	1 ND
IR10MW31A1														
Sampling Date	12/23/93	8/11/94	5/23/95	NS	NS	NS	NS	NS	9/3/99	1/12/00	4/28/00	7/10/00	10/16/00	1/17/01
1,2-DCE (total)	10 ND	10 ND	10 ND						NS	NS	NS	NS	NS	NS
cis-1,2-DCE	NS	NS	NS						1 ND	1 ND	1 ND	1 ND	0.5 ND	0.5 ND
trans-1,2-DCE	NS	NS	NS						1 ND	1 ND	1 ND	1 ND	0.5 ND	0.5 ND
TCE	10 ND	10 ND	10 ND						1 ND	1 ND	1 ND	1 ND	0.5 ND	0.5 ND
Vinyl Chloride	10 ND	10 ND	10 ND						0.5 ND	0.5 ND	0.5 ND	0.5 ND	0.5 ND	0.5 ND
IR10MW33A[b]														
Sampling Date	NS	NS	NS	NS	NS	NS	NS	NS	9/3/99	1/12/00	4/27/00	7/10/00	10/13/00	1/19/01
1,2-DCE (total)									NS	NS	NS	NS	NS	NS
cis-1,2-DCE									10	13	12	13	14	10
trans-1,2-DCE									1 ND	0.3	1 ND	1 ND	0.6	0.5 ND
TCE									19	23	25	25	18	13
Vinyl Chloride									0.5 ND	0.5 ND	0.5 ND	0.5 ND	0.5 ND	0.5 ND

TABLE 6 (Continued)

HISTORICAL RESULTS FOR TCE, DCE, AND VINYL CHLORIDE AT MONITORING WELLS NEAR IR-10 VOC GROUNDWATER PLUME[a]

	RI	RI	RI	RI	RI	RI	RI	RI	Q1	Q2	Q3	Q4	Q5	Q6
IR61MW05A														
Sampling Date	8/31/95	10/2/95	11/8/95	NS	NS	NS	NS	NS	9/3/99	1/13/00	NS	NS	10/17/00	NS
1,2-DCE (total)	0.5 ND	0.5 ND	0.5 ND						10 ND	10 ND			NS	
cis-1,2-DCE	NS	NS	NS						NS	NS			10 ND	
trans-1,2-DCE	NS	NS	NS						NS	NS			10 ND	
TCE	0.5 ND	0.5 ND	0.5 ND						10 ND	10 ND			10 ND	
Vinyl Chloride	0.5 ND	0.5 ND	0.5 ND						10 ND	10 ND			10 ND	
PA50MW01A														
Sampling Date	3/16/93	8/17/94	6/14/95	NS	NS	NS	NS	NS	9/1/99	1/13/00	4/28/00	7/10/00	10/12/00	1/17/01
1,2-DCE (total)	10 ND	10 ND	10 ND						10 ND	NS	NS	NS	NS	NS
cis-1,2-DCE	NS	NS	NS						NS	1 ND	1 ND	1 ND	0.5 ND	0.5 ND
trans-1,2-DCE	NS	NS	NS						NS	1 ND	1 ND	1 ND	0.5 ND	0.5 ND
TCE	10 ND	10 ND	10 ND						10 ND	1 ND	1 ND	1 ND	0.5 ND	0.5 ND
Vinyl Chloride	10 ND	10 ND	10 ND						10 ND	0.5 ND	0.5 ND	0.5 ND	0.5 ND	0.5 ND

Notes:

a All concentrations reported in micrograms per liter
b Monitoring well installed in 1999; therefore, historical data not available

DCE Dichloroethene
ND Not detected; concentration reported is analytical detection limit
NS Not sampled
Q1-Q6 Quarters 1, 2, 3, 4, 5, and 6 of the RAMP
RI Remedial investigation
TCE Trichloroethene

TABLE 7

FILTERED AND UNFILTERED METALS CONCENTRATIONS FOR LOW-FLOW GROUNDWATER SAMPLING[a]

Well No.	IR07MWS-4		IR10MW31A1		PA50MW01A		
Sampling Date	01/17/2001	01/17/2001	01/17/2001	01/18/2001	01/17/2001	01/17/2001	01/18/2001
	0103F008[b]	0103H005[c]	0103F009[b]	0103F014[c]	0103F006[b]	0103F007[b,d]	0103F011[c]
Parameter	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Dissolved (Filtered)	Total (Unfiltered)	Total (Unfiltered)	Dissolved (Filtered)
Aluminum	6U	6U	6U	10.4U	6U	6U	56.3U
Antimony	2U	2U	2U	2U	2U	2U	3.9U
Arsenic	2U	2U	2U	2.4	2.9U	2.8U	2.1
Barium	22.6	19	49.3	50	120	127	131
Beryllium	1U	1U	1U	1U	1U	1U	1U
Cadmium	1U	1U	1U	1U	1U	1U	1U
Calcium	125,000	105,000	176,000	185,000	38,800	40,200	39,700
Chromium	14.5	15.5	2	2.2U	1U	1U	1U
Cobalt	1U	1U	1U	1U	1U	1.3	1U
Copper	4.5U	3.8U	1.6U	1.8U	1.1	1U	1U
Iron	7U	7U	7U	25.5U	7U	7U	64.2
Lead	1U	1U	1U	1.3	1U	1U	1U
Magnesium	316,000	269,000	357,000	373,000	92,200	95,500	93,400
Manganese	1U	1U	243	1160	166	171	160
Mercury	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.12
Molybdenum	7U	7U	7U	9	7U	7U	2U
Nickel	19.8U	13.7U	6U	12.1	6U	8.7U	6.8
Potassium	94,200	90,000	61,100	68,500	4,350	4,300	4,740
Selenium	3U	3U	3U	3U	3U	3U	3.4
Silver	1U	1U	1U	1U	1U	1U	1U
Sodium	3,000,000	2,430,000	2,910,000	2,530,000	261,000	270,000	260,000
Thallium	2.4	2U	2U	2U	2U	2U	2U
Vanadium	1.5	1.1	2.9	1U	3.4	3.9	3.3
Zinc	3U	3U	3U	3U	3U	3U	3U

TABLE 7 (Continued)

FILTERED AND UNFILTERED METALS CONCENTRATIONS FOR LOW-FLOW GROUNDWATER SAMPLING[a]

Notes:

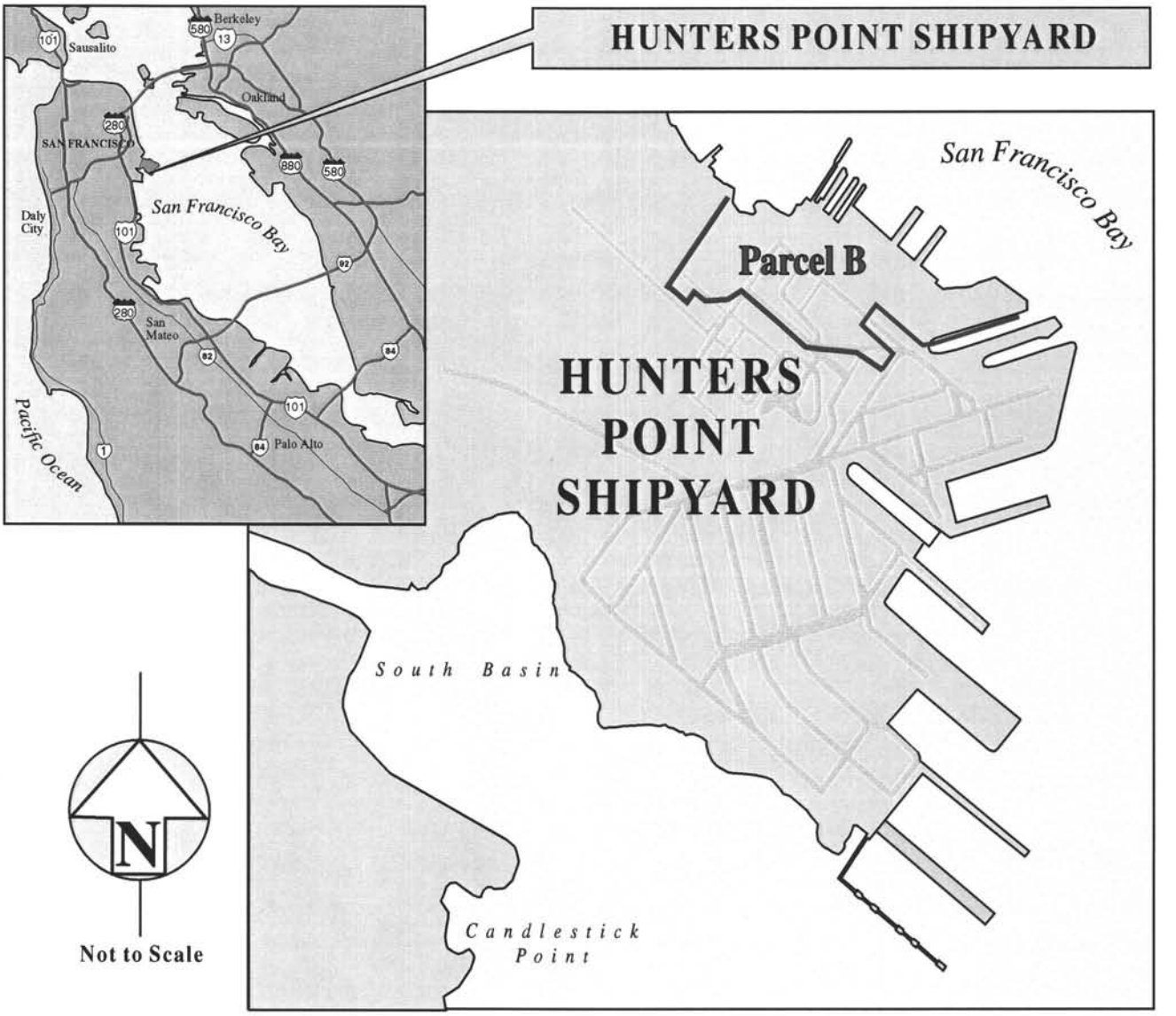
a All results are reported in micrograms per liter. The qualifier "U" indicates that the result is nondetected; the qualifier "J" indicates that the result is estimated.

b Monitoring well purged and sampled using low-flow procedure. The sample was not filtered.

c Monitoring well purged and sampled using conventional purging and sampling procedures. The sample was filtered in the field.

d Duplicate sample

FIGURES



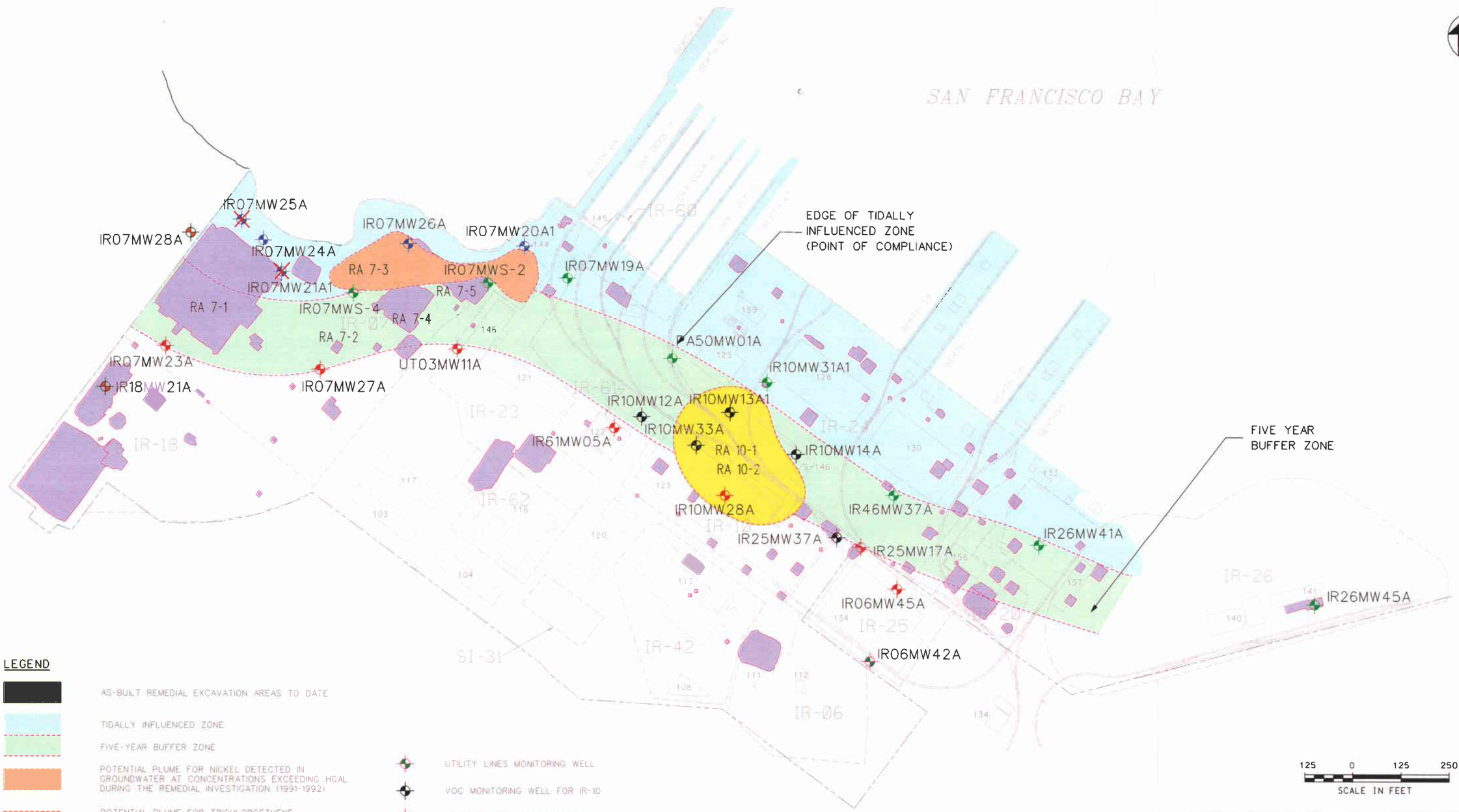
DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

SOUTHWEST DIVISION

SAN DIEGO, CALIFORNIA

HUNTERS POINT SHIPYARD — SAN FRANCISCO, CALIFORNIA

FIGURE 1
PARCEL B LOCATION MAP
HUNTERS POINT SHIPYARD



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SOUTHWEST DIVISION

SAN DIEGO, CALIFORNIA

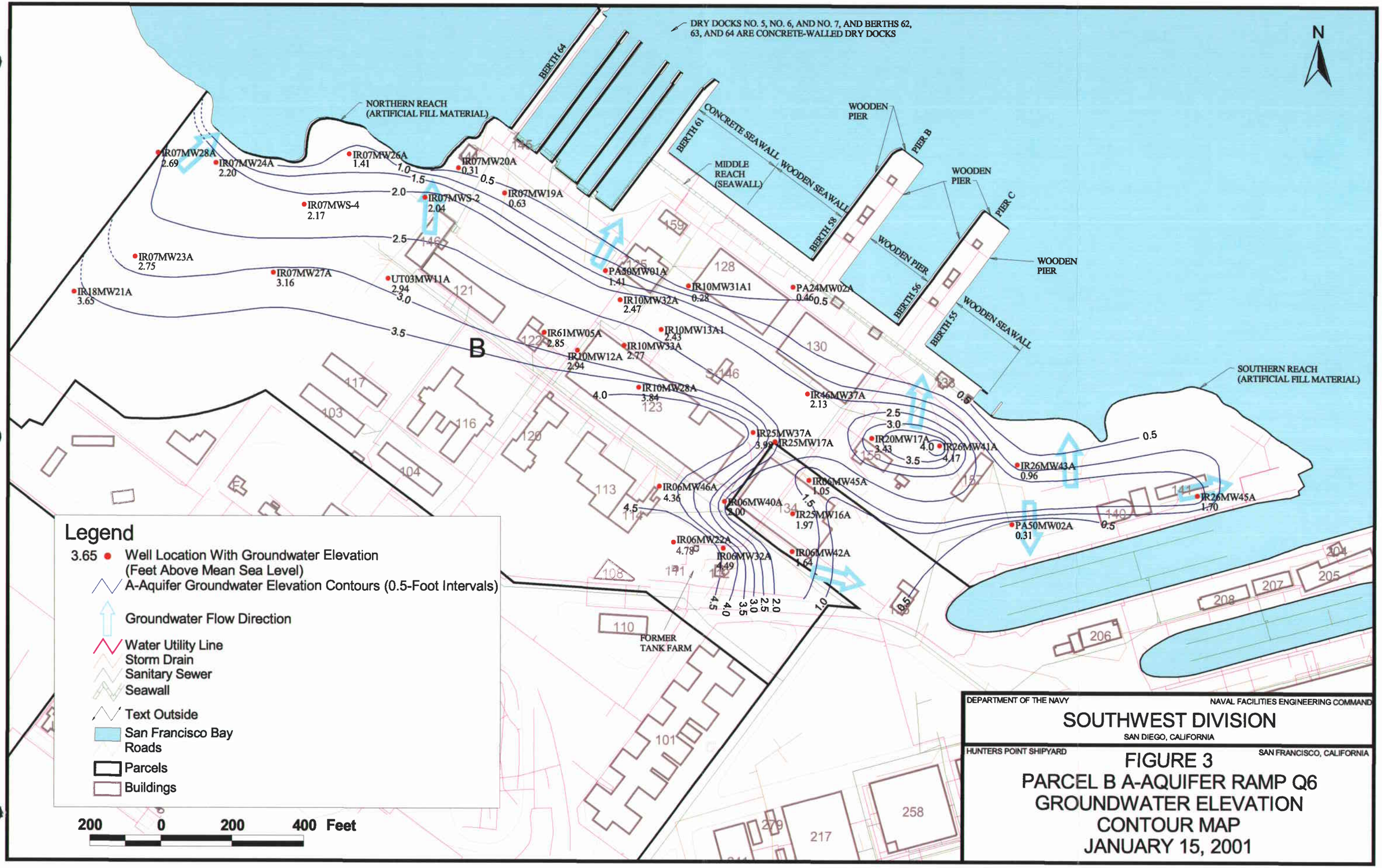
HUNTERS POINT SHIPYARD — SAN FRANCISCO, CALIFORNIA

FIGURE 2

LOCATION OF REMEDIAL ACTION MONITORING PLAN WELLS

PARCEL B

05/30/01 J:\HPS\dgn\Parc_B\ctl28\fig2_3qtr.dgn



DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

SOUTHWEST DIVISION

SAN DIEGO, CALIFORNIA

HUNTERS POINT SHIPYARD — SAN FRANCISCO, CALIFORNIA

FIGURE 3

PARCEL B A-AQUIFER RAMP Q6 GROUNDWATER ELEVATION CONTOUR MAP

JANUARY 15, 2001

APPENDIX A

SUMMARY OF Q6 ANALYTICAL RESULTS AND TRIGGER LEVELS JANUARY TO MARCH 2001 SAMPLING EVENT

(~~50~~ 48 Pages)

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR06MW42A	0103G002		16-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,1-DICHLOROETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ35	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,2-DIBROMOETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,2-DICHLOROBENZENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,2-DICHLOROETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,2-DICHLOROPROPANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,3-DICHLOROBENZENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	1,4-DICHLOROBENZENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2,2'-OXYBIS(1-CHLOROPROPANE)	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2,4,5-TRICHLOROPHENOL	25	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2,4,6-TRICHLOROPHENOL	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2,4-DICHLOROPHENOL	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2,4-DIMETHYLPHENOL	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2,4-DINITROPHENOL	25	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2,4-DINITROTOLUENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2,6-DINITROTOLUENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	2-BUTANONE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2-CHLORONAPHTHALENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2-CHLOROPHENOL	10	UJ3	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	2-HEXANONE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2-METHYLNAPHTHALENE	30		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2-METHYLPHENOL	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2-NITROANILINE	25	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	2-NITROPHENOL	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	3,3'-DICHLOROBENZIDINE	10	UJ7	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	3-NITROANILINE	25	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	4,4'-DDD	0.02	U9	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	4,4'-DDE	0.02	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	4,4'-DDT	0.02	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	4,6-DINITRO-2-METHYLPHENOL	25	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	4-BROMOPHENYL-PHENYLETHER	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	4-CHLORO-3-METHYLPHENOL	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	4-CHLOROANILINE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	4-CHLOROPHENYL-PHENYLETHER	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	4-METHYL-2-PENTANONE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	4-METHYLPHENOL	10	J	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	4-NITROANILINE	25	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	4-NITROPHENOL	25	U	µg/L	--	--	

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR06MW42A	0103G002		16-Jan-01	SVOA	ACENAPHTHENE	94		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	ACENAPHTHYLENE	10	J	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	ACETONE	10	U4J57	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	ACETOPHENONE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ALDRIN	0.01	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ALPHA-BHC	0.01	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ALPHA-CHLORDANE	0.02		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	ALUMINUM	6	UJ13	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	ANTHRACENE	7	J	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	ANTIMONY	3.7	J1	µg/L	--	--	15,000
IR06MW42A	0103G002		16-Jan-01	PEST	AROCLOR-1016	0.1	U	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	PEST	AROCLOR-1221	0.2	U	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	PEST	AROCLOR-1232	0.1	U	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	PEST	AROCLOR-1242	0.1	U	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	PEST	AROCLOR-1248	0.1	U	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	PEST	AROCLOR-1254	0.1	U	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	PEST	AROCLOR-1260	0.1	U	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	DMETAL	ARSENIC	4.4	U1	µg/L	--	--	4,000
IR06MW42A	0103G002		16-Jan-01	SVOA	ATRAZINE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	BARIUM	343		µg/L	--	--	100,000
IR06MW42A	0103G002		16-Jan-01	SVOA	BENZALDEHYDE	10	UJ7	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	BENZENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BENZO(A)ANTHRACENE	10	J7	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BENZO(A)PYRENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BENZO(B)FLUORANTHENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BENZO(G,H,I)PERYLENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BENZO(K)FLUORANTHENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	--	--	750
IR06MW42A	0103G002		16-Jan-01	PEST	BETA-BHC	0.01	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BIPHENYL	10	J	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BIS(2-CHLOROETHOXY)METHANE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BIS(2-CHLOROETHYL)ETHER	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BIS(2-ETHYLHEXYL)PHTHALATE	10	U4J7	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	BROMODICHLOROMETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	BROMOFORM	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	BROMOMETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	BUTYLBENZYLPHTHALATE	10	UJ7	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	CADMIUM	1	U	µg/L	--	--	500
IR06MW42A	0103G002		16-Jan-01	DMETAL	CALCIUM	73,800		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	CAPROLACTAM	10	J7	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	CARBAZOLE	11		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	CARBON DISULFIDE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	CARBON TETRACHLORIDE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	CHLOROBENZENE	10	UJ5	µg/L	--	--	

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Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR06MW42A	0103G002		16-Jan-01	VOA	CHLOROETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	CHLOROFORM	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	CHLOROMETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	CHROMIUM	1.3	J	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L	--	--	5,000
IR06MW42A	0103G002		16-Jan-01	SVOA	CHRYSENE	10	J	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	COBALT	1	U	µg/L	--	--	80,000
IR06MW42A	0103G002		16-Jan-01	DMETAL	COPPER	1.2	U1	µg/L	--	--	4,000
IR06MW42A	0103G002		16-Jan-01	VOA	CYCLOHEXANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	DELTA-BHC	0.03		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	DIBENZ(A,H)ANTHRACENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	DIBENZOFURAN	38		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	DIELDRIN	0.02	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	2,300	J3	µg/L	--	--	1,250
IR06MW42A	0103G002		16-Jan-01	SVOA	DIETHYLPHTHALATE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	DIMETHYLPHTHALATE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	DI-N-BUTYLPHTHALATE	10	U4	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	DI-N-OCTYLPHTHALATE	10	UJ7	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ENDOSULFAN I	0.01	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ENDOSULFAN II	0.02	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ENDOSULFAN SULFATE	0.02	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ENDRIN	0.02	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ENDRIN ALDEHYDE	0.02	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	ENDRIN KETONE	0.02	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	ETHYLBENZENE	10	J5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	FLUORANTHENE	14		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	FLUORENE	36		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	GAMMA-BHC (LINDANE)	0.01	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	GAMMA-CHLORDANE	0.01	U1J3	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	690	J	µg/L	--	--	1,250
IR06MW42A	0103G002		16-Jan-01	PEST	HEPTACHLOR	0.03	U1	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	HEPTACHLOR EPOXIDE	0.01	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	HEXACHLOROBENZENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	HEXACHLOROBUTADIENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	HEXACHLOROCYCLOPENTADIENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	HEXACHLOROETHANE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	INDENO(1,2,3-CD)PYRENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	IRON	8,310		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	ISOPHORONE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	ISOPROPYLBENZENE	10	J5	µg/L	--	--	

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR06MW42A	0103G002		16-Jan-01	DMETAL	LEAD	1	U	µg/L	--	--	1,500
IR06MW42A	0103G002		16-Jan-01	DMETAL	MAGNESIUM	99,500		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	MANGANESE	872		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	MERCURY	0.11	J	µg/L	--	--	50
IR06MW42A	0103G002		16-Jan-01	PEST	METHOXYCHLOR	0.1	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	METHYL ACETATE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	METHYLENE CHLORIDE	11	U4J5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	NAPHTHALENE	150		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	NICKEL	6	U	µg/L	--	--	2,000
IR06MW42A	0103G002		16-Jan-01	SVOA	NITROBENZENE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	N-NITROSO-DI-N-PROPYLAMINE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	N-NITROSODIPHENYLAMINE	10	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	PENTACHLOROPHENOL	25	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	PHENANTHRENE	14		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	PHENOL	10	UJ3	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	POTASSIUM	16,100		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	SVOA	PYRENE	9	J3	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	SILVER	1	U	µg/L	--	--	600
IR06MW42A	0103G002		16-Jan-01	DMETAL	SODIUM	249,000		µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	STYRENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	TETRACHLOROETHENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	--	--	7,000
IR06MW42A	0103G002		16-Jan-01	VOA	TOLUENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	PEST	TOXAPHENE	1	U	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	TRICHLOROETHENE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	VANADIUM	1.1	J	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	VOA	VINYL CHLORIDE	10	UJ5	µg/L	--	--	200
IR06MW42A	0103G002		16-Jan-01	VOA	XYLENE (TOTAL)	10	J5	µg/L	--	--	
IR06MW42A	0103G002		16-Jan-01	DMETAL	ZINC	5.2	U2J3	µg/L	--	--	7,000
IR06MW45A	0103G003		16-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ57	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	UJ5	µg/L	--		--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR06MW45A	0103G003		16-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ57	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	2-BUTANONE	10	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	2-HEXANONE	10	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	ACETONE	13	U4J5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	BENZENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	BROMOFORM	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	BROMOMETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	CARBON DISULFIDE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	CHLOROBENZENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	CHLOROETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	CHLOROFORM	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	CHLOROMETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	UJ5	µg/L	--	85	--
IR06MW45A	0103G003		16-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	CYCLOHEXANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	ETHYLBENZENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	METHYL ACETATE	0.5	UJ57	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4J5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	STYRENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	TETRACHLOROETHENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	TOLUENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	UJ5	µg/L	--	85	--
IR06MW45A	0103G003		16-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	TRICHLOROETHENE	0.5	UJ5	µg/L	--	114	--
IR06MW45A	0103G003		16-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	UJ5	µg/L	--		--
IR06MW45A	0103G003		16-Jan-01	LVOA	VINYL CHLORIDE	0.5	UJ5	µg/L	--	55	--
IR06MW45A	0103G003		16-Jan-01	LVOA	XYLENE (TOTAL)	0.5	UJ5	µg/L	--		--
IR07MW19A	0103G006		16-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	UJ5	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW19A	0103G006		16-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,1-DICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ35	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,2-DIBROMOETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,2-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,2-DICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,2-DICHLOROPROPANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,3-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	1,4-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	2-BUTANONE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	2-HEXANONE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	4-METHYL-2-PENTANONE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	ACETONE	16	U4J57	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	ALUMINUM	6	UJ13	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	ARSENIC	5.3	U1	µg/L	36	--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	BARIUM	32	J	µg/L	504	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	BENZENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	BROMODICHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	BROMOFORM	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	BROMOMETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	CALCIUM	99,900		µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CARBON DISULFIDE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CARBON TETRACHLORIDE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CHLOROFORM	10	J5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	CHROMIUM	5.9	J	µg/L	15.7	--	--
IR07MW19A	0103G006		16-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	UJ5	µg/L	85	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	COBALT	1	U	µg/L	20.8	--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	COPPER	2.7	U1	µg/L	28	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	CYCLOHEXANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	ETHYLBENZENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	UJ	µg/L	1,250	--	--

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HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW19A	0103G006		16-Jan-01	DMETAL	IRON	7	U	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	ISOPROPYLBENZENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	MAGNESIUM	297,000		µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	MANGANESE	1	U	µg/L	8,140	--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	METHYL ACETATE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	METHYLENE CHLORIDE	38	U4J5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	NICKEL	11.3	U2	µg/L	96.5	--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	POTASSIUM	147,000		µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	SILVER	1	U	µg/L	7.43	--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	SODIUM	3,970,000		µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	STYRENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	TETRACHLOROETHENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	TOLUENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	UJ5	µg/L	85	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	TRICHLOROETHENE	10	UJ5	µg/L	114	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	VANADIUM	1	U	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	VOA	VINYL CHLORIDE	10	UJ5	µg/L	55	--	--
IR07MW19A	0103G006		16-Jan-01	VOA	XYLENE (TOTAL)	10	UJ5	µg/L		--	--
IR07MW19A	0103G006		16-Jan-01	DMETAL	ZINC	10.5	U2J3	µg/L	81	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,1-DICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,1-DICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ35	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ35	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	UJ5	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,2-DIBROMOETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,2-DIBROMOETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,2-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,2-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,2-DICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,2-DICHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,2-DICHLOROPROPANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,2-DICHLOROPROPANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,3-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,3-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	1,4-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	1,4-DICHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	2-BUTANONE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	2-BUTANONE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	2-HEXANONE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	2-HEXANONE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	4-METHYL-2-PENTANONE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	4-METHYL-2-PENTANONE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	ACETONE	48	U4J57	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	ACETONE	19	U4J57	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	ALUMINUM	6	UJ13	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	ALUMINUM	6	UJ13	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	ARSENIC	5.9	U1	µg/L	36	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	ARSENIC	8.1	U1	µg/L	36	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	BARIUM	46.6	J	µg/L	504	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	BARIUM	50.6	J	µg/L	504	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	BENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	BENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	BERYLLIUM	1	J	µg/L	1.4	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	BERYLLIUM	1.3	J	µg/L	1.4	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	BROMODICHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	BROMODICHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	BROMOFORM	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	BROMOFORM	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	BROMOMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	BROMOMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	CADMIUM	1.1	J	µg/L	9.3	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	CADMIUM	1.6	J	µg/L	9.3	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	CALCIUM	223,000		µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	CALCIUM	232,000		µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CARBON DISULFIDE	10	UJ5	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CARBON DISULFIDE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CARBON TETRACHLORIDE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CARBON TETRACHLORIDE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CHLOROBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CHLOROETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CHLOROFORM	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CHLOROFORM	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	CHROMIUM	6.3	J	µg/L	15.7	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	CHROMIUM	9	J	µg/L	15.7	--	--
IR07MW20A1	0103G004		16-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	UJ5	µg/L	85	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	UJ5	µg/L	85	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	COBALT	1	U	µg/L	20.8	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	COBALT	1.6	J	µg/L	20.8	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	COPPER	3	U1	µg/L	28	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	COPPER	5.7	U1	µg/L	28	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	CYCLOHEXANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	CYCLOHEXANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	ETHYLBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	ETHYLBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	28	J	µg/L	1,250	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	UJ	µg/L	1,250	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	IRON	7	U	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	IRON	16.5	U1	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	ISOPROPYLBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	ISOPROPYLBENZENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	MAGNESIUM	767,000		µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	MAGNESIUM	801,000		µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	MANGANESE	1	U	µg/L	8,140	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	MANGANESE	1	U	µg/L	8,140	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	METHYL ACETATE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	METHYL ACETATE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	METHYLENE CHLORIDE	35	U4J5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	METHYLENE CHLORIDE	38	U4J5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	NICKEL	25.5	U2	µg/L	96.5	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	NICKEL	25.6	U2	µg/L	96.5	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	POTASSIUM	270,000		µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	POTASSIUM	300,000		µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	SILVER	1	U	µg/L	7.43	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	SILVER	1.5	U2	µg/L	7.43	--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	SODIUM	1,650,000		µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	SODIUM	8,070,000		µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	STYRENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	STYRENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	TETRACHLOROETHENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	TETRACHLOROETHENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	THALLIUM	8.3	J1	µg/L	13	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	THALLIUM	8.2	J1	µg/L	13	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	TOLUENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	TOLUENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	UJ5	µg/L	85	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	UJ5	µg/L	85	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	TRICHLOROETHENE	10	UJ5	µg/L	114	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	TRICHLOROETHENE	10	UJ5	µg/L	114	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	VANADIUM	1	U	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	VANADIUM	2.3	J	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	VINYL CHLORIDE	10	UJ5	µg/L	55	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	VINYL CHLORIDE	10	UJ5	µg/L	55	--	--
IR07MW20A1	0103G004		16-Jan-01	VOA	XYLENE (TOTAL)	10	UJ5	µg/L		--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	VOA	XYLENE (TOTAL)	10	UJ5	µg/L		--	--
IR07MW20A1	0103G004		16-Jan-01	DMETAL	ZINC	6	UJ3	µg/L	81	--	--
IR07MW20A1	0103G005	0103G004	16-Jan-01	DMETAL	ZINC	6	UJ3	µg/L	81	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	2-BUTANONE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	2-HEXANONE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	ACETONE	10	U4J7	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	ALUMINUM	18.4	U1	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	ANTIMONY	2	U	µg/L	500	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	ARSENIC	3.9	J1	µg/L	36	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	BARIUM	237		µg/L	504	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	BENZENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	BROMOFORM	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	BROMOMETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	CALCIUM	193,000		µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CHLOROETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CHLOROFORM	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	CHROMIUM	1.2	U1	µg/L	15.7	--	--
IR07MW24A	0103H014		18-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW24A	0103H014		18-Jan-01	DMETAL	COBALT	5.6	J	µg/L	20.8	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	COPPER	1.2	U1	µg/L	28	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ7	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	IRON	172	J3	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	MAGNESIUM	140,000		µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	MANGANESE	2,140	J3	µg/L	8,140	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	METHYL ACETATE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	METHYLENE CHLORIDE	10	U4	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	MOLYBDENUM	2	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	NICKEL	39.2	J	µg/L	96.5	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	POTASSIUM	20,200		µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	SELENIUM	3	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	SILVER	1	UJ1	µg/L	7.43	--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	SODIUM	348,000	J24	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	STYRENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	TOLUENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	114	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ7	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	VANADIUM	1	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	55	--	--
IR07MW24A	0103H014		18-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L		--	--
IR07MW24A	0103H014		18-Jan-01	DMETAL	ZINC	3	U	µg/L	81	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW26A	0103H004		17-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	2-BUTANONE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	2-HEXANONE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	ACETONE	10	U4J7	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	ALUMINUM	6	UJ1	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	ARSENIC	2	U	µg/L	36	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	BARIUM	92.2	J4	µg/L	504	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	BENZENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	BERYLLIUM	1.1	J	µg/L	1.4	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	BROMOFORM	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	BROMOMETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	CALCIUM	236,000		µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CHLOROETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CHLOROFORM	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	CHROMIUM	9	J	µg/L	15.7	--	--
IR07MW26A	0103H004		17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	COBALT	1	U	µg/L	20.8	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	COPPER	1.5	U1	µg/L	28	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ7	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	UJ7	µg/L	1,250	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	IRON	23.5	U1	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	MAGNESIUM	912,000		µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW26A	0103H004		17-Jan-01	DMETAL	MANGANESE	1	U	µg/L	8,140	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	METHYL ACETATE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	METHYLENE CHLORIDE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	560	U2J7	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	NICKEL	15.6	U2	µg/L	96.5	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	POTASSIUM	233,000		µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	SILVER	1.1	U2	µg/L	7.43	--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	SODIUM	7,990,000		µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	STYRENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	THALLIUM	3.2	J1	µg/L	13	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	TOLUENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	114	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ7	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	VANADIUM	3.3	J	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	55	--	--
IR07MW26A	0103H004		17-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L		--	--
IR07MW26A	0103H004		17-Jan-01	DMETAL	ZINC	60	UJ3	µg/L	81	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2,2'-OXYBIS(1-CHLOROPROPANE)	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2,4,5-TRICHLOROPHENOL	25	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2,4,6-TRICHLOROPHENOL	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2,4-DICHLOROPHENOL	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2,4-DIMETHYLPHENOL	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW28A	0103F013		18-Jan-01	SVOA	2,4-DINITROPHENOL	25	UJ3	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2,4-DINITROTOLUENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2,6-DINITROTOLUENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	2-BUTANONE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2-CHLORONAPHTHALENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2-CHLOROPHENOL	10	UJ3	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	2-HEXANONE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2-METHYLNAPHTHALENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2-METHYLPHENOL	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2-NITROANILINE	25	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	2-NITROPHENOL	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	3,3'-DICHLOROBENZIDINE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	3-NITROANILINE	25	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	4,4'-DDD	0.01	J5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	4,4'-DDE	0.02	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	4,4'-DDT	0.02	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	4,6-DINITRO-2-METHYLPHENOL	25	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	4-BROMOPHENYL-PHENYLETHER	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	4-CHLORO-3-METHYLPHENOL	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	4-CHLOROANILINE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	4-CHLOROPHENYL-PHENYLETHER	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	4-METHYLPHENOL	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	4-NITROANILINE	25	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	4-NITROPHENOL	25	UJ3	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	ACENAPHTHENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	ACENAPHTHYLENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	ACETONE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	ACETOPHENONE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ALDRIN	0.01	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ALPHA-BHC	0.01	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ALPHA-CHLORDANE	0.01	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	ALUMINUM	6	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	ANTHRACENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	ANTIMONY	2	U	µg/L	500	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	AROCLOR-1016	0.1	UJ5	µg/L	0.19	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	AROCLOR-1221	0.2	UJ5	µg/L	0.19	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	AROCLOR-1232	0.1	UJ5	µg/L	0.19	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	AROCLOR-1242	0.1	UJ5	µg/L	0.19	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	AROCLOR-1248	0.1	UJ5	µg/L	0.19	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	AROCLOR-1254	0.1	UJ5	µg/L	0.19	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	AROCLOR-1260	0.1	UJ5	µg/L	0.19	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	ARSENIC	2.7	J1	µg/L	36	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	ATRAZINE	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW28A	0103F013		18-Jan-01	DMETAL	BARIUM	278		µg/L	504	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BENZALDEHYDE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	BENZENE	10	UJ3	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BENZO(A)ANTHRACENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BENZO(A)PYRENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BENZO(B)FLUORANTHENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BENZO(G,H,I)PERYLENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BENZO(K)FLUORANTHENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	BETA-BHC	0.01	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BIPHENYL	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BIS(2-CHLOROETHOXY)METHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BIS(2-CHLOROETHYL)ETHER	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BIS(2-ETHYLHEXYL)PHTHALATE	10	U4J7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	BROMOFORM	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	BROMOMETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	BUTYLBENZYLPHTHALATE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	CALCIUM	323,000		µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	CAPROLACTAM	10	J7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	CARBAZOLE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CHLOROETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CHLOROFORM	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	CHROMIUM	1.7	U1	µg/L	15.7	--	--
IR07MW28A	0103F013		18-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	CHRYSENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	COBALT	1.2	J1	µg/L	20.8	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	COPPER	1.4	U1	µg/L	28	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	DELTA-BHC	0.01	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	DIBENZ(A,H)ANTHRACENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	DIBENZOFURAN	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	DIELDRIN	0.02	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	DIETHYLPHTHALATE	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW28A	0103F013		18-Jan-01	SVOA	DIMETHYLPHTHALATE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	DI-N-BUTYLPHTHALATE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	DI-N-OCTYLPHTHALATE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ENDOSULFAN I	0.01	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ENDOSULFAN II	0.02	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ENDOSULFAN SULFATE	0.02	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ENDRIN	0.02	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ENDRIN ALDEHYDE	0.02	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	ENDRIN KETONE	0.02	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	FLUORANTHENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	FLUORENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	GAMMA-BHC (LINDANE)	0.01	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	GAMMA-CHLORDANE	0.01	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	HEPTACHLOR	0.02	J5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	HEPTACHLOR EPOXIDE	0.01	U9	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	HEXACHLOROBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	HEXACHLOROBUTADIENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	HEXACHLOROCYCLOPENTADIENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	HEXACHLOROETHANE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	INDENO(1,2,3-CD)PYRENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	IRON	2,140	J3	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	ISOPHORONE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	MAGNESIUM	139,000		µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	MANGANESE	1,880	J3	µg/L	8,140	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MW28A	0103F013		18-Jan-01	PEST	METHOXYCHLOR	0.1	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	METHYL ACETATE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	METHYLENE CHLORIDE	10	U4	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	MOLYBDENUM	2	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	280	U1	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	NAPHTHALENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	NICKEL	4.4	U1	µg/L	96.5	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	NITROBENZENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	N-NITROSO-DI-N-PROPYLAMINE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	N-NITROSODIPHENYLAMINE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	PENTACHLOROPHENOL	25	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	PHENANTHRENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	SVOA	PHENOL	10	UJ3	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	POTASSIUM	24,400		µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MW28A	0103F013		18-Jan-01	SVOA	PYRENE	10	U	µg/L	300	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	SELENIUM	3	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	SILVER	1	UJ1	µg/L	7.43	--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	SODIUM	596,000	J24	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	STYRENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	TOLUENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	PEST	TOXAPHENE	1	UJ5	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	TRICHLOROETHENE	10	UJ3	µg/L	114	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ7	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	VANADIUM	1	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	55	--	--
IR07MW28A	0103F013		18-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L		--	--
IR07MW28A	0103F013		18-Jan-01	DMETAL	ZINC	3.9	U2	µg/L	81	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ3	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	2-BUTANONE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	2-HEXANONE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	ACETONE	10	U4J7	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	ALUMINUM	6	UJ1	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	ARSENIC	2	U	µg/L	36	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	BARIUM	56.1	J4	µg/L	504	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	BENZENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	BROMOFORM	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MWS-2	0103H002		17-Jan-01	VOA	BROMOMETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	CALCIUM	269,000		µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CHLOROETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CHLOROFORM	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	CHROMIUM	1.9	J	µg/L	15.7	--	--
IR07MWS-2	0103H002		17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	COBALT	1	U	µg/L	20.8	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	COPPER	2.6	U1	µg/L	28	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	IRON	7	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	MAGNESIUM	524,000		µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	MANGANESE	179		µg/L	8,140	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	METHYL ACETATE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	METHYLCYCLOHEXANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	METHYLENE CHLORIDE	12	U4	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	NICKEL	14.3	U2	µg/L	96.5	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	POTASSIUM	169,000		µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	SELENIUM	3.4	J1	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	SILVER	1	U	µg/L	7.43	--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	SODIUM	5,960,000		µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	STYRENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	THALLIUM	4.4	J1	µg/L	13	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	TOLUENE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MWS-2	0103H002		17-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	114	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	VANADIUM	1	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	55	--	--
IR07MWS-2	0103H002		17-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L		--	--
IR07MWS-2	0103H002		17-Jan-01	DMETAL	ZINC	60	UJ3	µg/L	81	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ3	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	2-BUTANONE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	2-HEXANONE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	ACETONE	10	UJ7	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	ALUMINUM	6	UJ1	µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	ALUMINUM	6	UJ1	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	ARSENIC	2	U	µg/L	36	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	ARSENIC	2	U	µg/L	36	--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	BARIUM	22.6	J4	µg/L	504	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	BARIUM	19	J4	µg/L	504	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	BENZENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	BROMOFORM	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	BROMOMETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	CALCIUM	125,000		µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	CALCIUM	105,000		µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MWS-4	0103F008		17-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	CHLOROETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	CHLOROFORM	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	CHROMIUM	14.5		µg/L	15.7	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	CHROMIUM	15.5		µg/L	15.7	--	--
IR07MWS-4	0103F008		17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	COBALT	1	U	µg/L	20.8	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	COBALT	1	U	µg/L	20.8	--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	COPPER	4.5	U1	µg/L	28	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	COPPER	3.8	U1	µg/L	28	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	IRON	7	U	µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	IRON	7	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	MAGNESIUM	316,000		µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	MAGNESIUM	269,000		µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	MANGANESE	1	U	µg/L	8,140	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	MANGANESE	1	U	µg/L	8,140	--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	METHYL ACETATE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	METHYLCYCLOHEXANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	METHYLENE CHLORIDE	10	U4	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	280	U2	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	NICKEL	19.8	U2	µg/L	96.5	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	NICKEL	13.7	U2	µg/L	96.5	--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	POTASSIUM	94,200		µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	POTASSIUM	90,000		µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	SELENIUM	3	UJ1	µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	SILVER	1	U	µg/L	7.43	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	SILVER	1	U	µg/L	7.43	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR07MWS-4	0103F008		17-Jan-01	TMETAL	SODIUM	3,000,000		µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	SODIUM	2,430,000		µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	STYRENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	THALLIUM	2.4	J1	µg/L	13	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	TOLUENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	114	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	VANADIUM	1.5	J	µg/L		--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	VANADIUM	1.1	J	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	55	--	--
IR07MWS-4	0103F008		17-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L		--	--
IR07MWS-4	0103F008		17-Jan-01	TMETAL	ZINC	3	UJ3	µg/L	81	--	--
IR07MWS-4	0103H005		17-Jan-01	DMETAL	ZINC	3	UJ3	µg/L	81	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	--	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR10MW12A	0103H010		18-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	ACETONE	10	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	ACETONE	10	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	BENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	BENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	--	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR10MW12A	0103H010		18-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	STYRENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	STYRENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	--	--	--
IR10MW12A	0103H010		18-Jan-01	LVOA	XYLENE (TOTAL)	0.5	U	µg/L	--	--	--
IR10MW12A	0103H011	0103H010	18-Jan-01	LVOA	XYLENE (TOTAL)	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	ACETONE	10	U	µg/L	--	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR10MW13A1	0103H012		18-Jan-01	LVOA	BENZENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	8		µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	STYRENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.6		µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	TRICHLOROETHENE	5		µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	--	--	--
IR10MW13A1	0103H012		18-Jan-01	LVOA	XYLENE (TOTAL)	0.5	U	µg/L	--	--	--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	1	UJ7	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,1-DICHLOROETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,1-DICHLOROETHENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	1	UJ7	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,2-DIBROMOETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,2-DICHLOROBENZENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,2-DICHLOROETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,2-DICHLOROPROPANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,3-DICHLOROBENZENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	1,4-DICHLOROBENZENE	1	U	µg/L	--		--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR10MW28A	0103F012		18-Jan-01	LVOA	2-BUTANONE	25	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	2-HEXANONE	25	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	4-METHYL-2-PENTANONE	25	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	ACETONE	25	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	BENZENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	BROMODICHLOROMETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	BROMOFORM	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	BROMOMETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	CARBON DISULFIDE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	CARBON TETRACHLORIDE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	CHLOROBENZENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	CHLOROETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	CHLOROFORM	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	CHLOROMETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	1	U	µg/L	--	85	--
IR10MW28A	0103F012		18-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	CYCLOHEXANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	DIBROMOCHLOROMETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	ETHYLBENZENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	ISOPROPYLBENZENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	METHYL ACETATE	1	UJ7	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	METHYLCYCLOHEXANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	METHYLENE CHLORIDE	4	U4	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	STYRENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	TETRACHLOROETHENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	TOLUENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	1	U	µg/L	--	85	--
IR10MW28A	0103F012		18-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	TRICHLOROETHENE	32		µg/L	--	114	--
IR10MW28A	0103F012		18-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	1	U	µg/L	--		--
IR10MW28A	0103F012		18-Jan-01	LVOA	VINYL CHLORIDE	1	U	µg/L	--	55	--
IR10MW28A	0103F012		18-Jan-01	LVOA	XYLENE (TOTAL)	1	U	µg/L	--		--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	2-BUTANONE	10	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	2-HEXANONE	10	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	ACETONE	10	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	ALUMINUM	10.4	U1	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	ALUMINUM	6	UJ1	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	ANTIMONY	2	U	µg/L	500	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	ARSENIC	2.4	J1	µg/L	36	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	ARSENIC	2	U	µg/L	36	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	BARIUM	50	J	µg/L	504	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	BARIUM	49.3	J4	µg/L	504	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	BENZENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	CALCIUM	185,000		µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	CALCIUM	176,000		µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	CHROMIUM	2.2	U1	µg/L	15.7	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	CHROMIUM	2	J	µg/L	15.7	--	--
IR10MW31A1	0103F009		17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	85	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	COBALT	1	UJ1	µg/L	20.8	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	COBALT	1	U	µg/L	20.8	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	COPPER	1.8	U1	µg/L	28	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	COPPER	1.6	U1	µg/L	28	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR10MW31A1	0103F009		17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	IRON	25.5	U1J3	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	IRON	7	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	LEAD	1.3	J	µg/L	14.4	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	LEAD	1	U	µg/L	14.4	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	MAGNESIUM	373,000		µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	MAGNESIUM	357,000		µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	MANGANESE	1,160	J3	µg/L	8,140	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	MANGANESE	243		µg/L	8,140	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	MOLYBDENUM	9	J	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	NICKEL	12.1	J	µg/L	96.5	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	NICKEL	6	U	µg/L	96.5	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	POTASSIUM	68,500	J	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	POTASSIUM	61,100		µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	SELENIUM	3	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	SELENIUM	3	UJ1	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	SILVER	1	UJ1	µg/L	7.43	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	SILVER	1	U2	µg/L	7.43	--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	SODIUM	2,530,000	J24	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	SODIUM	2,910,000		µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	STYRENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	TOLUENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	85	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	114	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L		--	--
IR10MW31A1	0103F014		18-Jan-01	DMETAL	VANADIUM	1	U	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	VANADIUM	2.9	J	µg/L		--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	55	--	--
IR10MW31A1	0103F009		17-Jan-01	LVOA	XYLENE (TOTAL)	0.5	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR10MW31A1	0103F014		18-Jan-01	DMETAL	ZINC	3	U	µg/L	81	--	--
IR10MW31A1	0103F009		17-Jan-01	TMETAL	ZINC	3	UJ3	µg/L	81	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	ACETONE	10	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	BENZENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	10		µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	STYRENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	--	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR10MW33A	0103L001		19-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	TRICHLOROETHENE	13		µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	--	--	--
IR10MW33A	0103L001		19-Jan-01	LVOA	XYLENE (TOTAL)	0.5	U	µg/L	--	--	--
IR18MW21A	0103H008		18-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2,2'-OXYBIS(1-CHLOROPROPANE)	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2,2'-OXYBIS(1-CHLOROPROPANE)	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2,4,5-TRICHLOROPHENOL	25	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2,4,5-TRICHLOROPHENOL	25	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2,4,6-TRICHLOROPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2,4,6-TRICHLOROPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2,4-DICHLOROPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2,4-DICHLOROPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2,4-DIMETHYLPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2,4-DIMETHYLPHENOL	10	U	µg/L	--		--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR18MW21A	0103H008		18-Jan-01	SVOA	2,4-DINITROPHENOL	25	UJ3	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2,4-DINITROPHENOL	25	UJ3	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2,4-DINITROTOLUENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2,4-DINITROTOLUENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2,6-DINITROTOLUENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2,6-DINITROTOLUENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	2-BUTANONE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	2-BUTANONE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2-CHLORONAPHTHALENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2-CHLORONAPHTHALENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	2-CHLOROPHENOL	10	UJ3	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2-CHLOROPHENOL	10	UJ3	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	2-HEXANONE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	2-HEXANONE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2-METHYLNAPHTHALENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2-METHYLNAPHTHALENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	2-METHYLPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2-METHYLPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2-NITROANILINE	25	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2-NITROANILINE	25	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	2-NITROPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	2-NITROPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	3,3'-DICHLOROBENZIDINE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	3,3'-DICHLOROBENZIDINE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	3-NITROANILINE	25	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	3-NITROANILINE	25	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	4,4'-DDD	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	4,4'-DDD	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	4,4'-DDE	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	4,4'-DDE	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	4,4'-DDT	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	4,4'-DDT	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	4,6-DINITRO-2-METHYLPHENOL	25	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	4,6-DINITRO-2-METHYLPHENOL	25	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	4-BROMOPHENYL-PHENYLETHER	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	4-BROMOPHENYL-PHENYLETHER	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	4-CHLORO-3-METHYLPHENOL	10	UJ7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	4-CHLORO-3-METHYLPHENOL	10	UJ7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	4-CHLOROANILINE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	4-CHLOROANILINE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	4-CHLOROPHENYL-PHENYLETHER	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	4-CHLOROPHENYL-PHENYLETHER	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L	--		--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR18MW21A	0103H008		18-Jan-01	SVOA	4-METHYLPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	4-METHYLPHENOL	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	4-NITROANILINE	25	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	4-NITROANILINE	25	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	4-NITROPHENOL	25	UJ3	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	4-NITROPHENOL	25	UJ3	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	ACENAPHTHENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	ACENAPHTHENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	ACENAPHTHYLENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	ACENAPHTHYLENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	VOA	ACETONE	10	U4J7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	ACETONE	10	UJ7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	ACETOPHENONE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	ACETOPHENONE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	ALDRIN	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ALDRIN	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	ALPHA-BHC	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ALPHA-BHC	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	ALPHA-CHLORDANE	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ALPHA-CHLORDANE	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	ALUMINUM	9.4	U1	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	ANTHRACENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	ANTHRACENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	ANTIMONY	2	U	µg/L	--	5,000	--
IR18MW21A	0103H008		18-Jan-01	PEST	AROCLOR-1016	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	AROCLOR-1016	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H008		18-Jan-01	PEST	AROCLOR-1221	0.2	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	AROCLOR-1221	0.2	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H008		18-Jan-01	PEST	AROCLOR-1232	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	AROCLOR-1232	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H008		18-Jan-01	PEST	AROCLOR-1242	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	AROCLOR-1242	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H008		18-Jan-01	PEST	AROCLOR-1248	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	AROCLOR-1248	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H008		18-Jan-01	PEST	AROCLOR-1254	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	AROCLOR-1254	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H008		18-Jan-01	PEST	AROCLOR-1260	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	AROCLOR-1260	0.1	UJ5	µg/L	--	1.9	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	ARSENIC	2.8	J1	µg/L	--	360	--
IR18MW21A	0103H008		18-Jan-01	SVOA	ATRAZINE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	ATRAZINE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	BARIUM	227		µg/L	--	5,040	--
IR18MW21A	0103H008		18-Jan-01	SVOA	BENZALDEHYDE	10	UJ7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BENZALDEHYDE	10	UJ7	µg/L	--		--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR18MW21A	0103H008		18-Jan-01	VOA	BENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	BENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	BENZO(A)ANTHRACENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BENZO(A)ANTHRACENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	BENZO(A)PYRENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BENZO(A)PYRENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	BENZO(B)FLUORANTHENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BENZO(B)FLUORANTHENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	BENZO(G,H,I)PERYLENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BENZO(G,H,I)PERYLENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	BENZO(K)FLUORANTHENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BENZO(K)FLUORANTHENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	--	14	--
IR18MW21A	0103H008		18-Jan-01	PEST	BETA-BHC	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	BETA-BHC	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	BIPHENYL	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BIPHENYL	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	BIS(2-CHLOROETHOXY)METHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BIS(2-CHLOROETHOXY)METHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	BIS(2-CHLOROETHYL)ETHER	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BIS(2-CHLOROETHYL)ETHER	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	BIS(2-ETHYLHEXYL)PHTHALATE	10	U4J7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BIS(2-ETHYLHEXYL)PHTHALATE	10	U4J7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	BROMOFORM	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	BROMOFORM	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	BROMOMETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	BROMOMETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	BUTYLBENZYLPHTHALATE	10	UJ7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	BUTYLBENZYLPHTHALATE	10	UJ7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	CADMIUM	1	U	µg/L	--	93	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	CALCIUM	148,000		µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	CAPROLACTAM	10	UJ7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	CAPROLACTAM	10	UJ7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	CARBAZOLE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	CARBAZOLE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	CHLOROBENZENE	10	J	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	CHLOROETHANE	10	U	µg/L	--		--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	CHLOROFORM	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CHLOROFORM	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	CHROMIUM	1	U	µg/L	--	157	--
IR18MW21A	0103H008		18-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	CHRYSENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	CHRYSENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	--	85	--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	--	85	--
IR18MW21A	0103H008		18-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	COBALT	1	UJ1	µg/L	--	208	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	COPPER	1	U	µg/L	--	280	--
IR18MW21A	0103H008		18-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	DELTA-BHC	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	DELTA-BHC	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	DIBENZ(A,H)ANTHRACENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	DIBENZ(A,H)ANTHRACENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	DIBENZOFURAN	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	DIBENZOFURAN	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	DIELDRIN	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	DIELDRIN	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	--	1,250	--
IR18MW21A	0103H008		18-Jan-01	SVOA	DIETHYLPHTHALATE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	DIETHYLPHTHALATE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	DIMETHYLPHTHALATE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	DIMETHYLPHTHALATE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	DI-N-BUTYLPHTHALATE	10	U4	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	DI-N-BUTYLPHTHALATE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	DI-N-OCTYLPHTHALATE	10	UJ7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	DI-N-OCTYLPHTHALATE	10	UJ7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	ENDOSULFAN I	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ENDOSULFAN I	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	ENDOSULFAN II	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ENDOSULFAN II	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	ENDOSULFAN SULFATE	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ENDOSULFAN SULFATE	0.02	UJ5	µg/L	--		--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR18MW21A	0103H008		18-Jan-01	PEST	ENDRIN	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ENDRIN	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	ENDRIN ALDEHYDE	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ENDRIN ALDEHYDE	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	ENDRIN KETONE	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	ENDRIN KETONE	0.02	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	FLUORANTHENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	FLUORANTHENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	FLUORENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	FLUORENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	PEST	GAMMA-BHC (LINDANE)	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	GAMMA-BHC (LINDANE)	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	GAMMA-CHLORDANE	0.01	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	GAMMA-CHLORDANE	0.01	U9	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	--	1,250	--
IR18MW21A	0103H008		18-Jan-01	PEST	HEPTACHLOR	0.03	J5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	HEPTACHLOR	0.02	J5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	HEPTACHLOR EPOXIDE	0.01	U9	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	HEPTACHLOR EPOXIDE	0.01	UJ35	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	HEXACHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	HEXACHLOROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	HEXACHLOROBUTADIENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	HEXACHLOROBUTADIENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	HEXACHLOROCYCLOPENTADIENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	HEXACHLOROCYCLOPENTADIENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	HEXACHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	HEXACHLOROETHANE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	INDENO(1,2,3-CD)PYRENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	INDENO(1,2,3-CD)PYRENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	IRON	2,530	J3	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	ISOPHORONE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	ISOPHORONE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	LEAD	1	U	µg/L	--	144	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	MAGNESIUM	66,800		µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	MANGANESE	1,480	J3	µg/L	--	81,400	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	--	6	--
IR18MW21A	0103H008		18-Jan-01	PEST	METHOXYCHLOR	0.1	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	METHOXYCHLOR	0.1	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	METHYL ACETATE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	METHYL ACETATE	10	U	µg/L	--		--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR18MW21A	0103H008		18-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	METHYLENE CHLORIDE	10	U4	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	METHYLENE CHLORIDE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	MOLYBDENUM	2	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	NAPHTHALENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	NAPHTHALENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	NICKEL	1	U	µg/L	--	965	--
IR18MW21A	0103H008		18-Jan-01	SVOA	NITROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	NITROBENZENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	N-NITROSO-DI-N-PROPYLAMINE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	N-NITROSO-DI-N-PROPYLAMINE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	N-NITROSODIPHENYLAMINE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	N-NITROSODIPHENYLAMINE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	PENTACHLOROPHENOL	25	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	PENTACHLOROPHENOL	25	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	PHENANTHRENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	PHENANTHRENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	SVOA	PHENOL	10	UJ3	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	PHENOL	10	UJ3	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	POTASSIUM	11,100		µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	SVOA	PYRENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H009	0103H008	18-Jan-01	SVOA	PYRENE	10	U	µg/L	--	3,000	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	SELENIUM	3	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	SILVER	1	UJ1	µg/L	--	74.3	--
IR18MW21A	0103H008		18-Jan-01	DMETAL	SODIUM	92,600	J24	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	STYRENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	STYRENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	--	130	--
IR18MW21A	0103H008		18-Jan-01	VOA	TOLUENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	TOLUENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	PEST	TOXAPHENE	1	UJ5	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	PEST	TOXAPHENE	1	UJ5	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	--	85	--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	--	85	--
IR18MW21A	0103H008		18-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	--	114	--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	--	114	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR18MW21A	0103H008		18-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ7	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ7	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	VANADIUM	1	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	--	55	--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	--	55	--
IR18MW21A	0103H008		18-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L	--		--
IR18MW21A	0103H009	0103H008	18-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L	--		--
IR18MW21A	0103H008		18-Jan-01	DMETAL	ZINC	3	U	µg/L	--	810	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	ACETONE	10	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	BENZENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	--	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR25MW37A	0103H016		19-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	STYRENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	--	--	--
IR25MW37A	0103H016		19-Jan-01	LVOA	XYLENE (TOTAL)	0.5	U	µg/L	--	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	22		µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	2-BUTANONE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	2-HEXANONE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	ACETONE	10	UJ7	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	ALUMINUM	15.5	U1	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	ANTIMONY	2	U	µg/L	500	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	ARSENIC	3.8	J1	µg/L	36	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	BARIUM	17.3	J	µg/L	504	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	BENZENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	BROMOFORM	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	BROMOMETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	CALCIUM	13,700		µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR26MW41A	0103H013		18-Jan-01	VOA	CHLOROETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	CHLOROFORM	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	CHROMIUM	2.9	U1	µg/L	15.7	--	--
IR26MW41A	0103H013		18-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	COBALT	1	UJ1	µg/L	20.8	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	COPPER	4	U1	µg/L	28	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	DICHLORODIFLUOROMETHANE	28	J7	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	IRON	18.2	U1J3	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	MAGNESIUM	45,500		µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	MANGANESE	335	J3	µg/L	8,140	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	METHYL ACETATE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	METHYLENE CHLORIDE	10	U4	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	MOLYBDENUM	2	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	260	U1	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	NICKEL	39.4	J	µg/L	96.5	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	POTASSIUM	1,080	J	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	SELENIUM	3	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	SILVER	1	UJ1	µg/L	7.43	--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	SODIUM	198,000	J24	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	STYRENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	THALLIUM	2.3	J1	µg/L	13	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	TOLUENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	114	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	TRICHLOROFLUOROMETHANE	5	J7	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	VANADIUM	4.6	J	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	55	--	--
IR26MW41A	0103H013		18-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L		--	--
IR26MW41A	0103H013		18-Jan-01	DMETAL	ZINC	3.7	U2	µg/L	81	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR26MW45A	0103H017		19-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	2-BUTANONE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	2-HEXANONE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	ACETONE	10	UJ7	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	ALUMINUM	6	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	ANTIMONY	2	U	µg/L	500	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	ARSENIC	3.1	J1	µg/L	36	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	BARIUM	112	J	µg/L	504	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	BENZENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	BROMOFORM	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	BROMOMETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	CALCIUM	151,000		µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CHLOROETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CHLOROFORM	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	CHROMIUM	5.2	U1	µg/L	15.7	--	--
IR26MW45A	0103H017		19-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	COBALT	1	UJ1	µg/L	20.8	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	COPPER	2.1	U1	µg/L	28	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ7	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR26MW45A	0103H017		19-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	IRON	7	UJ3	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	MAGNESIUM	383,000		µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	MANGANESE	128	J3	µg/L	8,140	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	METHYL ACETATE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	METHYLENE CHLORIDE	10	U4	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	MOLYBDENUM	2	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	380	U1	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	NICKEL	14.3	J	µg/L	96.5	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	POTASSIUM	131,000		µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	SELENIUM	3	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	SILVER	1	UJ1	µg/L	7.43	--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	SODIUM	3,820,000	J24	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	STYRENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	TOLUENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	114	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ7	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	VANADIUM	2.2	J	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	55	--	--
IR26MW45A	0103H017		19-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L		--	--
IR26MW45A	0103H017		19-Jan-01	DMETAL	ZINC	3	U	µg/L	81	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ3	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR46MW37A	0103H003		17-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	2-BUTANONE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	2-HEXANONE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	ACETONE	10	U4J7	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	ALUMINUM	6	UJ1	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	ARSENIC	2	U	µg/L	36	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	BARIUM	61.6	J4	µg/L	504	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	BENZENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	BROMOFORM	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	BROMOMETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	CALCIUM	17,600		µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CHLOROETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CHLOROFORM	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	CHROMIUM	1	U	µg/L	15.7	--	--
IR46MW37A	0103H003		17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	COBALT	1	U	µg/L	20.8	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	COPPER	1	U	µg/L	28	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	12	J	µg/L	1,250	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	IRON	11.5	U1	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	LEAD	1.7	U1	µg/L	14.4	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	MAGNESIUM	166,000		µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	MANGANESE	22.9		µg/L	8,140	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	METHYL ACETATE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	METHYLCYCLOHEXANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	METHYLENE CHLORIDE	11	U4	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
IR46MW37A	0103H003		17-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	NICKEL	8.9	U2	µg/L	96.5	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	POTASSIUM	3,380	J	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	SILVER	1.1	U2	µg/L	7.43	--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	SODIUM	152,000		µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	STYRENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	TOLUENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	85	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	114	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	VANADIUM	1	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	55	--	--
IR46MW37A	0103H003		17-Jan-01	VOA	XYLENE (TOTAL)	10	U	µg/L		--	--
IR46MW37A	0103H003		17-Jan-01	DMETAL	ZINC	3	UJ3	µg/L	81	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
PA50MW01A	0103F006		17-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	2-BUTANONE	10	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	2-BUTANONE	10	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	2-HEXANONE	10	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	2-HEXANONE	10	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	ACETONE	10	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	ACETONE	10	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	ALUMINUM	6	UJ1	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	ALUMINUM	6	UJ1	µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	ALUMINUM	56.3	U1	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	ANTIMONY	2	UJ1	µg/L	500	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	ANTIMONY	3.9	U1	µg/L	500	--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	ARSENIC	2.9	U1	µg/L	36	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	ARSENIC	2.8	U1	µg/L	36	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	ARSENIC	2.1	J1	µg/L	36	--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	BARIUM	120	J4	µg/L	504	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	BARIUM	127	J4	µg/L	504	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	BARIUM	131	J	µg/L	504	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	BENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	BENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	BERYLLIUM	1	U	µg/L	1.4	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	CADMIUM	1	U	µg/L	9.3	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	CADMIUM	1	U	µg/L	9.3	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	CADMIUM	1	U	µg/L	9.3	--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	CALCIUM	38,800		µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	CALCIUM	40,200		µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	CALCIUM	39,700		µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L		--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	CHROMIUM	1	U	µg/L	15.7	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	CHROMIUM	1	U	µg/L	15.7	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	CHROMIUM	1	U1	µg/L	15.7	--	--
PA50MW01A	0103F006		17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	85	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	85	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	COBALT	1	U	µg/L	20.8	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	COBALT	1.3	J	µg/L	20.8	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	COBALT	1	UJ1	µg/L	20.8	--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	COPPER	1.1	U1	µg/L	28	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	COPPER	1	U	µg/L	28	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	COPPER	1	U	µg/L	28	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	1,250	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	1,250	--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	IRON	7	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	IRON	7	U	µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	IRON	64.2	U1J3	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	LEAD	1	U	µg/L	14.4	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	LEAD	1	U1	µg/L	14.4	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	LEAD	1	U	µg/L	14.4	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
PA50MW01A	0103F006		17-Jan-01	TMETAL	MAGNESIUM	92,200		µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	MAGNESIUM	95,500		µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	MAGNESIUM	93,400		µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	MANGANESE	166		µg/L	8,140	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	MANGANESE	171		µg/L	8,140	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	MANGANESE	160	J3	µg/L	8,140	--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	MERCURY	0.1	U	µg/L	0.6	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	MERCURY	0.12	J	µg/L	0.6	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	METHYLENE CHLORIDE	2	U4	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	MOLYBDENUM	7	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	MOLYBDENUM	7	U	µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	MOLYBDENUM	2	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	300	U2	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	NICKEL	6	U	µg/L	96.5	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	NICKEL	8.7	U2	µg/L	96.5	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	NICKEL	6.8	J	µg/L	96.5	--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	POTASSIUM	4,350	J	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	POTASSIUM	4,300	J	µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	POTASSIUM	4,740	J	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	SELENIUM	3	UJ1	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	SELENIUM	3	UJ1	µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	SELENIUM	3.4	J	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	SILVER	1	U	µg/L	7.43	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	SILVER	1	U	µg/L	7.43	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	SILVER	1	UJ1	µg/L	7.43	--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	SODIUM	261,000		µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	SODIUM	270,000		µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	SODIUM	260,000	J24	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	STYRENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	STYRENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	THALLIUM	2	UJ1	µg/L	13	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	THALLIUM	2	UJ1	µg/L	13	--	--

SUMMARY OF ANALYTICAL RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Duplicate Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	POC Well Trigger Level (µg/L)	Sentinel Well Trigger Level (µg/L)	Utility Well Trigger Level (µg/L)
PA50MW01A	0103F006		17-Jan-01	LVOA	TOLUENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	TOLUENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	85	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	85	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	114	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	114	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	VANADIUM	3.4	J	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	VANADIUM	3.9	J	µg/L		--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	VANADIUM	3.3	J	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	55	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	55	--	--
PA50MW01A	0103F006		17-Jan-01	LVOA	XYLENE (TOTAL)	0.5	U	µg/L		--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	LVOA	XYLENE (TOTAL)	0.5	U	µg/L		--	--
PA50MW01A	0103F006		17-Jan-01	TMETAL	ZINC	3	UJ3	µg/L	81	--	--
PA50MW01A	0103F007	0103F006	17-Jan-01	TMETAL	ZINC	3	UJ3	µg/L	81	--	--
PA50MW01A	0103F011		18-Jan-01	DMETAL	ZINC	3	U	µg/L	81	--	--

NOTES: Bold font indicates a result that exceeds the trigger level

CHROM	Chromium
DMETAL	Dissolved metal
LVOA	Low-level volatile organic compound
ND	Not detected. Concentration reported is the analytical detection limit
PEST	Pesticide
SVOA	Semivolatile volatile organic compound
TMETAL	Total metal
TPHEXT	Total petroleum hydrocarbon - extractable
TPHPRG	Total petroleum hydrocarbon - purgeable
µg/L	Micrograms per liter
VOA	Volatile organic compound

Qualifiers:

J	Qualified as estimated
R	Qualified as rejected
U	Not detected

Qualifier codes:

1	System performance
2	Precision - matrix duplicate
3	Accuracy - surrogate, matrix, or blank spike
4	Serial dilution
5	Holding time
7	Calibration
8	Exceeds calibration range
U1	Non-detected due to method blank contamination
U2	Non-detected due to field blank contamination
U4	Non-detected - common laboratory contaminant

APPENDIX B

JANUARY TO MARCH 2001 MONITORING WELL SAMPLING SHEETS

(24 Pages)

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR06MW42A Site No.: IR06 Day and Date: Tues 01/16/01

Personnel: G Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 13.75 ft. below top of casing

Depth to water: 10.32 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	3.43	ft. x 0.652 gal/ft x 3 =	6.71	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 0.42 mg/L
Middle: 0.26 mg/L
Bottom: _____mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
0907	1.0	17.7	2.16	0.10	6.85	4.85	10	
0911	2.0	18.4	2.18	0.10	6.47	4.82	22	
0915	3.0	18.6	2.19	0.10	6.55	4.78	33	
0919	4.0	18.6	2.19	0.10	6.58	4.77	38	
0924	5.0	18.8	2.18	0.10	6.46	4.77	34	
0928	6.0	18.8	2.19	0.10	6.54	4.79	31	
0934	7.0	18.6	2.21	0.10	6.73	4.82	25	
0940	8.5	18.6	2.22	0.10	7.08	4.84	19	
0948	10.0	18.6	2.23	0.10	6.88	4.85	16	

Purged Dry? NO Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs	X				F-y/n
Pest/PCBs	X				F-y/n
Metals	X	F-y/n Y			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G Heinrich

Sample Number(s): 0103G002 Sample Date/Time: 01/16/01 1000

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR06MW45A Site No.: IR06 Day and Date: Tuesday 01/16/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 13.20 ft. below top of casing

Depth to water: 5.94 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	7.26	ft. x 0.652 gal/ft x 3 =	14.20	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 2.62 mg/L
Middle: 3.10 mg/L
Bottom: 0.17 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1040	3.0	13.4	18.50	1.08	10.56	4.74	950	
1045	5.0	14.1	1.24	1.24	9.77	4.70	620	
1047	7.0	14.2	22.10	1.32	9.87	4.70	275	
1050	9.0	14.8	28.90	1.78	9.71	4.70	510	
1052	10.0							Dry
1355								DTW= 5.92

Purged Dry? [ ] Field measurement equipment used: Horiba U-10, Heron Dipper T 45.55 Do Meter

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	Low			Hex Cr.	
SVOCs	X				F-y/n [ ]
Pest/PCBs					F-y/n [ ]
Metals		F-y/n [ ]			
TPH-p					F-y/n= note (yes/no) filtered samples.
TPH-e					Filter where turbidity > 100 NTU.

Sampler(s): G. Heinrich

Sample Number(s): 0103G003 Sample Date/Time: 1/16/01 1400

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [ ] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR07MW19A Site No.: IR07 Day and Date: Tuesday 01/16/01

Personnel: Gavin Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 15.77 ft. below top of casing

Depth to water: 8.86 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	6.91	ft. x 0.652 gal/ft x 3 =	13.52	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 1.54 mg/L
Middle: 1.55 mg/L
Bottom: 0.33 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1251	3.0	16.1	23.4	1.41	9.22	4.47	20	
1253	6.0	16.2	22.6	1.36	9.26	4.47	41	
1256	9.0	16.3	22.2	1.33	9.24	4.47	52	
1300	12.0	16.8	27.6	1.70	8.76	4.47	170	
1304	15.0	16.3	20.3	1.21	9.62	4.49	91	
1307	18.0	16.3	19.7	1.17	9.52	4.51	49	

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals	X	F-y/n Y			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G Heinrich

Sample Number(s): 0103G006 Sample Date/Time: 1/16/01 1315

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [ ] None [ ] Field Duplicate [X] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR07MW20A1 Site No.: IR07 Day and Date: Tuesday 01/16/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 23.41 ft. below top of casing

Depth to water: 7.40 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	16.01	ft. x 0.652 gal/ft x 3 =	31.32	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 3.34 mg/L
Middle: 2.59 mg/L
Bottom: 0.75 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1130	5.0	14.8	35.9	2.27	9.75	4.66	35	
1133	10.0	14.9	36.3	2.27	9.69	4.64	26	
1136	15.0	15.0	36.1	2.27	9.83	4.65	54	
1140	20.0	15.1	36.3	2.29	9.57	4.66	28	
1143	25.0	15.1	36.3	2.29	9.55	4.66	27	
1146	30.0	15.1	36.3	2.29	9.52	4.67	26	
1150	35.0	15.1	36.3	2.28	9.57	4.67	15	

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals	X	F-y/n Y			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G Heinrich

Sample Number(s): 0103G004 Sample Date/Time: 1/16/01 1200

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [X] MS/MSD

Dup. Sample Number: 0103G005 Dup. Sample Date/Time: 1/16/01 1230

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR07MW24A Site No.: IR07 Day and Date: Thurs 01/18/01

Personnel: G Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 18.68 ft. below top of casing

Depth to water: 11.68 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	7.00	ft. x 0.652 gal/ft x 3 =	13.69	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings

Position in Screened Interval

Top: 0.80 mg/L

Middle: 0.49 mg/L

Bottom: 0.20 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1455	3.0	16.0	6.94	0.37	8.23	4.58	182	
1458	6.0	16.5	4.16	0.21	8.05	4.53	51	
1501	9.0	16.4	3.99	0.20	8.08	4.53	55	
15:04	12.0	16.5	3.51	0.17	8.21	4.54	33	
1508	15.0	16.6	3.07	0.15	8.19	4.53	20	
1512	18.0	16.3	3.41	0.17	8.45	4.52	66	
1525	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals	X	F-y/n Y			
TPH-p	X				F-y/n= note (yes/no) filtered samples. Filter where turbidity > 100 NTU.
TPH-e	X				

Sampler(s): G Heinrich

Sample Number(s): 0103H014 Sample Date/Time: 01/18/01 1525

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: _____ Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR07MW26A Site No.: IR07 Day and Date: Wed 01/17/01

Personnel: G Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 17.90 ft. below top of casing

Depth to water: 11.06 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	6.84	ft. x 0.652 gal/ft x 3 =	13.38	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 0.69 mg/L
Middle: 1.45 mg/L
Bottom: 0.45 mgL

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1118	4.0	15.3	32.1	2.00	9.35	4.41	125	
1121	6.0	15.6	32.7	2.04	9.48	4.39	75	
1123	8.0	15.5	32.8	2.05	9.59	4.39	67	
1126	10.0	15.5	32.9	2.06	9.65	4.40	51	
1128	12.0	15.6	33.4	2.09	10.21	4.41	41	
1130	14.0	15.8	34.4	2.16	9.80	4.41	64	
1132	16.0	15.6	33.6	2.10	10.10	4.42	46	
1138	18.0	15.5	33.8	2.11	9.77	4.44	44	
1150	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals	X	F-y/n Y			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G Heinrich

Sample Number(s): 0103H004 Sample Date/Time: 1/17/01 1150

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR07MW28A Site No.: IR07 Day and Date: Thurs 01/18/01

Personnel: J. Fortuna

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 17.88 ft. below top of casing Screened Interval:

Depth to water: 9.52 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	8.36	ft. x 0.652 gal/ft x 3 =	16.35	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 1.26 mg/L
Middle: 0.83 mg/L
Bottom: 0.54 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1400	5.0	16.7	4.55	0.23	1.22	7.38	1	
1405	9.0	16.8	4.92	0.25	0.91	7.34	0	
1409	13.0	16.8	4.86	0.25	0.95	7.35	1	
1415	17.0	16.8	4.89	0.25	0.89	7.36	2	
1425	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs	X				F-y/n
Pest/PCBs	X				F-y/n
Metals	X	F-y/n Y			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): J. Fortuna

Sample Number(s): 0103F013 Sample Date/Time: 1/18/01 1425

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [ ] None [ ] Field Duplicate [X] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR07MWS-2 Site No.: IR07 Day and Date: Tuesday 01/06/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 18.25 ft. below top of casing Screened Interval:

Depth to water: 10.77 ft. below top of casing

	Water Column		Purge Volume	
[ ] 2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
[ ] 4-inch well	7.48	ft. x 0.652 gal/ft x 3 =	14.63	gal.
[ ] _-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 0.99mg/L
Middle: 0.54 mg/L
Bottom: 0.28 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
0912	3.0	14.3	30.60	1.89	8.58	4.52	384	
0915	6.0	14.3	26.50	1.61	8.64	4.49	231	
0918	9.0	14.3	26.00	1.58	8.79	4.50	166	
0920	12.0	14.4	26.10	1.59	8.67	4.51	210	
0924	15.0	14.4	25.90	1.58	8.64	4.50	131	
0940	Sample							

Purged Dry? No Field measurement equipment used: Heron Dipper T, Horiba U-10, YS1 55 Do Meter

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs					F-y/n [ ]
Pest/PCBs					F-y/n [ ]
Metals	X	F-y/n [ ]			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G. Heinrich

Sample Number(s): 0103H002 Sample Date/Time: 1/17/01 0940

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Date 1/17/01

Well Name	IR07MWS4	Screen Interval			
Project	Parcel B Ramp Sample	Static Elevation	GND TOC	Immiscible Phases Present?	N
Project No.	G0069-270C0101	Static Water Level (from TOC)	13.79	Type	
Well Location	IR07	Well Stick Up		Measured with	VISUAL
Sample Date	1/17/01	Static Elevation		PID Readings (background)	0.00
Sampling Personnel		Well Depth	20.76 MEAS RPTD	PID Reading (TOC)	0.00
	J Fortuna	Feet of Water	6.97	Well Installed by	
		Gallons/Foot	0.652	Installation Date	
Sample ID	0103F008	Casing Volume	4.54	Development Date(s)	
Duplicate ID	NA				

FIELD CHEMISTRY CALIBRATIONS FACTORY CALIBRATED

Date/Time Spec. Conductance: Standard____umhos/cm at 25C Reading__umhos/cm at___^{0}C

pH: pH 4.00 - at__^{0}C pH 7.00 - _at__^{0}C pH 10.00 - _at__^{0}C Slope

Dissolved Oxygen: D.O. Meter__mg/L at ^{0}C PID: Calibration Gas Isobytyl PPM 100 Span____Reading 100

PURGING

Time	Discharge Rate (mL/min)	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (^{0}C)	Specific Conduct (umhos/cm at ^{0}C)	Turbidity (NTU)	Cumulative Volume of Water Removed (Purged) Liters	Casing Volume	PID/OVA Reading Location	Value	Depth to Water (ft)	Salinity
1029	250	1.18	6.99	220.8	16.71	16875	0.1	2				13.81	clear
1033	250	0.88	6.99	218.3	16.76	16989	0.0	3				13.81	10.04
`036	300	0.63	6.99	216.1	16.93	16870	0.0	4				13.81	9.93
1040	300	0.57	6.99	214.1	16.97	16720	0.0	5				13.82	
1043	300	0.52	7.00	212.2	16.94	16527	0.0	6				13.82	9.70
1047	300	0.53	7.00	210.2	16.92	16318	0.0	7				13.82	
1050	300	0.49	7.00	208.9	16.95	16120	0.0	8				13.82	
1057	300	0.45	7.00	205.9	17.05	15534	0.4	10				13.83	
1104	300	0.42	7.01	202.9	17.16	14992	2.7	12				13.83	8.76
1108	300	0.41	7.01	201.9	17.16	14861	2.3	13				13.83	
1111	300	0.40	7.01	200.7	17.09	14692	1.0	14				13.83	
1114	300	0.41	7.01	200.5	17.12	14649	0.0	15				13.83	

SAMPLE PARAMETERS

VOC	Hex Cr	Metals	TPH-P	TPH-E								

Condition of Well Good

Remarks

FIELD EQUIPMENT

Ph Meter	YSI 6820 w/610 datalogger	Serial Number	97B0440 (YSI 6820)	Fractions	
Spec. Cond. Meter	Same as pH	Serial Number	152392R (610D)		
Pump	Geopump 2	Serial Number	N/A		
Water Level Meter	Solinst	Serial Number	16885	Number of Bottles	
D.O. Meter	Same as pH	Serial Number		Sample Depth	
Filter Apparatus	N/A	Filters	.45 MICRON	Field Notebook	
Temprature Measure	Same as pH	Serial Number		Sample Method	Perastaltic Pump at 200 ml/min
Interface Probe	N/A	Serial Number	N/A		100 ml/min for VOC's
PID/OVA		Serial Number		Discharge Water Containerized?	Y

Field Chemistry Calibrations

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR07MWS-4 Site No.: IR07 Day and Date: Tuesday 01/17/01

Personnel: G Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 20.76 ft. below top of casing Screened Interval:

Depth to water: 13.87 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	6.89	ft. x 0.652 gal/ft x 3 =	13.48	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 0.80 mg/L
Middle: 0.38 mg/L
Bottom: ____mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1217	3.0	16.4	14.4	0.83	9.84	4.47	6	
1220	6.0	16.7	16.1	0.94	8.04	4.45	4	
1223	9.0	16.7	14.8	0.85	8.37	4.47	4	
1226	12.0	16.5	14.8	0.86	8.97	4.49	7	
1230	15.0	16.7	15.6	0.90	8.68	4.49	5	
1233	19.0	16.7	15.3	0.89	8.13	4.49	28	
1240	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals	X	F-y/n Y			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G Heinrich

Sample Number(s): 0103H005 Sample Date/Time: 01/16/01 1240

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR10MW12A Site No.: IR10 Day and Date: Tuesday 01/16/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 17.96 ft. below top of casing

Depth to water: 6.31 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	11.65	ft. x 0.652 gal/ft x 3 =	22.79	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings

Position in Screened Interval

Top: 0.96 mg/L

Middle: 0.40 mg/L

Bottom: 0.23 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1205	4.0	14.3	2.83	0.13	9.06	4.54	41	
1208	8.0	14.8	3.52	0.17	8.62	4.53	34	
1211	12.0	14.4	1.62	0.07	9.02	4.53	15	
1215	16.0	14.5	2.44	0.11	8.94	4.58	39	
1218	20.0	14.2	1.59	0.07	8.94	4.57	14	
1222	24.0	14.8	3.48	0.17	9.09	4.59	91	
1226	30.0	14.5	1.99	0.09	9.50	4.58	32	
1235	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, Heron Dipper T, YS1 55 D.O. Meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*	*Field Test Kit Analyses*	
VOCs	X	Low			
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals		F-y/n Y			
TPH-p					
TPH-e					

F-y/n= note (yes/no) filtered samples.
Filter where turbidity > 100 NTU.

Sampler(s): G. Heinrich

Sample Number(s): 0103H010 Sample Date/Time: 1/18/01 12235

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [ ] None [X] Field Duplicate [ ] MS/MSD

Dup. Sample Number: 0103H011 Dup. Sample Date/Time: 01/18/01 1250

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR10MW13A1 Site No.: IR10 Day and Date: Thursday 01/18/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 19.57 ft. below top of casing

Depth to water: 7.59 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	11.98	ft. x 0.652 gal/ft x 3 =	23.43	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 0.70 mg/L
Middle: 0.23 mg/L
Bottom: 0.26 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1300	5.0	17.7	3.64	0.18	7.58	4.53	128	
1304	10.0	18.0	3.95	0.20	7.85	4.5	183	
1308	15.0	17.9	3.82	0.19	8.39	4.49	137	
1312	20.0	18.1	3.99	0.20	7.72	4.49	140	
1317	25.0	18.2	4.12	0.21	7.66	4.49	78	
1320	31.0	17.7	3.67	0.18	8.52	4.47	100	
1325	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, YS1 55 Do Meter, Heron Dipper T

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X	Low-level			
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals		F-y/n			
TPH-p					F-y/n= note (yes/no) filtered samples.
TPH-e					Filter where turbidity > 100 NTU.

Sampler(s): G. Heinrich

Sample Number(s): 0103H012 Sample Date/Time: 01/18/01 1325

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR10MW14A Site No.: IR10 Day and Date: Friday 01/19/01

Personnel: G.Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: _____ ft. below top of casing

Depth to water: _____ ft. below top of casing

	Water Column		Purge Volume	
☐ 2-inch well	_____	ft. x 0.163 gal/ft x 3 =	_____	gal.
☐ 4-inch well	_____	ft. x 0.652 gal/ft x 3 =	_____	gal.
☐ _-inch well	_____	ft. x _____ gal/ft x 3 =	_____	gal.

Initial D.O. Readings
Position in Screened Interval
Top: ____mg/L
Middle: ____mg/L
Bottom: ____mg/L

Method of Extraction: ☐ Disposable Bailer ☐ Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments

Purged Dry? ☐ Field measurement equipment used: _____

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X	Low			
SVOCs					F-y/n ☐
Pest/PCBs					F-y/n ☐
Metals		F-y/n ☐			
TPH-p					F-y/n= note (yes/no) filtered samples.
TPH-e					Filter where turbidity > 100 NTU.

Sampler(s): _____

Sample Number(s): _____ Sample Date/Time: _____

Sample Collection Method: ☐ Disposable Bailer ☐ Other:

QA/QC Sample(s)? ☐ None ☐ Field Duplicate ☐ MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

*****WELL NOT SAMPLED: PROXIMAL TO OPEN EXCAVATION*****

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR10MW28A | Site No.: IR10 | Day and Date: Thursday 01/18/01

Personnel: j. Fortuna

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 17.26 ft. below top of casing

Depth to water: 11.63 ft. below top of casing

		Water Column		Purge Volume	
X	2-inch well	5.63	ft. x 0.163 gal/ft x 3 =	2.75	gal.
	4-inch well		ft. x 0.652 gal/ft x 3 =		gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 4.66 mg/L
Middle: 1.51 mg/L
Bottom: 0.60 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1112	1.0	14.7	4.30	0.21	3.03	7.03	25	
1115	1.5							
1315	Depth to water = 14.15; collect sample							

Purged Dry? Yes Field measurement equipment used: Horiba U-10, YS1 55 Do Meter, Heron Dipper T

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X	Low-level			
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals		F-y/n			
TPH-p					F-y/n= note (yes/no) filtered samples.
TPH-e					Filter where turbidity > 100 NTU.

Sampler(s): J. Fortuna

Sample Number(s): 0103F012 Sample Date/Time: 01/18/01 1315

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Date 1/17/01

Well Name	IR10MW31A1	Screen Interval			
Project	Parcel B Ramp Sample	Static Elevation	GND TOC	Immiscible Phases Present?	N
Project No.	G0069-270C0101	Static Water Level (from TOC)	10.02	Type	
Well Location	IR10	Well Stick Up		Measured with	VISUAL
Sample Date	01/17/01	Static Elevation		PID Readings (background)	
Sampling Personnel		Well Depth	17.14 MEAS RPTD	PID Reading (TOC)	
	J. Fortuna	Feet of Water		Well Installed by	
		Gallons/Foot	0.652	Installation Date	
Sample ID	0103F004	Casing Volume		Development Date(s)	
Duplicate ID					

FIELD CHEMISTRY CALIBRATIONS FACTORY CALIBRATED

Date/Time Spec. Conductance: Standard____umhos/cm at 25C Reading____umhos/cm at___°C

pH: pH 4.00 - at__°C pH 7.00 - at__°C pH 10.00 - at__°C Slope

Dissolved Oxygen: D.O. Meter__mg/L at °C PID: Calibration Gas_____PPM ____Span____Reading

PURGING

Time	Discharge Rate (mL/min)	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conduct (umhos/cm at °C)	Turbidity (NTU)	Cumulative Volume of Water Removed (Purged) Liters	Casing Volume	PID/OVA Reading Location	Value	Depth to Water (ft)	Salinity
1228	250	4.93	7.62	226.8	17.65	12301	10.5	2				10.04	
1232	250	4.68	7.61	226.3	17.74	12447	7.5	3				10.08	7.17
1236	250	4.60	7.61	225.7	17.76	12502	5.2	4				10.11	
1240	250	4.52	7.60	224.8	17.71	12564	3.6	5				10.15	
1244	225	4.25	7.59	224.9	17.74	12721	2.5	6				10.18	
1252	250	3.92	7.58	224.4	17.80	12982	1.4	8				10.27	
1259	250	3.41	7.54	223.8	17.82	13448	0.9	10				10.32	
1308	225	2.56	7.50	222.8	17.85	14202	0.8	12				10.40	
1316	250	2.25	7.49	221.3	17.89	14525	0.8	14				10.45	
1324	250	2.11	7.48	219.5	17.88	14718	0.8	16				10.52	
1332	250	2.02	7.47	218.1	17.91	14787	0.7	18				10.59	
1340	250	2.03	7.47	217.8	17.90	14793	0.9	20				10.62	

SAMPLE PARAMETERS

	Hex Cr	Metals	TPH-P	TPH-E		Low-level VOC						

Condition of Well

Remarks Decreasing DTW due to tidal influence; well is known to recharge rapidly, low tide at 1323

FIELD EQUIPMENT

Ph Meter	YSI 6820 w/610D	Serial Number	97B0440AA (6820)	Fractions	
Spec. Cond. Meter	Same as pH	Serial Number	152392R (610D)		
Pump	Geopump 2	Serial Number	N/A		
Water Level Meter	Solinst	Serial Number	16885	Number of Bottles	
D.O. Meter	Same as pH	Serial Number		Sample Depth	
Filter Apparatus	N/A	Filters		Field Notebook	
Temprature Measure	Same as pH	Serial Number		Sample Method	Parastaltic Pump at 250 ml/min
Interface Probe	N/A	Serial Number	N/A		100 ml/min for VOC's
PID/OVA	N/A	Serial Number		Discharge Water Containerized?	Y

Field Chemistry Calibrations

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR10MW31A1 Site No.: IR10 Day and Date: Thursday 01/18/01

Personnel: J. Fortuna

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 15.90 ft. below top of casing

Depth to water: 10.82 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	5.08	ft. x 0.652 gal/ft x 3 =	9.94	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: ____mg/L
Middle: ____mg/L
Bottom: ____mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1520	3.0	17.4	12.4	0.70	4.32	7.86	44	
1523	6.0	17.9	14.8	0.86	2.35	7.63	146	
1526	9.0	18.0	15.3	0.88	6.51	7.58	78	
1530	12.0	18.2	15.5	0.90	2.21	7.57	143	
1535	15.0	18.2	15.5	0.90	1.97	7.58	169	
1540	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		Field Test Kit Analyses	
Off-Site Lab			*Off-Site Lab*			
VOCs						
SVOCs						F-y/n
Pest/PCBs						F-y/n
Metals	X	F-y/n Y				
TPH-p						
TPH-e						

F-y/n= note (yes/no) filtered samples.
Filter where turbidity > 100 NTU.

Sampler(s): J. Fortuna

Sample Number(s): 010JF019 Sample Date/Time: 1/18/01 1540

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: _____ Dup. Sample Date/Time: _____

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR10MW33A Site No.: IR10 Day and Date: Friday 01/19/01

Personnel: L. Genin

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 15.10 ft. below top of casing

Depth to water: 7.50 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	7.60	ft. x 0.652 gal/ft x 3 =	14.87	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 3.65 mg/L
Middle: 0.57 mg/L
Bottom: 0.24 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
0852	3.0	14.5	8.26	0.44	8.64	4.24	1	
0856	6.0	14.9	8.96	0.49	7.09	4.21	381	
0902	9.0	15.3	11.00	0.61	6.98	4.20	504	
0905	12.0	15.0	6.51	0.34	7.65	4.16	226	
0908	15.0	15.1	6.65	0.35	7.72	4.21	189	
0912	14.0	15.0	6.23	0.33	7.80	4.21	91	
0914	21.0	15.3	8.09	0.43	7.38	4.22	466	

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern	Field Test Kit Analyses
Off-Site Lab			*Off-Site Lab*	
VOCs	X	Low		F-y/n
SVOCs				F-y/n
Pest/PCBs				
Metals		F-y/n Y		
TPH-p				F-y/n= note (yes/no) filtered samples. Filter where turbidity > 100 NTU.
TPH-e				

Sampler(s): L.Genin

Sample Number(s): 0103L001 Sample Date/Time: 1/19/01 0920

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [ ] None [ ] Field Duplicate [X] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR18MW21A | Site No.: IR18 | Day and Date: Thursday 01/18/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 18.75 ft. below top of casing

Depth to water: 14.25 ft. below top of casing

		Water Column		Purge Volume	
[ ]	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
[X]	4-inch well	4.50	ft. x 0.652 gal/ft x 3 =	8.80	gal.
[ ]	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 0.49 mg/L
Middle: 0.31 mg/L
Bottom: ____mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1056	2.0	16.5	1.70	0.07	7.62	4.36	22	
1059	4.0	16.5	1.67	0.07	7.38	4.48	45	
1102	6.0	16.5	1.63	0.07	7.43	4.51	55	
1104	8.0	16.6	1.61	0.07	7.30	4.50	38	
1107	10.0	16.7	1.62	0.07	7.23	4.50	64	
1111	12.0	16.7	1.60	0.07	7.21	4.50	26	
1120	Sample							

Purged Dry? [No] Field measurement equipment used: Horiba U-10, Heron Dipper T YS1 55 Do Meter

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs	X				F-y/n [ ]
Pest/PCBs	X				F-y/n [ ]
Metals	X	F-y/n [ ]			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G. Heinrich

Sample Number(s): 0103H008 Sample Date/Time: 1/18/01 1120

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [ ] None [X] Field Duplicate [ ] MS/MSD

Dup. Sample Number: 0103H009 Dup. Sample Date/Time: 01/18/01 1145

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR25MW17A Site No.: IR25 Day and Date: Friday 01/19/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: _____ ft. below top of casing

Depth to water: _____ ft. below top of casing

		Water Column		Purge Volume	
[ ]	2-inch well	_____	ft. x 0.163 gal/ft x 3 =	_____	gal.
[X]	4-inch well	_____	ft. x 0.652 gal/ft x 3 =	_____	gal.
[ ]	_-inch well	_____	ft. x _____ gal/ft x 3 =	_____	gal.

Initial D.O. Readings
Position in Screened Interval
Top: ____mg/L
Middle: ____mg/L
Bottom: ____mg/L

Method of Extraction: [ ] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (ppt)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments

Purged Dry? [ ] Field measurement equipment used: _____

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern	Field Test Kit Analyses	
Off-Site Lab			*Off-Site Lab*		
VOCs	VOC's	Low			
SVOCs					F-y/n [ ]
Pest/PCBs					F-y/n [ ]
Metals	X	F-y/n [ ]			
TPH-p	X			F-y/n= note (yes/no) filtered samples.	
TPH-e	X			Filter where turbidity > 100 NTU.	

Sampler(s): _____

Sample Number(s): _____ Sample Date/Time: _____

Sample Collection Method: [ ] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [ ] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

*****WELL NOT SAMPLED: PROXIMAL TO OPEN EXCAVATION*****

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR25MW37A Site No.: IR25 Day and Date: Fri 01/19/01

Personnel: G Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 15.88 ft. below top of casing

Depth to water: 6.83 ft. below top of casing

		Water Column		Purge Volume	
[ ]	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
[X]	4-inch well	9.05	ft. x 0.652 gal/ft x 3 =	17.70	gal.
[ ]	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings

Position in Screened Interval

Top: 1.20 mg/L

Middle: 1.20 mg/L

Bottom: 0.60 mgL

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
0900	4.0	15.9	1.39	0.06	1.60	8.02	196	
0905	6.0	16.3	1.35	0.05	1.92	7.91	304	
0908	8.0	16.8	1.35	0.06	1.63	7.88	193	
0910	10.0	16.8	1.36	0.06	1.61	7.89	220	
0914	12.0	16.9	1.39	0.06	1.58	7.92	538	
0916	14.0	17.2	1.41	0.06	1.71	7.96	905	
0920	16.0	17.1	1.43	0.06	1.46	7.99	999.0	
0922	17.0	Well dry						
1045	18.0	16.4	1.39	0.06	3.50	7.98	209.0	

Purged Dry? [Yes] Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T Water level meter, Thermo 580B PID

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X	low-level		Hex Cr	
SVOCs					F-y/n [ ]
Pest/PCBs					F-y/n [ ]
Metals		F-y/n [ ]			
TPH-p					F-y/n= note (yes/no) filtered samples.
TPH-e					Filter where turbidity > 100 NTU.

Sampler(s): G Heinrich

Sample Number(s): 0103H016 Sample Date/Time: 1/19/01 1050

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR26MW41A Site No.: IR26 Day and Date: Thursday 01/18/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 20.49 ft. below top of casing

Depth to water: 6.27 ft. below top of casing

		Water Column		Purge Volume	
	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
X	4-inch well	14.22	ft. x 0.652 gal/ft x 3 =	27.81	gal.
	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings

Position in Screened Interval

Top: 0.38 mg/L

Middle: 0.26 mg/L

Bottom: 0.22 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1359	6.0	17.20	1.24	0.05	9.66	4.44	13	
1404	12.0	17.60	1.37	0.06	9.09	4.53	7	
1409	18.0	18.20	4.03	0.20	7.69	4.53	12	
1415	24.0	18.00	2.42	0.11	8.69	4.52	15	
1420	30.0	17.90	1.74	0.09	9.14	4.53	13	

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals	X	F-y/n			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G. Heinrich

Sample Number(s): 0103H013 Sample Date/Time: 01/18/01 1430

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR26MW45A Site No.: IR26 Day and Date: Friday 01/19/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 15.71 ft. below top of casing

Depth to water: 6.95 ft. below top of casing

		Water Column		Purge Volume	
[ ]	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
[X]	4-inch well	8.76	ft. x 0.652 gal/ft x 3 =	17.13	gal.
[ ]	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings

Position in Screened Interval

Top: 2.3 mg/L

Middle: 0.5 mg/L

Bottom: 0.4 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1329	3.0	17.0	20.4	1.21	2.51	7.48	52	
1331	6.0	17.4	21.8	1.31	1.77	7.43	113	
1335	9.0	17.6	22.0	1.33	1.55	7.46	165	
1339	12.0	18.0	23.3	1.41	1.28	7.51	144	
1344	15.0	18.0	23.4	1.41	1.77	7.58	90	
1347	18.0	18.0	23.7	1.44	1.87	7.63	95	
1353	21.0	17.9	20.9	1.25	2.86	7.61	70	
1404	24.0	17.6	20.3	1.21	3.11	7.56	30	
1425	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, YSI-55 D.O. Meter, Heron Dipper T

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X			Hex Cr	
SVOCs					F-y/n
Pest/PCBs					F-y/n
Metals	X	F-y/n			
TPH-p	X				F-y/n= note (yes/no) filtered samples. Filter where turbidity > 100 NTU.
TPH-e	X				

Sampler(s): G. Heinrich

Sample Number(s): 0103H017 Sample Date/Time: 1/19/01 1425

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: IR46MW37A Site No.: IR46 Day and Date: Wednesday 01/19/01

Personnel: G. Heinrich

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 20.78 ft. below top of casing

Depth to water: 7.83 ft. below top of casing

		Water Column		Purge Volume	
[ ]	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
[X]	4-inch well	12.95	ft. x 0.652 gal/ft x 3 =	25.33	gal.
[ ]	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 0.75 mg/L
Middle: 0.32 mg/L
Bottom: 0.25 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1017	5.0	17.5	2.00	0.09	2.85	4.48	220	
1022	10.0	18.0	2.02	0.09	6.83	4.51	262	
1026	15.0	18.3	2.05	0.09	6.87	4.49	240	
1030	20.0	18.6	2.03	0.09	6.79	4.49	370	
1037	26.0	18.6	2.02	0.09	7.02	4.51	273	
1055	Sample							

Purged Dry? [No] Field measurement equipment used: Horiba U-10, Heron Dipper T YS1 55 Do Meter

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		
Off-Site Lab			*Off-Site Lab*		*Field Test Kit Analyses*
VOCs	X	Low	Cr VI		
SVOCs					F-y/n [ ]
Pest/PCBs					F-y/n [ ]
Metals	X	F-y/n [ ]			
TPH-p	X				F-y/n= note (yes/no) filtered samples.
TPH-e	X				Filter where turbidity > 100 NTU.

Sampler(s): G. Heinrich

Sample Number(s): 0103H003 Sample Date/Time: 1/17/01 1055

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: _____ Dup. Sample Date/Time: _____

Comments:

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Date 1/17/01

Well Name	PA50MW01A	Screen Interval			
Project	Parcel B Ramp Sample	Static Elevation	GND TOC	Immiscible Phases Present?	N
Project No.	G0069-270C0101	Static Water Level (from TOC)	7.93	Type	
Well Location	Parcel B	Well Stick Up		Measured with	VISUAL
Sample Date	01/17/01	Static Elevation		PID Readings (background)	
Sampling Personnel		Well Depth	15.90 MEAS RPTD	PID Reading (TOC)	
	J. Fortuna	Feet of Water		Well Installed by	
		Gallons/Foot	0.652	Installation Date	
Sample ID	0103F006	Casing Volume		Development Date(s)	
Duplicate ID	0103F007				

FIELD CHEMISTRY CALIBRATIONS FACTORY CALIBRATED

Date/Time Spec. Conductance: Standard____umhos/cm at 25C Reading____umhos/cm at___°C

pH: pH 4.00 - at__°C pH 7.00 - _at_°C pH 10.00 - _at__°C Slope

Dissolved Oxygen: D.O. Meter__mg/L at °C PID: Calibration Gas_____PPM ____Span____Reading

PURGING

Time	Discharge Rate (mL/min)	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conduct (umhos/cm at °C)	Turbidity (NTU)	Cumulative Volume of Water Removed (Purged) Liters	Casing Volume	PID/OVA Reading Location	Value	Depth to Water (ft)	Salinity
0852	333	1.15	7.63	182.0	16.93	2034	2.0	1				7.93	
0855	333	0.88	7.63	180.8	17.08	2041	2.1	2				7.93	1.05
0859	300	0.72	7.63	179.4	17.10	2041	2.6	3				7.93	
0902	300	0.60	7.63	178.2	17.22	2043	3.9	4				7.93	
0905	300	0.53	7.64	177.7	17.20	2045	0.0	5				7.93	
0908	300	0.44	7.63	177.4	17.26	2048	0.0	6				7.93	
0911	300	0.39	7.63	176.9	17.29	2060	0.1	7				7.93	1.06
0914	300	0.35	7.63	175.5	17.35	2077	0.0	8				7.93	
0917	300	0.34	7.63	174.5	17.37	2080	0.0	9				7.93	
0920	300	0.33	7.63	173.9	17.41	2083	0.0	10				7.93	
0923	300	0.33	7.63	173.7	17.42	2083	0.0	11				7.93	

SAMPLE PARAMETERS

	Hex Cr	Metals	TPH-P	TPH-E		Low-level VOC						

Condition of Well Broken vault flanges, otherwise good

Remarks

FIELD EQUIPMENT

Ph Meter	YSI 6820 w/610D	Serial Number	97B0440AA (6820)	Fractions	
Spec. Cond. Meter	Same as pH	Serial Number	152392R (610D)		
Pump	Geopump 2	Serial Number	N/A		
Water Level Meter	Solinst	Serial Number	16885	Number of Bottles	
D.O. Meter	Same as pH	Serial Number		Sample Depth	
Filter Apparatus	N/A	Filters		Field Notebook	
Temprature Measure	Same as pH	Serial Number		Sample Method	Parastaltic Pump at 300 ml/min
Interface Probe	N/A	Serial Number	N/A		100 ml/min for VOC's
PID/OVA	N/A	Serial Number		Discharge Water Containerized?	Y

Field Chemistry Calibrations

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Well No.: PA50MW01A Site No.: IR10 Day and Date: Thursday 1/18/01

Personnel: J. Fortuna

Organic Vapor Concentrations Top of Casing: 0.0 ppm Breathing Zone 0.0 ppm

Depth to bottom: 17.14 ft. below top of casing

Depth to water: 7.91 ft. below top of casing

		Water Column		Purge Volume	
[ ]	2-inch well		ft. x 0.163 gal/ft x 3 =		gal.
[X]	4-inch well	9.23	ft. x 0.652 gal/ft x 3 =	18.05	gal.
[ ]	_-inch well		ft. x _____ gal/ft x 3 =		gal.

Initial D.O. Readings
Position in Screened Interval
Top: 1.20 mg/L
Middle: 0.64 mg/L
Bottom: 0.52 mg/L

Method of Extraction: [X] Disposable Bailer [ ] Other:_____

Groundwater Parameters

Time	Volume Purged (gal.)	Temp. (°C)	Specific Conductivity (mS/cm)	Salinity (ppt)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)	Comments
1213	5.0	16.7	2.09	0.09	1.81	7.52	48	
1217	9.0	17.0	2.12	0.10	1.50	7.68	45	
1221	13.0	17.0	2.10	0.10	1.41	7.76	51	
1225	17.0	17.0	2.13	0.10	1.28	7.79	51	
1230	21.0	17.0	2.14	0.10	1.38	7.80	32	
1234	25.0	17.0	2.14	0.10	1.43	7.79	32	
1245	Sample							

Purged Dry? No Field measurement equipment used: Horiba U-10, YS1 55 Do Meter, Heron Dipper T

Groundwater Samples Collected

Analytes of Concern			Analytes of Concern		Field Test Kit Analyses	
Off-Site Lab			*Off-Site Lab*			
VOCs						
SVOCs						F-y/n
Pest/PCBs						F-y/n
Metals	dissolved	F-y/n Y				
TPH-p					F-y/n= note (yes/no) filtered samples.	
TPH-e					Filter where turbidity > 100 NTU.	

Sampler(s): J. Fortuna

Sample Number(s): 0103F011 Sample Date/Time: 1/18/01 1245

Sample Collection Method: [X] Disposable Bailer [ ] Other:

QA/QC Sample(s)? [X] None [ ] Field Duplicate [ ] MS/MSD

Dup. Sample Number: Dup. Sample Date/Time:

Comments:

APPENDIX C

JANUARY TO MARCH 2001 CHAIN-OF-CUSTODY RECORDS FOR SAMPLES

(40 Pages)

Tetra Tech EM Inc.
San Francisco Office

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San Francisco, CA 94105
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Chain of Custody Record

4658

Page 1 of 1

Project name: Parcel B Bioslurp Sampling	PO#: 002252	Lab: Southwest Labs	
Project number: G0069-27000001	TtEMI technical contact: Ramona Moezzi (415) 222-8278	Field samplers: G Heinrich	
	TtEMI project manager: Tom Shuff (415) 222-8347	Field samplers' signatures: [signature]	

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	VOCs TOV Tox
					No./Container Types					Preservative Added: HCl		NaHSO4	HCl		HCl	
										Analysis Required						
01036001	Trip Blank	1/16/01	0700 (1)	water	2					X						
01036002	IR06MW42A Disp. Boiler		1000 (4)		6	6	1			X	X	X	X	X	X	
01036004	IR07MW20A1 Disp. Boiler		1200 (7)		6	2	1			X			X	X	X	
01036005	IR07MW20A1 (dup)		1230 (8)		6	2	1			X			X	X	X	
01636006	IR07MW19A (ms/msd) disp. boiler		1315 (9)		12	4	2			X			X	X	X	
01036003	IR06MW45A disp. boiler		1400 (10)		3											X

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	Gavan Heinrich	R&M EIE	1/16/01	1500
Received by: Relinquished to Fed Ex				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Fed Ex Airbill # 825064783517

metals are field filtered for dissolved metals analysis

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Chain of Custody Record

PO#	002252
Lab:	Southwest Labs (918) 251 2599
Project name:	Parcel B RAMP Sampling
TtEMI technical contact:	Raneen Molzzi (415) 222 8278
Field samplers:	J. Fortuna
Project number:	G00.69-270 C0101
TtEMI project manager:	Tom Shoff (415) 222 8347
Field samplers' signatures:	

Preservative Added: HCl, HCl, HNO3, HNO3

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Total Metals	Dissolved Metals*
0103F001	Trip Blank	1/16/01	0820 (2)	Water	2						X							
0103F002	Source Blank	↓	0935 (3)	↓	6	6				1		X	X	X	-	X	X	X
0103F003	Source Blank		0945 (4)							1								X
0103F004	Eqt. rinsate (bailer + metals filter)		1105 (6)		6	6				1		X	X	X	-	X	X	- X

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	Rtm Environmental	1/16/01	1530
Received by:	Relinquished to FedEx			
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

* Samples for dissolved metals analysis are field-filtered.

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Chain of Custody Record

PO#	002249 mod 1
Lab:	CET
Project name:	Parcel 2 Bump Sampling
TtEMI technical contact:	Romeen Moezzi (415) 222 8238
Field samplers:	G Heinrich
Project number:	6000692 0001
TtEMI project manager:	Tom Schoff (415) 222-8347
Field samplers' signatures:	

Preservative Added

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Cr VI
01036002	IR06MW12A disp boiler	1/16/01	1000	Water			1									X
01036004	IR07MW20A1 disp boiler	↓	1200	↓			1									X
01036005	IR07MW20A1 (dup)		1230				1									X
01036006	IR07MW19A (ms/msd) disp b.	↓	1315	↓			2									X

	Name (print)	Company Name	Date	Time
Relinquished by:	Gavan Heinrich	TtEMI	1/16/01	1420
Received by:	John Fortuna	RTM Eng	1/16/01	1420
Relinquished by:	John Fortuna	RTM Environmental	1/16/01	1517
Received by:	LISA Bennett	CET LTD	1/16/01	3:20
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

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Chain of Custody Record

PO#	002249 Mod 1
Lab:	Curtis + Tompkins
Project name:	Parcel B RAMP Sampling
TtEMI technical contact:	(415) Runeen Moezzi 2228278
Field samplers:	J. Fortuna / L. Gerin (JF)
Project number:	60069-270C0101
TtEMI project manager:	(415) Tom Shott 2228347
Field samplers' signatures:	

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly		CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Chrom.										
0103F002	Source Blank	1/16/01	0935	Water						1								X										
0103F004	Eqt. Rinsate (bailer)	1/16/01	1105	Water						1								X										

Preservative Added

No./Container Types

Analysis Required

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	R+M Environmental	1/16/01	1517
Received by:	Lisa Bennetts	C&T LTD	1/16/01	3:20
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

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Chain of Custody Record

4698

Page 1 of 1

PO#	002252
Lab:	Southwest Labs 918 251 2559
Project name:	Parcel B Range Sampling
TtEMI technical contact:	Romeen Mozzi 415 222.8278
Field samplers:	G Heinrich
Project number:	60069-27000101
TtEMI project manager:	Tom Shoff 415.222.8347
Field samplers' signatures:	

Preservative Added: HCl, HNO3, HCl

No./Container Types: 40 ml VOA, 1 Liter Amber, 1 Liter Poly, Brass Tube, Glass Jar

Analysis Required: CLP VOA, CLP SVOA, CLP Pest/PCBs, CLP Metals, TPH Purgeables, TPH Extractables

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
01Ø3HØØ1	Trip Blank	1/17/01	0700 (1)	water	2	—	—	—	—	X	—	—	—	—	—
01Ø3HØØ2	IR07MW5-2 disp. boiler	↓	0940 (4)	↓	6	2	1	—	—	X	—	—	X	X	X
01Ø3HØØ3	IR46MW37A disp boiler	↓	1055 (6)	↓	6	2	1	—	—	X	—	—	X	X	X
~~01Ø3HØØ3~~	~~IR07MW26A disp boiler~~ GH		~~1150~~		6	2	1	—	—	X	—	—	X	X	X
01Ø3HØØ4	IR07MW26A disp boiler	water	1150 (8)	water	6	2	1	—	—	X	—	—	X	X	X
01Ø3HØØ5	IR07MW5-4 disp boiler	↓	1240 (9)	↓	—	—	1	—	—	—	—	—	X	—	—
01Ø3HØØ6	Equip Rinsate DIW water	↓	1330 (14)	↓	6	2	1	—	—	X	—	—	X	X	X

	Name (print)	Company Name	Date	Time
Relinquished by: M. Heinrich	Gavan Heinrich	R&M EIE	1/17/01	1530
Received by: Relinquished to Fed Ex				
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Received by:				
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Turnaround time/remarks: Fed Ex tracking # 8215 8079 4210

All metal samples are field filtered for dissolved metals

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PO# 002252 ~~002249 mod 1~~ JF

Lab: (918) Southwest Labs 251 2599

Project name: Parcel B Ramp

TtEMI technical contact: (415) Ranee Mozzi 222 8278

Field samplers: J. Fortuna

Project number: G0069-270001

TtEMI project manager: (415) Tom Shoff 222 8347

Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Total Metals	Dissolved Metals	CLP Low-level VOA
0103F005	Trip blank	1/17/01	0810 (2)	Water	2						X								
0103F006	PA50MW01A Peri Pump		0930 (3)		6	2				1					X	X	X		X
0103F007	" Dup "		1005 (3)		6	2				1					X	X	X		X
0103F008	IR07MW54 Peri Pump		1120 (3)		6	2				1	X				X	X	X		X
0103F009	IR10MW31A1 Peri Pump		1345 (3)		6	2				1					X	X	X		X

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	RTM E/E	1/17/01	1530
Received by: Relinquished to FedEx				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

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8245 8079 4210

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Chain of Custody Record

PO#	002249 Mod 1
Lab:	Curtis + Tompkins
Project name:	Parcel B Ramp
TtEMI technical contact:	(415) Ramesh Mazzi 222 8278
Field samplers:	J. Fortuna
Project number:	GD069-27DC01D1
TtEMI project manager:	(415) Tom Shoff 222 8347
Field samplers' signatures:	

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex. Chromium
0103F006	PA50MW01A Peri Pump	1/17/01	0930	Water						1							X
0103F007	" Dup "	↓	1005	↓						1							X
0103F008	IR07MW54 Peri Pump	↓	1120	↓						1							X
0103F009	IR10MW31A1 Peri Pump	↓	1345	↓						1							X

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	RGM EIE	1/17/01	1500
Received by:	Gavan Heinrich	RGM EIE	1/17/01	1500
Relinquished by:	Gavan Heinrich	RGM EIE	1/17/01	1545
Received by:	Lisa Reynolds	CT LTD	1/17/01	1545
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Tetra Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

Page 1 of 1

PO#	002249
Lab:	CST
Project name:	Parcel D Ramp Sampling
TtEMI technical contact:	Ramesh Murthi 415 227 8278
Field samplers:	G Heinrich
Project number:	G0069-270C0001
TtEMI project manager:	Tom Shoff 415 227 8347
Field samplers' signatures:	[signature]

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Chromium+6
01C3H0002	IR07MW5-2 disp boiler	1/17/01	0940	water			1									X
01C3H0003	IR46MW37A disp boiler	"	1055	"			1									X
~~01C3H0003~~	~~IR07MW26A disp boiler~~ GH		~~1150~~				1									X
01C3H0004	IR07MW26A disp boiler	"	1150	"			1									X
01C3H0006	Equip Rinsate DTW meter	"	1330	"			1									X

	Name (print)	Company Name	Date	Time
Relinquished by:	Gavan Heinrich	TtEMI	1/17/01	1430
Received by:	~~Gavan Heinrich~~ GH			
Relinquished by:	Gavan Heinrich	RIMCOR LTD	01/17/01	1530
Received by:	LISA BERNATIS			
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

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Chain of Custody Record

4659

PO#	002252
Lab:	(918) 251 2599 Southwest labs of Oklahoma
Project name:	Parcel B RAME
TtEMI technical contact:	(415) Ramen Mazzi 222 8278
Field samplers:	J. Fortman
Project number:	G0069-274C0101
TtEMI project manager:	Tom Shoff (415) 222 8347
Field samplers' signatures:	

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly			CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Dissolved Metals	CLP Low level VOA								
0103F010	Trip blank	1/18/00	1020 (1)	Water	2															X								
0103F011 PASOMWOIA	~~IR10MW31A~~ (DE)		1245 (6)	bailer						1									X									
0103F012	IR10MW28A		1315 (8)	bailer	3															X								
0103F013 MS/MSD	IR07MW28A		1425 (10)	bailer	12	12				2			X	X	X		X	X	X									
0103F014	IR10MW31A		1540 (13)	bailer						1									X									

	Name (print)	Company Name	Date	Time
Relinquished by:				
Received by: Relinquished to FedEx	John Fortman	RMI EIE	1/19/01	1750
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Samples for dissolved metals analysis are field filtered

FedEx Airbill # 8245 8079 ~~4269~~ 4194

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5091

Chain of Custody Record

Page 1 of 1

PO#	002252
Lab:	Southwest labs
Project name:	Parcel B Ramp Sampling
TtEMI technical contact:	Ramon Maezzi 415.272.6278
Field samplers:	G Heinrich
Project number:	60069.270(01)
TtEMI project manager:	Tom Shoff (415) 272 6347
Field samplers' signatures:	[signature]

Preservative Added: HCl, HNO3, HCl, HCl

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	VOC low level
01H007	Trip blank	1/18/01	0900 (1)	water	2					X						
01H008	JR18MW21A disp bailer	↓	1120 (3)	↓	6	6	1			X	X	X	X	X	X	
01H009	JR19MW21A (dup) disp bailer		1145 (4)		3	4				X	X	X				
01H010	JR10MW12A disp bailer		1235 (5)		3											X
01H011	JR10MW12A (dup) disp bailer		1250 (7)		3											X
01H012	JR10MW13A1 disp bailer		1325 (9)		3											X
01H013	JR36MW41A disp bailer		1430 (11)		6	2	1			X			X	X	X	
01H014	JR07MW24A disp bailer	✓	1525 (12)	↓	6	2	1			X			X	X	X	

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	Gavan Heinrich	REM EIE	1/18/01	1730
Received by: Relinquished to Fed Ex				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Fed Ex airbill # 8245 8079 ~~4209~~ ~~4444~~ 4483

metals are field filtered for dissolved metals

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Chain of Custody Record

5050

Page 1 of 1

Project name: Parcel B RAMP	PO#: 002249 Mod 2	Lab: Curtis + Tompkins	
Project number: 60064-270CD101	TtEMI technical contact: Ramon Metzi (415)2226248	Field samplers: J. Fortman	
	TtEMI project manager: Tom Stott (415)222-8577	Field samplers' signatures:	

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Chromium
0103F013 MS/MSD	IR07MW28A	1/18/01	1425	Water						1							X

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortman	RAM EIE	1/18/01	1615
Received by:	Gavin Heinrich	RAM EIE	1/18/01	1615
Relinquished by:	Gavin Heinrich	RAM EIE	1/18/01	1715
Received by:	Pat Flynn	C&T	1/18/01	1715
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

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090

Chain of Custody Record

PO#: 002249 mod 1	Lab: Curtis & Tompkins	
Project name: Parcel B Ramp Sampling	TtEMI technical contact: Ramsey Moers (?) 415 222-8278	Field samplers: G Heinrich
Project number: G0069-270C0101	TtEMI project manager: Tom Shoff 415 222-8247	Field samplers' signatures: [signature]

Preservative Added

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Cr.
0103H008	IR18MW21A disp bailer	1/18/01	1120	water	—	—	1	—	—	—	—	—	—	—	—	X
0103H013	IR26MW41A disp bailer	|	1430	|	—	—	1	—	—	—	—	—	—	—	—	X
0103H014	IR07MW24A disp bailer	|	1525	|	—	—	1	—	—	—	—	—	—	—	—	X

1/18/01 [initials]

	Signature	Name (print)	Company Name	Date	Time
Relinquished by:	[signature]	Gavan Heinrich	PRC EIE	1/18/01	1715
Received by:	[signature]	Pat Flynn	C&T	1/18/01	1715
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

Turnaround time/remarks:

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5054

Chain of Custody Record

PO#	002252
Lab:	918-251-2599 Southwest Labs
Project name:	Parcel B Rump Sample
TtEMI technical contact:	415-222-8278 Rameen Moezzi
Field samplers:	Laura Genin
Project number:	G0069-270C0101
TtEMI project manager:	415-222-8349 Tom Shofl
Field samplers' signatures:	Laura Genin

Preservative Added: HCl; HNO3; HCl

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500mL Poly	CLP VOA (water)	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
01031L003	Trip Blank	1/19/01	0800 (3)	water	2	—	—	—	—	—	X	—	—	—	—	—
01031L001	MSMSD IR10MW33A	1/19/01	0920 (3)	water	6	—	—	—	—	—	X	—	—	—	—	—
01031L002	Equip. Rinsate (DTW)	1/19/01	1500 (6)	water	6	2	—	—	1	—	X	—	X	X	X	—

Laura Genin

	Name (print)	Company Name	Date	Time
Relinquished by: Laura Genin	Laura Genin	R + M	1/19/01	1680
Received by: Fed Ex				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Fed Ex tracking # 8245 8079 4172

metals are for dissolved metals and are filtered in the field

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Chain of Custody Record

PO# 002252

Lab: Southwest Labs (918) 251 2599

Project name: Parcel B Ramp Sampling

TtEMI technical contact: Ramesh Moezzi (415) 222 8278

Field samplers: G Heinrich

Project number: G0069-270C01

TtEMI project manager: Tom Shoff (415) 222.8347

Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar				CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	VOC's low level										
													HCl			HNO3 HCl		HCl											
01G3H015	Trip Blank	1/19/01	0800 (1)	water	2								X																
01G3H016	IR25MW37A disp. bailer	↓	1055 (4)	↓	3														X										
01G3H017	IR26MW45A disp. bailer	↓	1425 (5)	↓	6	2	1						X			X	X	X											

	Name (print)	Company Name	Date	Time
Relinquished by:	Gavan Heinrich	RSM EIE	1/19/01	1600
Received by: Relinquished to Fed Ex				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Fed Ex tracking # 8245 8079 4172

metals are for disolved metals and are field filtered

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5089

Chain of Custody Record

PO# ØØ2249 mod	Lab: Curtis + Tompkins	
Project name: Parcel B Ramp Sampling	TtEMI technical contact: (415) Rameen Moe 229 2228278	Field samplers: Gavan Heinrich
Project number: ØØØ69-27ØCØ101	TtEMI project manager: Tom Shaff 222-8347	Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly Cool	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Cr.
ØØ1Ø3HØ17	IR26MW45A disp bailer	1/19/01	1425	water			1									X

	Name (print)	Company Name	Date	Time
Relinquished by:	Gavan Heinrich	R&M EIE	1/19/01	1445
Received by:	Laura Genin	R&M EIE	1/19/01	1445
Relinquished by:	Laura Genin	R&M EIE	1/19/01	1525
Received by:	Steven Stanley	C&T	1/19/01	1525
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

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Chain of Custody Record

5055

Project name:	Parcel B Ramp Sample
Project number:	G0069270C01G1
PO#	002249
TtEMI technical contact:	Rameen Moezzi 415-222-8278
TtEMI project manager:	Tom Shoff 415-222-8349
Lab:	Curtis + Tompkin
Field samplers:	Laura Genin
Field samplers' signatures:	Laura Gen

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500mL Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Cr
0103L002	Equip Rinsate	1/19/01	1500	water						1							X

Preservative Added

No./Container Types

Analysis Required

	Name (print)	Company Name	Date	Time
Relinquished by: Laura Gen	Laura Genin	RCM EJE	1/19/01	15:25
Received by: [signature]	Steven Stanley	C&T	1/19/01	15:25
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

COOLER RECEIPT / SAMPLE LOG-IN SHEET

COOLER RECEIPT / SAMPLE LOG-IN SHEET (115-ATT2.WB1) / SWL-GA-115 REV 5.0 / GA-115-CRLOGIN-F_

LAB NAME: SOUTHWEST LABORATORY OF OKLAHOMA

PAGE 1 OF 1

RECEIVED BY (PRINT NAME): JANET FITZGERALD

RECEIVED BY (SIGNATURE):

LOGGED IN BY (SIGNATURE):

REC'D DATE 01/17/01

TIME REC'D 08:15

LOG-IN DATE 2001-01-17 12:41

PROJECT: PARCEL B RAMP Y2Q1-3

EPISODE: 45643

SAMPLE DELIVERY GROUP: 45643

Client Sample #	Sample Fraction @	Assigned LAB#	Cooler I.D.	pH Check	ACID/ BASE LOT#	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
0103G001	V	45643.01	01/17/01-	N		
0103G002	GC, B, V M	45643.02	01/17/01-	N		
0103G004	GC, V, M	45643.03	01/17/01-	N		
0103G005		45643.04	01/17/01-	N		
0103G006 N1		45643.05	01/17/01-	N		
0103G006 MS1		45643.06	01/17/01-	N		
0103G006 SD1		45643.07	01/17/01-	N		
0103G006 Dul	M	45643.08	01/17/01-	N		
0103G003	V	45643.09	01/17/01-	N		
0103F001		45643.10	01/17/01-	N		
0103F002	GC, B, V M	45643.11	01/17/01-	N		
0103F003	M	45643.12	01/17/01-	N		
0103F004	GC, B, V M	45643.13	01/17/01-	N		

Remarks

1. CUSTODY SEAL(S): Present/Absent
   Intact/ Broken
2. CUSTODY SEALS NOS.:
   NO SEALS
3. CHAIN-OF CUSTODY. Present/Absent
   Sealed In Plastic? Yes/ No
   Taped To Lid? Yes/ No
   Properly Filled Out (Ink, Signed, ETC.)? Yes/ No
4. AIRBILL AirBill/ Sticker
   Present/Absent
5. AIRBILL NO:
   825064783517
6. COOLER CONDITIONS
   Enough Ice? Yes/ No
   Type of Ice? Wet
   Type of Packing? Bubble Wrap
7. SAMPLE TAGS Present/Absent
8. SAMPLE CONDITION: Intact/ Broken*/ Leaking
   Bottles Sealed In Separate Plastic Bags? Yes/ No
   Correct Containers Used For Tests Indicated? Yes/ No
   Correct Preservative? Yes/ No
   Sufficient Sample? Yes/ No
   Labels Complete (I.D., Date, Time, Signature, Preservative? Yes/ No
   VOA Samples Without Bubbles? Yes/ No~
9. Does Information on Custody Records, Labels, Tags Agree? Yes/ No*
10. RAD SCREEN WITH GIEGER COUNTER? Yes/ No
11. P.O. Called? Yes/ No

* Contact PO and attach record of resolution

@ Sample Fractions: B=SV GC/MS, V= VOA GC/MS or GC, P=Pesticide, H=Herbicide, D=Dioxin, A=Air, I=Inorganics, C=Cyanide, M=Metals, R=Radiochemistry

~ Note samples with bubbles under remarks section.

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Chain of Custody Record

PO#	002252
Lab:	Southwest labs
Project name:	Parcel B Rough Sampling
TtEMI technical contact:	Ramen Moezzi, (415) 222-8279
Field samplers:	G Heinrich
Project number:	G0069-27000001
TtEMI project manager:	Tom Shoff (415) 222-8347
Field samplers' signatures:	[signature]

Preservative Added: HCl; NaHSO3; HCl; HCl

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly Sealed	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	VOCs Low Level
0103G001		1/16/01	0700	water	2					X						
0103G002		↓	1000	↓	6	6	1			X	X	X	X	X	X	
0103G004			1200		6	2	1			X			X	X	X	
0103G005			1230		6	2	1			X			X	X	X	
0163G006			1315		12	4	2			X			X	X	X	
0103G003		↓	1400	↓	3											X

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	Gavan Heinrich	R&M E/E	1/16/01	1500
Received by: Relinquished to Fed Ex				
Relinquished by:				
Received by:				
Relinquished by:				
Received by: Janet Fitzgerald			8:40	
Relinquished by: 1/17/01			8:15	
Received by:				

Turnaround time/remarks: Fed Ex Airbill # 825064783517

metals are field filtered for disolved metals analysis

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4703

Chain of Custody Record

Page 1 of 1

Project name: Parcel B RAAP Sampling
Project number: G0064-270C0101
PO#: 002252
TtEMI technical contact: (415) Rameen Moezzi 222 8278
TtEMI project manager: Tom Shoff (415) 222 8347
Lab: (918) Southwest Labs 251 2599
Field samplers: J. Fortuna
Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Total Metals	Dissolved Metals*
0103F001		1/16/01	0820	Water	2						X							
0103F002		↓	0935	↓	6	6				1	X	X	X		X	X	X	
0103F003			0945							1								X
0103F004			1105		6	6				1	X	X	X		X	X	X	

Preservative Added: HCL, HCL, HNO3, HNO3

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	Rtm Environmental	1/16/01	1530
Received by: Relinquished to FedEx				
Relinquished by:				
Received by:				
Relinquished by:				
Received by: Ofelia Fitzgerald 1/17/01 8:15				
Relinquished by:				
Received by:				

Turnaround time/remarks:

* Samples for dissolved metals analysis are field-filtered.

FedEx Airbill # 825064783517

WHITE Laboratory Copy YELLOW Project Office Copy

COOLER RECEIPT / SAMPLE LOG-IN SHEET

COOLER RECEIPT / SAMPLE LOG-IN SHEET (115-ATT2.WB1) / SWL-GA-115 REV 5.0 / GA-115-CRLOGIN-F-

LAB NAME: SOUTHWEST LABORATORY OF OKLAHOMA

PAGE 1 OF 1

RECEIVED BY (PRINT NAME): JANET FITZGERALD

RECEIVED BY (SIGNATURE): Janet Fitzgerald

LOGGED IN BY (SIGNATURE): Janet Fitzgerald

REC'D DATE 01/18/01

TIME REC'D 08:15

LOG-IN DATE 2001-01-18 14:40

PROJECT: PARCEL B RAMP Y2Q1-3

EPISODE: 45652

SAMPLE DELIVERY GROUP: 45643

Client Sample #	Sample Fraction @	Assigned LAB#	Cooler I.D.	pH Check	ACID/ BASE LOT#	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
0103F005	V	45652.01	01/18/01-2	N		2.8c
0103F006	V,BC,M	45652.02	01/18/01-2	N		2.8c
0103F007		45652.03	01/18/01-2	N		2.8c
0103F008		45652.04	01/18/01-2	N		2.8c
0103F009		45652.05	01/18/01-2	N		2.8c
0103H001	V	45652.06	01/18/01-1	N		1.4c
0103H002	V,C,M	45652.07	01/18/01-1	N		1.4c
0103H003		45652.08	01/18/01-1	N		1.4c
0103H004	V	45652.09	01/18/01-1	N		1.4c
0103H005	M	45652.10	01/18/01-1	N		1.4c
0103H006	V,EC,M	45652.11	01/18/01-1	N		1.4c

Remarks

1. CUSTODY SEAL(S): Present/Absent
   Intact/ Broken
2. CUSTODY SEALS NOS.: N/A
3. CHAIN-OF CUSTODY. Present/Absent
   Sealed In Plastic? Yes/ No
   Taped To Lid? Yes/ No
   Properly Filled Out (Ink, Signed, ETC.)? Yes/ No
4. AIRBILL AirBill/ Sticker
   Present/Absent
5. AIRBILL NO: 824580794210
6. COOLER CONDITIONS
   Enough Ice? Yes/ No
   Type of Ice? Wet
   Type of Packing? Bubble Wrap
7. SAMPLE TAGS Present/Absent
8. SAMPLE CONDITION: Intact/ Broken*/ Leaking
   Bottles Sealed In Separate Plastic Bags? Yes/ No
   Correct Containers Used For Tests Indicated? Yes/ No
   Correct Preservative? Yes/ No
   Sufficient Sample? Yes/ No
   Labels Complete (I.D., Date, Time, Signature, Preservative? Yes/ No
   VOA Samples Without Bubbles? Yes/No~
9. Does Information on Custody Records, Labels, Tags Agree? Yes/No*
10. RAD SCREEN WITH GIEGER COUNTER? Yes/ No
11. P.O. Called? Yes/ No

* Contact PO and attach record of resolution

@ Sample Fractions: B=SV GC/MS, V= VOA GC/MS or GC, P=Pesticide, H=Herbicide, D=Dioxin, A=Air, I=Inorganics, C=Cyanide, M=Metals, R=Radiochemistry

~ Note samples with bubbles under remarks section.

Tetra Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

PO# 002252 ~~002249 mod 1~~ JF

Lab: (918) Southwest Labs 251 2594

Project name: Parcel B RAMP

TtEMI technical contact: (415) Raneen Mizzi 222 8278

Field samplers: J. Fortuna

Project number: G0069-270C0101

TtEMI project manager: (415) Tom Shoff 222 8347

Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Total Metals	Dissolved Metals	CLP Low-level VOA
0103F005		1/17/01	0810	Water	2						X								
0103F006		↓	0930	↓	6	2				1					X	X	X	X	
0103F007			1005		6	2				1					X	X	X	X	
0103F008			1120		6	2				1	X				X	X	X	X	
0103F009			1345		6	2				1					X	X	X	X	

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	RTM ETE	1/17/01	1530
Received by: Relinquished to FedEx				
Relinquished by:				
Received by: Janet Fitzgerald	Janet Fitzgerald	SWLO	1/18/01	8:15
Relinquished by:				
Received by:				2.8c
Relinquished by:				
Received by:				

Turnaround time/remarks:

FedEx Airbill # ~~2595 9139~~ JF
8245 8079 4210

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Tetra Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

PO#	002252
Lab:	Southwest Labs 918 251 2559
Project name:	Parcel B Ramp Sampling
TtEMI technical contact:	Romeen Mozzi 415 222.8278
Field samplers:	G Heinrich
Project number:	G0069-2700C0101
TtEMI project manager:	Tom Shoff 415.222.8347
Field samplers' signatures:	G Heinrich

Preservative Added: HCl, HNO3, HCl

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
Ø1Ø3HØØ1		1/17/01	0700	water	2					X					
Ø1Ø3HØØ2		↓	0940	↓	6	2	1			X			X	X	X
Ø1Ø3HØØ3		↓	1055	↓	6	2	1			X			X	X	X
~~Ø1Ø3HØØ3~~	GH.		~~1150~~		~~6~~	~~2~~	~~1~~			~~X~~			~~X~~	~~X~~	~~X~~
Ø1Ø3HØØ4		water	1150	water	6	2	1			X			X	X	X
Ø1Ø3HØØ5		↓	1240	↓			1						X		
Ø1Ø3HØØ6		↓	1330	↓	6	2	1			X			X	X	X

	Name (print)	Company Name	Date	Time
Relinquished by:	G Heinrich	R&M EIE	1/17/01	1530
Received by: Relinquished to Fed Ex				
Relinquished by:				
Received by: Janet Fitzgerald	Janet Fitzgerald	SWLO	1/18/01	8:15
Relinquished by:				
Received by:				1.4C
Relinquished by:				
Received by:				

Turnaround time/remarks: Fed Ex tracking # 8245 8079 4210

All metal samples are field filtered for dissolved metals

WHITE - Laboratory Copy YW - Project Office Copy

COOLER RECEIPT / SAMPLE LOG-IN SHEET

COOLER RECEIPT / SAMPLE LOG-IN SHEET (115-ATT2 WB1) / SWL-GA-115 REV 5 C / GA-115-CR LOGIN-F

LAB NAME: SOUTHWEST LABORATORY OF OKLAHOMA

PAGE 1 OF 1

RECEIVED BY (PRINT NAME): JASON SPRIGGS

RECEIVED BY (SIGNATURE):

LOGGED IN BY (SIGNATURE):

PROJECT: PARCEL B RAMP-Y2Q1-3

EPISODE: 45662

SAMPLE DELIVERY GROUP: 45662

REC'D DATE 01/19/01

TIME REC'D 08:30

LOG-IN DATE 2001-01-19 13:39

Remarks

1. CUSTODY SEAL(S): Present/Absent
   Intact/ Broken
2. CUSTODY SEALS NOS.:
   N/A
3. CHAIN-OF CUSTODY. Present/Absent
   Sealed In Plastic? Yes/ No
   Taped To Lid? Yes/ No
   Properly Filled Out (Ink, Signed, ETC.)? Yes/ No
4. AIRBILL AirBill/ Sticker Present/Absent
5. AIRBILL NO:
   824580794183
6. COOLER CONDITIONS
   Enough Ice? Yes/ No
   Type of Ice? Wet
   Type of Packing? Bubble Wrap
7. SAMPLE TAGS Present/Absent
8. SAMPLE CONDITION: Intact/ Broken*/ Leaking
   Bottles Sealed In Separate Plastic Bags? Yes/ No
   Correct Containers Used For Tests Indicated? Yes/ No
   Correct Preservative? Yes/ No
   Sufficient Sample? Yes/ No
   Labels Complete (I.D., Date, Time, Signature, Preservative? Yes/ No
   VOA Samples Without Bubbles? Yes/ No~
9. Does Information on Custody Records, Labels, Tags Agree? Yes/ No*
10. RAD SCREEN WITH GIEGER COUNTER? Yes/ No
11. P.O. Called? Yes/ No

Client Sample #	Sample Fraction @	Assigned LAB#	Cooler I.D.	pH Check	ACID/ BASE LOT#	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
0103F010	V	45662.01	01/19/01-1	N		5.1c
0103F011	M	45662.02	01/19/01-1	N		5.1c
0103F012	V	45662.03	01/19/01-1	N		5.1c
0103F013	V, B, GC M	45662.04	01/19/01-1	N		5.1c
0103F013	↓	45662.05	01/19/01-1	N		5.1c
0103F013	V, B, GC	45662.06	01/19/01-1	N		5.1c
0103F013	M	45662.07	01/19/01-1	N		5.1c
0103F014	M	45662.08	01/19/01-1	N		5.1c
0103H007	V	45662.09	01/19/01-2	N		5.2c
0103H008	V, B, GC M	45662.10	01/19/01-1	N		5.1c
0103H009	V, B, GC	45662.11	01/19/01-1	N		5.1c
0103H010	V	45662.12	01/19/01-1	N		5.1c
0103H011	↓	45662.13	01/19/01-1	N		5.1c
0103H012	↓	45662.14	01/19/01-1	N		5.1c
0103H013	V, GC M	45662.15	01/19/01-1	N		5.1c
0103H014	↓	45662.16	01/19/01-1	N		5.1c

* Contact PO and attach record of resolution

@ Sample Fractions: B=SV GC/MS, V= VOA GC/MS or GC, P=Pesticide, H=Herbicide, D=Dioxin, A=Air I=Inorganics, C=Cyanide, M=Metals, R=Radiochemistry

~ Note samples with bubbles under remarks section.

Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

Project name: Parcel B Range Sampling
Project number: 60069.270(01)01

PO#: 002252
TtEMI technical contact: Ramona Moezzi 415.272.2279
TtEMI project manager: Tony Shiff (415) 222 9347

Lab: Southwest labs
Field samplers: G Heinrich
Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	VOC's (low level)
					No./Container Types					Analysis Required						
										Preservative Added						
										HCl			HNO3	HCl	HCl	
Φ1Φ3H.Φ07		1/18/01	0900	water	2					X						
Φ1Φ3H.Φ09			1120		6	6	1			X	X	X	X	X	X	
Φ1Φ3H.Φ10			1145		3	4				X	X	X				
Φ1Φ3H.Φ08			1235		3										X	
Φ1Φ3H.Φ11			1250		3										X	
Φ1Φ3H.Φ12			1325		3										X	
Φ1Φ3H.Φ13			1430		6	2	1			X			X	X	X	
Φ1Φ3H.Φ14			1525		6	2	1			X			X	X	X	

	Name (print)	Company Name	Date	Time
Relinquished by:	Gavan Heinrich	REM EIE	1/19/01	1730
Received by: Relinquished to Fed Ex				
Relinquished by:				
Received by:	Tyson Sparks	SWLO	1-19-01	8:10
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time remarks: Fed Ex airbill # 8245.8079 4209

Metals are field filtered for dissolved metals

5.22

5

WHITE - Laboratory Copy W - Project Office Copy

Tetra Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

Project name: Parcel B RAMP
Project number: C0069-274C0101
PO#: 002252
TtEMI technical contact: (415) Ramesh Mazz. 222 8278
TtEMI project manager: Tom Shott (415) 222 8347
Lab: (918) 251 2599 Southwest Labs of Oklahoma
Field samplers: J. Fortner
Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Dissolved Metals	CLP low level VOA
0103F010		1/10/00	1020	Water	2													X
0103F011			1245							1						X		
0103F012			1315		3													X
0103F013 MS/MSD			1425		12	12				2	X	X	X		X	X	X	
0103F014			1540							1							X	

Preservative Added

Analysis Required

	Name (print)	Company Name	Date	Time
Relinquished by:				
Received by: Relinquished to Fedex	John Fortner	RMI E&E	1/19/01	1750
Relinquished by:				
Received by:	JASON SPIEGES	SWLS	1-19-01	9:10
Relinquished by:				
Received by:				

Turnaround time remarks:

Samples for dissolved metals analysis are field filtered

FedEx Airbill # 8245 8079 4209

ST/ice

White: Laboratory Copy Project Office Copy

COOLER RECEIPT / SAMPLE LOG-IN SHEET

COOLER RECEIPT / SAMPLE LOG-IN SHEET (115-ATT2.WB1) / SWL-GA-115 REV 5.0 / GA-115-CRLOGIN-F

LAB NAME: SOUTHWEST LABORATORY OF OKLAHOMA

PAGE 1 OF 1

RECEIVED BY (PRINT NAME): JANET FITZGERALD

RECEIVED BY (SIGNATURE): Janet Fitzgerald

LOGGED IN BY (SIGNATURE): Janet Fitzgerald

REC'D DATE 01/20/01

TIME REC'D 09:30

LOG-IN DATE 2001-01-20 10:06

PROJECT: PARCEL B RAMP Y2Q1-3

EPISODE: 45670

SAMPLE DELIVERY GROUP: 45662

Remarks

1. CUSTODY SEAL(S): Present/Absent Intact/ Broken
2. CUSTODY SEALS NOS.: NO SEALS
3. CHAIN-OF CUSTODY. Present/Absent
   Sealed In Plastic? Yes/ No
   Taped To Lid? Yes/ No
   Properly Filled Out (Ink, Signed, ETC.)? Yes/ No
4. AIRBILL AirBill/ Sticker Present/Absent
5. AIRBILL NO: 824580794172
6. COOLER CONDITIONS
   Enough Ice? Yes/ No
   Type of Ice? Wet
   Type of Packing? Bubble Wrap
7. SAMPLE TAGS Present/Absent
8. SAMPLE CONDITION: Intact/ Broken*/ Leaking
   Bottles Sealed In Separate Plastic Bags? Yes/ No
   Correct Containers Used For Tests Indicated? Yes/ No
   Correct Preservative? Yes/ No
   Sufficient Sample? Yes/ No
   Labels Complete (I.D., Date, Time, Signature, Preservative? Yes/ No
   VOA Samples Without Bubbles? Yes/ No~
9. Does Information on Custody Records, Labels, Tags Agree? Yes/ No*
10. RAD SCREEN WITH GIEGER COUNTER? Yes/ No
11. P.O. Called? Yes/ No

Client Sample #	Sample Fraction @	Assigned LAB#	Cooler I.D.	pH Check	ACID/ BASE LOT#	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
0103L003	V	45670.01	01-20-01-1	N		1.8c
0103L001	V	45670.02	01-20-01-1	N		1.8c
0103L001	V	45670.03	01-20-01-1	N		1.8c
0103L001	V	45670.04	01-20-01-1	N		1.8c
0103L002	V,C,M	45670.05	01-20-01-1	N		1.8c
0103H015	V	45670.06	01-20-01-1	N		1.8c
0103H016	V	45670.07	01-20-01-1	N		1.8c
0103H017	C,V,M	45670.08	01-20-01-1	N		1.8c

* Contact PO and attach record of resolution

@ Sample Fractions: B=SV GC/MS, V= VOA GC/MS or GC, P=Pesticide, H=Herbicide, D=Dioxin, A=Air, I=Inorganics, C=Cyanide, M=Metals, R=Radiochemistry

~ Note samples with bubbles under remarks section.

Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

PO#	002252
Lab:	Southwest Labs (918) 251 2599
Project name:	Parcel D Ramp Sampling
TtEMI technical contact:	Romeen Moezzi (415) 222 8278
Field samplers:	G Heinrich
Project number:	G0069-270001
TtEMI project manager:	Tom Shuff (415) 222-9347
Field samplers' signatures:	[signature]

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	VOC's low level
					Preservative Added					HCl			HNO3	HCl		HCl
0103H015		1/19/01	0900	water	2					X						
0103H016			1055		3											X
0103H017			1425		6	2	1			X			X	X	X	

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	Gavan Heinrich	R&M E/E	1/19/01	1600
Received by: Relinquished to Fed Ex				
Relinquished by:				
Received by: [signature]	Janet Fitzgerald	SWLO	1/20/01	09:30
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Fed Ex tracking # 8245 8079 4172

metals are for disolved metals and are field filtered

1.8C

Tt Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

5054

Chain of Custody Record

PO# 002252

Lab: 918-251-2599 Southwest Labs

Project name: Parcel B Ramp Sample

TtEMI technical contact: 415-222-8278 Rameen Moezzi

Field samplers: Laura Genin

Project number: G0069-270C0101

TtEMI project manager: 415-222-8349 Tom Sheff

Field samplers' signatures: Laura Genin

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500mL Poly		CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables
					No./Container Types							Preservative Added: HCl			HNO3 HCl		
												Analysis Required					
0103L003		1/19/01	0800	water	2							X					
0103L001	MS MSD	1/19/01	0920	water	6							X					
0103L002		1/19/01	1500	water	6	2				1		X			X	X	X

Laura Genin

	Name (print)	Company Name	Date	Time
Relinquished by: Laura Genin	Laura Genin	R+M	1/19/01	1600
Received by: Fed Ex				
Relinquished by:				
Received by: Janet Fitzgerald	Janet Fitzgerald	SWLO	1/20/01	0930
Relinquished by:				
Received by:				
Relinquished by:				1.8°C
Received by:				

Turnaround time/remarks: Fed Ex tracking # 8245 8079 4172

metals are for disolved metals and are filtered in the field

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Tetra Tech EM Inc.
San Francisco Office

149 742

657

Chain of Custody Record

Page 1 of 1

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

PO# 02249 mod 1

Lab: C&T

Project name: Parcel B Ramp Sampling

TtEMI technical contact: Romeen Moezzi (415) 222 8278

Field samplers: G Heinrich

Project number: 00069 270 C01 01

TtEMI project manager: Tom Schoff (415) 222-8347

Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly Sour	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Cr VI
01036002		1/16/01	1000	Water			1									X
01036004		↓	1200	↓			1									X
01036005			1230				1									X
01036006			1315				2									X

Preservative Added

Analysis Required

	Name (print)	Company Name	Date	Time
Relinquished by:	Gavan Heinrich	RETA EIE	1/16/01	1420
Received by:	John Fortuna	RTA EIE	1/16/01	1420
Relinquished by:	John Fortuna	RTA Environmental	1/16/01	1517
Received by:	LISA Bennett	C&T LTD	1/16/01	3:20
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Received ☐ On Ice ☒ Cold ☐ Ambient ☐ Intact

Preservation Correct? ☐ Yes ☐ No ☐ N/A

WHITE-Laboratory Copy YELLOW-Project Office Copy

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1
Effective Date: 10-May-99
Revision: 1 Number 3 of 3
Filename: F:\QC\Forms\QC\Cooler.wpd

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 149742 Date Received: 1/16/01 Number of Coolers: 0
Client: Tetra Tech EMI Project: Pace 1 & Rowe Sampling

A. Preliminary Examination Phase
Date Opened: — By (print): — (sign) —

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES NO
   If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES NO
   How many and where? _____ Seal date: _____ Seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO
4. Were custody papers dry and intact when received? ..... YES NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... YES NO
6. Did you sign the custody papers in the appropriate place? ..... YES NO
7. Was project identifiable from custody papers? ..... YES NO
   If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... YES NO
   Type of ice: wet ice Temperature: chilled

B. Login Phase
Date Logged In: 1/16/01 By (print): John Brownfield (sign) [signature]

1. Describe type of packing in cooler: _____
2. Did all bottles arrive unbroken? ..... YES NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... YES NO
4. Did bottle labels agree with custody papers? ..... YES NO
5. Were appropriate containers used for the tests indicated? ..... YES NO
6. Were correct preservatives added to samples? ..... YES NO N/A
7. Was sufficient amount of sample sent for tests indicated? ..... YES NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO N/A
9. Was the client contacted concerning this sample delivery? ..... YES NO
   If YES, give details below.
   Who was called? _____ By whom? _____ Date: _____

Additional Comments:
received in a bucket w/ bags of ice

000004

Tetra Tech EM Inc.
San Francisco Office

149743

695

Chain of Custody Record

Page 1 of 1

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

PO# 002249 Mod 1

Lab: Curtis + Tompkins

Project name: Parcel B RAMP Sampling

TtEMI technical contact: (415) Ranier Moezzi 2228278

Field samplers: J. Fortuna ~~H. Green~~ JF

Project number: 60069-270C0101

TtEMI project manager: (415) Tom Shoff 2228347

Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Chromium
0103F002		1/16/01	0935	Water						1							X
0103F004		1/16/01	1105	Water						1							X

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	R+M Environmental	1/16/01	1517
Received by:	Lisa Bennetts	CoT LTD	1/16/01	3:20
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Received ☐ On Ice ☒ Cold ☐ Ambient ☒ Intact

Preservation Correct? ☐ Yes ☐ No ☒ N/A

WHITE-Laboratory Copy YELLOW-Project Office Copy

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1
Effective Date: 10-May-99
Revision: 1 Number 3 of 3
Filename: F:\QC\Forms\QC\Cooler.wpd

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 149743 Date Received: 1/16/01 Number of Coolers: 0
Client: Tetra Tech EMI Project: Pace 1 B Row Sampling

A. Preliminary Examination Phase
Date Opened: — By (print): — (sign) —

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES NO
   If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES NO
   How many and where? _____ Seal date: _____ Seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO
4. Were custody papers dry and intact when received? ..... YES NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... YES NO
6. Did you sign the custody papers in the appropriate place? ..... YES NO
7. Was project identifiable from custody papers? ..... YES NO
   If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... YES NO
   Type of ice: wet ice Temperature: chilled

B. Login Phase
Date Logged In: 1/16/01 By (print): J Chris Brantley (sign) [signature]

1. Describe type of packing in cooler: _____
2. Did all bottles arrive unbroken? ..... YES NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ... YES NO
4. Did bottle labels agree with custody papers? ..... YES NO
5. Were appropriate containers used for the tests indicated? ..... YES NO
6. Were correct preservatives added to samples? ..... YES NO N/A
7. Was sufficient amount of sample sent for tests indicated? ..... YES NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO N/A
9. Was the client contacted concerning this sample delivery? ..... YES NO
   If YES, give details below.
   Who was called? _____ By whom? _____ Date: _____

Additional Comments: received in a bucket w/ bags of ice

Tetra Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

149775

Chain of Custody Record

Page 1 of 1

Project name:	Purcell B Ramp
Project number:	G0069-270C0101
PO#	002249 Mod 1
TtEMI technical contact:	Rumer Mazzi (415) 222 8278
TtEMI project manager:	Tom Shoff (415) 222 8347
Lab:	Curtis + Tompkins
Field samplers:	J. Fortuna
Field samplers' signatures:	

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex. Chromium
0103F006		1/17/01	0930	Water						1							X
0103F007		↓	1005	↓						1							X
0103F008			1120							1							X
0103F009			1345							1							X

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortuna	R&M E/E	1/17/01	1500
Received by:	Gavan Heinrich	R&M E/E	1/17/01	1500
Relinquished by:	Gavan Heinrich	R&M E/E	1/17/01	1545
Received by:	LISA Bennetts	C&T LTD	1/17/01	15:45
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Received ☐ On ice ☑ Cold ☐ Ambient ☑ Intact

Preservation Correct? ☐ Yes ☐ No ☑ N/A

WHITE–Laboratory Copy YELLOW–Project Office Copy

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1
Effective Date: 10-May-99
Revision: 1 Number 3 of 3
Filename: F:\QC\Forms\QC\Cooler.wpd

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 149775 Date Received: 1/17/01 Number of Coolers: —
Client: Terra Tech EMI Project: Phase B RAMP Sampling

A. Preliminary Examination Phase
Date Opened: — By (print): — (sign) —

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES NO
   If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES NO
   How many and where? _____ Seal date: _____ Seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO
4. Were custody papers dry and intact when received? ..... YES NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... YES NO
6. Did you sign the custody papers in the appropriate place? ..... YES NO
7. Was project identifiable from custody papers? ..... YES NO
   If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... YES NO
   Type of ice: wet ice Temperature: Chilled

B. Login Phase
Date Logged In: 1/17/01 By (print): John Armstrong (sign) [signature]

1. Describe type of packing in cooler: —
2. Did all bottles arrive unbroken? ..... YES NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... YES NO
4. Did bottle labels agree with custody papers? ..... YES NO
5. Were appropriate containers used for the tests indicated? ..... YES NO
6. Were correct preservatives added to samples? ..... YES NO NA
7. Was sufficient amount of sample sent for tests indicated? ..... YES NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO NA
9. Was the client contacted concerning this sample delivery? ..... YES NO
   If YES, give details below.
   Who was called? _____ By whom? _____ Date: _____

Additional Comments: received in bucket w/ ice

000004

Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

149776

4699

Chain of Custody Record

PO#	002249
Lab:	C&T
Project name:	Parcel D Ramp Sampling
TtEMI technical contact:	Romcen Moczzi 415 222 8278
Field samplers:	G Heinrich
Project number:	G0069-270C0001
TtEMI project manager:	Tom Shoff 415 222 8347
Field samplers' signatures:	[signature]

Preservative Added

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Cr(VI)	000003
01 03 H 00 2		1/17/01	0940	water			1									X	
01 03 H 00 3		"	1055	"			1									X	
~~01 03 H 00 3~~	G.H.		1150				1									X	
01 03 H 00 4		"	1150	"			1									X	
01 03 H 00 6		"	1330	"			1									X	

	Name (print)	Company Name	Date	Time
Relinquished by:	~~[signature]~~ G.H. Gavan Heinrich	~~R&M EIE~~	~~1/17/01~~	~~1430~~
Received by:	~~[signature]~~ ~~Gavan Heinrich~~ G.H.			
Relinquished by:	[signature] Gavan Heinrich	R&M EIE	1/17/01	1545
Received by:	Lisa Bennetts LISA Bennetts	C&T LTD	01/17/01	15.45
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Preservation Correct? ☐ Yes ☐ No ☒ N/A

Received ☐ On Ice ☒ Cold ☐ Ambient ☐ Intact

WHITE–Laboratory Copy YELLOW–Project Office Copy

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1
Effective Date: 10-May-99
Revision: 1 Number 3 of 3
Filename: F:\QC\Forms\QC\Cooler.wpd

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 149776 Date Received: 1/17/01 Number of Coolers: —
Client: Terra Tech EMI Project: Proc B RAMP Sampling

A. Preliminary Examination Phase
Date Opened: — By (print): — (sign) —

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES NO
   If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES NO
   How many and where? _____ Seal date: _____ Seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO
4. Were custody papers dry and intact when received? ..... YES NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... YES NO
6. Did you sign the custody papers in the appropriate place? ..... YES NO
7. Was project identifiable from custody papers? ..... YES NO
   If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... YES NO
   Type of ice: wet ice Temperature: Chilled

B. Login Phase
Date Logged In: 1/17/01 By (print): Jamie Brewster (sign) [signature]

1. Describe type of packing in cooler: —
2. Did all bottles arrive unbroken? ..... YES NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ... YES NO
4. Did bottle labels agree with custody papers? ..... YES NO
5. Were appropriate containers used for the tests indicated? ..... YES NO
6. Were correct preservatives added to samples? ..... YES NO N/A
7. Was sufficient amount of sample sent for tests indicated? ..... YES NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... YES NO N/A
9. Was the client contacted concerning this sample delivery? ..... YES NO
   If YES, give details below.
   Who was called? _____ By whom? _____ Date: _____

Additional Comments: received in bucket w/ ice

Tetra Tech EM Inc.
San Francisco Office

149806

Chain of Custody Record

35 Main St. Suite 1800
San Francisco, CA 94105
15-543-4880
ax 415-543-5480

PO#	002249 Mod 2
Lab:	Curtis + Tompkins
Project name:	Parcel B RAMP
TtEMI technical contact:	Ramen Mazzi (415)2228276
Field samplers:	J. Fortune
Project number:	G0069-270C0101
TtEMI project manager:	Tom Stoff (415)2228747
Field samplers' signatures:	

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500 ml Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Chromium
0103F013 MS/MSD		1/18/01	1425	Water						1							X

Preservation Correct? ☒ Yes ☐ No ☐ N/A

Received ☒ On Ice ☐ Cold ☐ Ambient ☒ Intact

	Name (print)	Company Name	Date	Time
Relinquished by:	John Fortune	R&M EIE	1/18/01	1615
Received by:	Gavan Heinrich	R&M EIE	1/18/01	1615
Relinquished by:	Gavan Heinrich	R&M EIE	1/18/01	1715
Received by:	Pat Flynn	C&T	1/18/01	1715
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Receive over the counter in a bucket 1/18/01

WHITE-Laboratory Copy YELLOW-Project Office Copy

Tetra Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

149805

090

Chain of Custody Record

PO#	002249 mod 1
Lab:	Curtis & Tompkins
Project name:	Parcel B Ramp Sampling
TtEMI technical contact:	Rebecca Moezzi, 415 222-8278
Field samplers:	G Heinrich
Project number:	G0069-270C01
TtEMI project manager:	Tom Shott 415 222-8347
Field samplers' signatures:	[signature]

Preservative Added

Analysis Required

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Cr.	000003
01G3H008		1/18/01	1120	water			1									X	
01G3H013			1430				1									X	
01G3H014			1525				1									X	

No./Container Types

Preservation Correct? ☒ Yes ☐ No ☐ N/A

Received ☐ On Ice ☒ Cold ☐ Ambient ☒ Intact

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	Gavan Heinrich	REM EIE	1/18/01	1715
Received by: [signature]	Pat Elynn	CT	1/18/01	1715
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

WHITE-Laboratory Copy YELLOW-Project Office Copy

Tetra[illegible]ch EM Inc.
San Francisco Office
[illegible]5 Main St. Suite 1800
[illegible]n Francisco, CA 94105
[illegible]5-543-4880
[illegible]x 415-543-5480

149833

Chain of Custody Record

Page 1 of 1

PO#	002249
Lab:	Curtis + Tompkin
Project name:	Parcel B Ramp Sample
TtEMI technical contact:	Rameen Moezzi 415-222-8278
Field samplers:	Laura Genin
Project number:	F0069270C0101
TtEMI project manager:	Tom Shoff 415-222-8349
Field samplers' signatures:	Laura Genin

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	500mL Poly		CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Cr								
01031L002		1/19/01	1500	water						1								X								

Preservative Added

No./Container Types

Analysis Required

	Name (print)	Company Name	Date	Time
Relinquished by: Laura Genin	Laura Genin	RCM EJE	1/19/01	15:25
Received by: [illegible]	Steven Stanley	C&T	1/19/01	1525
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Preservation Correct? ☐ Yes ☐ No ☒ N/A

Received ☐ On Ice ☒ Cold ☐ Ambient ☒ Intact

WHITE-Laboratory Copy YELLOW-Project Office Copy

Tetra[illegible]ch EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

149831

Chain of Custody Record

Project name: Parcel B Ramp Sampling	PO#: ØØ2249 mod	Lab: Curtis + Tompkin.
Project number: GØØ69-27ØCØ101	TtEMI technical contact: (415) Rameen Moezzi 222-8278	Field samplers: Gavan Heinrich
	TtEMI project manager: Tom Shoff 222-8347	Field samplers' signatures: [signature]

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly Sealed	Brass Tube	Glass Jar	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	Hex Cr.
Ø1Ø3HØ17		1/19/01	1425	Water	—	—	1	—	—	—	—	—	—	—	—	X

	Name (print)	Company Name	Date	Time
Relinquished by: [signature]	Gavan Heinrich	R&M EE	1/19/01	1445
Received by: [signature]	Laura Genin	R&M EIE	1/19/01	1445
Relinquished by: [signature]	Laura Genin	R&M EIE	1/19/01	1525
Received by: [signature]	Steven Stanley	CET	1/19/01	1525
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Preservation Correct? ☐ Yes ☐ No ☒ N/A

Received ☐ On Ice ☒ Cold ☐ Ambient ☒ Intact

WHITE-Laboratory Copy YELLOW-Project Office Copy

APPENDIX D

JANUARY TO MARCH 2001 DATA VALIDATION REPORTS

(145 Pages)

DATA VALIDATION REPORT

Tech Review 3/9/01 by R. Moggi / TtEMI

Hunters Point Shipyard

Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Southwest Laboratory of Oklahoma, Inc.
Laboratory Project ID
45643

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 11.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborne
Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

DMETAL

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45643.06	0103G006MS		WATER	1/16/01
45643.02	0103G002	Full Validation Sample	WATER	1/16/01
45643.03	0103G004		WATER	1/16/01
45643.04	0103G005	Dup of 0103G004	WATER	1/16/01
45643.05	0103G006		WATER	1/16/01
45643.12	0103F003	Source Blank	WATER	1/16/01
45643.13	0103F004	Equipment Rinsate Blank	WATER	1/16/01
45652.07	0103H002		WATER	1/17/01
45652.08	0103H003	Full Validation Sample	WATER	1/17/01
45652.09	0103H004		WATER	1/17/01
45652.10	0103H005		WATER	1/17/01
45652.11	0103H006	Equipment Rinsate Blank	WATER	1/17/01

LVOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45643.09	0103G003		WATER	1/16/01
45652.02	0103F006	Full Validation Sample	WATER	1/17/01
45652.03	0103F007	Dup of 0103F006	WATER	1/17/01
45652.05	0103F009		WATER	1/17/01

PEST

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45643.02	0103G002MS		WATER	1/16/01
45643.02	0103G002MSD		WATER	1/16/01
45643.02	0103G002	Full Validation Sample	WATER	1/16/01
45643.11	0103F002	Source Blank	WATER	1/16/01
45643.13	0103F004	Equipment Rinsate Blank	WATER	1/16/01

SVOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45643.02	0103G002DL		WATER	1/16/01
45643.02	0103G002	Full Validation Sample	WATER	1/16/01
45643.11	0103F002	Source Blank	WATER	1/16/01
45643.13	0103F004	Equipment Rinsate Blank	WATER	1/16/01

2.0 Sample Collection, Preservation and Handling

TMETAL

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45643.08	0103G006MD		WATER	1/16/01
45652.02	0103F006MD	Full Validation Sample	WATER	1/17/01
45652.02	0103F006MS		WATER	1/17/01
45643.11	0103F002	Source Blank	WATER	1/16/01
45652.02	0103F006	Full Validation Sample	WATER	1/17/01
45652.03	0103F007	Dup of 0103F006	WATER	1/17/01
45652.04	0103F008		WATER	1/17/01
45652.05	0103F009		WATER	1/17/01

TPHEXT

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45643.06	0103G006MS		WATER	1/16/01
45643.07	0103G006MSD		WATER	1/16/01
45643.02	0103G002	Full Validation Sample	WATER	1/16/01
45643.03	0103G004		WATER	1/16/01
45643.04	0103G005	Dup of 0103G004	WATER	1/16/01
45643.05	0103G006		WATER	1/16/01
45643.11	0103F002	Source Blank	WATER	1/16/01
45643.13	0103F004	Equipment Rinsate Blank	WATER	1/16/01
45652.02	0103F006	Full Validation Sample	WATER	1/17/01
45652.03	0103F007	Dup of 0103F006	WATER	1/17/01
45652.04	0103F008		WATER	1/17/01
45652.05	0103F009		WATER	1/17/01
45652.07	0103H002		WATER	1/17/01
45652.08	0103H003	Full Validation Sample	WATER	1/17/01
45652.09	0103H004		WATER	1/17/01
45652.11	0103H006	Equipment Rinsate Blank	WATER	1/17/01
45643.02	0103G002RE		WATER	1/16/01
45643.03	0103G004RE		WATER	1/16/01
45643.04	0103G005RE		WATER	1/16/01
45643.05	0103G006RE		WATER	1/16/01
45643.11	0103F002RE		WATER	1/16/01
45643.13	0103F004RE		WATER	1/16/01
45652.02	0103F006RE		WATER	1/17/01
45652.03	0103F007RE		WATER	1/17/01
45652.04	0103F008RE		WATER	1/17/01
45652.05	0103F009RE		WATER	1/17/01
45652.07	0103H002RE		WATER	1/17/01
45652.08	0103H003RE		WATER	1/17/01
45652.09	0103H004RE		WATER	1/17/01
45652.11	0103H006RE		WATER	1/17/01

2.0 Sample Collection, Preservation and Handling

TPHPRG

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45643.06	0103G006MS		WATER	1/16/01
45643.07	0103G006MSD		WATER	1/16/01
45643.02	0103G002	Full Validation Sample	WATER	1/16/01
45643.03	0103G004		WATER	1/16/01
45643.04	0103G005	Dup of 0103G004	WATER	1/16/01
45643.05	0103G006		WATER	1/16/01
45643.11	0103F002	Source Blank	WATER	1/16/01
45643.13	0103F004	Equipment Rinsate Blank	WATER	1/16/01
45652.02	0103F006	Full Validation Sample	WATER	1/17/01
45652.03	0103F007	Dup of 0103F006	WATER	1/17/01
45652.04	0103F008		WATER	1/17/01
45652.05	0103F009		WATER	1/17/01
45652.07	0103H002		WATER	1/17/01
45652.08	0103H003	Full Validation Sample	WATER	1/17/01
45652.09	0103H004		WATER	1/17/01
45652.11	0103H006	Equipment Rinsate Blank	WATER	1/17/01

VOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45643.06	0103G006MS		WATER	1/16/01
45643.07	0103G006MSD		WATER	1/16/01
45643.01	0103G001	Trip Blank	WATER	1/16/01
45643.02	0103G002	Full Validation Sample	WATER	1/16/01
45643.03	0103G004		WATER	1/16/01
45643.04	0103G005	Dup of 0103G004	WATER	1/16/01
45643.05	0103G006		WATER	1/16/01
45643.10	0103F001	Trip Blank	WATER	1/16/01
45643.11	0103F002	Source Blank	WATER	1/16/01
45643.13	0103F004	Equipment Rinsate Blank	WATER	1/16/01
45652.01	0103F005	Trip Blank	WATER	1/17/01
45652.04	0103F008		WATER	1/17/01
45652.06	0103H001	Trip Blank	WATER	1/17/01
45652.07	0103H002		WATER	1/17/01
45652.08	0103H003	Full Validation Sample	WATER	1/17/01
45652.09	0103H004		WATER	1/17/01
45652.11	0103H006	Equipment Rinsate Blank	WATER	1/17/01

All samples were received intact and properly labeled. Custody seals and sample tags were not present for samples 0103G001 through 0103G006 and 0103F001 through 0103F004. Sample tags were not present for samples 0103F005 through 0103F009 and 0103H001 through 0103H006. Cooler temperature for samples 0103G001 through 0103G006 were 8.4°C upon arrival at the laboratory. All other cooler temperatures were 2 - 6°C upon arrival at the laboratory.

3.0 CLP Low-Level Volatile Organics

3.1 Holding Time

Due to a holding time problem, the following detected and non-detected results are qualified as estimated (J5/UJ5):

Lab ID	Client ID	Matrix	Collected	Analyzed	Holding Time (Days) Analysis	RTHT[1] (Days) Analysis	Q
45643.09	0103G003	WATER	1/16/01	1/25/01	9	7	J5 / UJ5

[1] Required technical holding time from sample collection to analysis was reduced to 7 days due to temperature exceedance → 8°C

Required temp: 4 ± 2°C

3.2 Blanks

Due to common laboratory contamination, the following results are considered nondetected (U4):

MATRIX: WATER

Client ID	Analyte	Reported Result	Qualified Result	Units
0103F006	METHYLENE CHLORIDE	1	1 U4	UG/L
0103F007	METHYLENE CHLORIDE	2	2 U4	UG/L
0103F009	METHYLENE CHLORIDE	1	1 U4	UG/L
0103G003	ACETONE	13	13 U4	UG/L
	METHYLENE CHLORIDE	1	1 U4	UG/L

According to the TtEMI Statement of Work, if the concentration detected in a sample is at a level < RL, the value shall be elevated to the RL (U4); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U4).

3.3 Calibrations

Due to initial calibrations problems, the following nondetected results are qualified as estimated (UJ7):

ICAL Date: 10/26/00

Analyte	ICAL RSD	Q
1,2-DIBROMO-3-CHLOROPROPANE	45.7	J7 / UJ7

Associated Samples: 0103G003 0103F006 0103F007 0103F009

[1] According to the TtEMI Statement of Work, if the inital calibration RSD exceeds 30%, apply J7 to all detected results, apply UJ7 to all non-detects

3.3 Calibrations

Due to continuing calibrations problems, the following nondetected results are qualified as estimated (UJ7):

Date Analyzed: 1/25/01

Analyte	CC %D	Q
1,1,2,2-TETRACHLOROETHANE	27.6	J7 / UJ7
METHYL ACETATE	35.3	J7 / UJ7

Associated Samples: 0103G003 0103F006 0103F007 0103F009

[1] According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

3.4 Field Duplicates

One set of field duplicates was collected for analysis by this method. The following results were found:

common lab contaminant

	Primary Sample		*Dup Sample*			
	0103F006		0103F007			
Analyte	**Result**	**RL**	**Result**	**RL**	**Units**	**RPD**
METHYLENE CHLORIDE	1	0.5	2	0.5	UG/L	67

All other target compounds were reported as nondetected.

Full Validation for Sample 0103F006

3.5 GC/MS Tuning

The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The sample was analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra, and peak identifications of the sample was evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes used.

Tentatively Identified Compounds (TICs)

TICs were not detected.

3.5 System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

4.0 CLP Volatile Organics

4.1 Holding Time

Due to a holding time problem, the following detected and non-detected results are qualified as estimated (J5/UJ5):

Lab ID	Client ID	Matrix	Collected	Analyzed	Holding Time (Days) Analysis	RTHT[1] (Days) Analysis	Q
45643.01	0103G001	WATER	1/16/01	1/24/01	8	7	J5 / UJ5
45643.02	0103G002	WATER	1/16/01	1/24/01	8	7	J5 / UJ5
45643.03	0103G004	WATER	1/16/01	1/24/01	8	7	J5 / UJ5
45643.04	0103G005	WATER	1/16/01	1/24/01	8	7	J5 / UJ5
45643.05	0103G006	WATER	1/16/01	1/24/01	8	7	J5 / UJ5

[1] Required technical holding time from sample collection to analysis was reduced to 7 days due to temperature exceedance → 8°C

Required temp: 4 ± 2°C

4.2 Laboratory Control Samples

Due to an accuracy problem in the LCS analysis, nondetected results for the following associated samples are qualified as estimated (UJ3):

LCS ID: L010123BBS1
BATCH ID: L010123B
MATRIX: WATER
PREP DATE:

Analyte	% Recovery LCS	% Recovery LCSD	Limits[1]	Q[2]
1,1-DICHLOROETHENE	80	74	75 - 125	J3/UJ3

Associated samples: 0103G001, 0103G002, 0103G004, 0103G005, 0103G006, 0103F001, 0103F004, 0103F008, 0103H002, 0103H003

[1] Project-Established Limits

[2] According to the TtEMI Statement of Work, if the LCS recovery is less than the lower control limit, apply J3 to all associated detects and nondetects

Detected results for the listed compounds may be biased low, and false nondetects may have been reported.

4.3 Blanks

Due to common laboratory contamination, the following results are considered nondetected (U4);

MATRIX: WATER

Client ID	Analyte	Reported Result	Qualified Result	Units
0103F001	ACETONE	24	24 U4	UG/L
	METHYLENE CHLORIDE	32	32 U4	UG/L
0103F002	METHYLENE CHLORIDE	2	10 U4	UG/L
0103F004	ACETONE	5	10 U4	UG/L
	METHYLENE CHLORIDE	12	12 U4	UG/L
0103F005	METHYLENE CHLORIDE	2	10 U4	UG/L
0103F008	METHYLENE CHLORIDE	10	10 U4	UG/L
0103G001	ACETONE	4	10 U4	UG/L
	METHYLENE CHLORIDE	11	11 U4	UG/L
0103G002	ACETONE	4	10 U4	UG/L
	METHYLENE CHLORIDE	11	11 U4	UG/L
0103G004	ACETONE	48	48 U4	UG/L
	METHYLENE CHLORIDE	35	35 U4	UG/L
0103G005	ACETONE	19	19 U4	UG/L
	METHYLENE CHLORIDE	38	38 U4	UG/L
0103G006	ACETONE	16	16 U4	UG/L
	METHYLENE CHLORIDE	38	38 U4	UG/L
0103H001	METHYLENE CHLORIDE	2	10 U4	UG/L
0103H002	ACETONE	7	10 U4	UG/L
	METHYLENE CHLORIDE	12	12 U4	UG/L
0103H003	ACETONE	8	10 U4	UG/L
	METHYLENE CHLORIDE	11	11 U4	UG/L
0103H004	ACETONE	2	10 U4	UG/L
0103H006	METHYLENE CHLORIDE	2	10 U4	UG/L

According to the TtEMI Statement of Work, if the concentration detected in a sample is at a level < RL, the value shall be elevated to the RL (U4); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U4).

4.4 Calibrations

Due to initial calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

ICAL Date: 1/23/01

Analyte	ICAL RSD	Q
ACETONE	32.4	J7 / UJ7

Associated Samples:

0103G001	0103G002	0103G004
0103G005	0103G006	0103F001
0103F002	0103F004	0103F005
0103F008	0103H001	0103H002
0103H003	0103H004	0103H006

[1] According to the TtEMI Statement of Work, if the inital calibration RSD exceeds 30%, apply J7 to all detected results, apply UJ7 to all non-detects

Due to continuing calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

Date Analyzed: 1/24/01

Analyte	CC %D	Q
DICHLORODIFLUOROMETHANE	100.8	J7 / UJ7
TRICHLOROFLUOROMETHANE	28.9	J7 / UJ7
METHYLCYCLOHEXANE	29.2	J7 / UJ7

Associated Samples:

0103F002	0103F005	0103H001
0103H004	0103H006	

[1] According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

4.5 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q[1]
0103F004	TOLUENE	1	2	10	UG/L	J
0103G002	ETHYLBENZENE	1	2	10	UG/L	J
0103G002	ISOPROPYLBENZENE	1	1	10	UG/L	J
0103G002	XYLENE (TOTAL)	1	1	10	UG/L	J
0103G006	CHLOROFORM	1	3	10	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

4.6 Field Duplicates

One set of field duplicates was collected for analysis by this method. The following results were found:

common lab contaminants.

	Primary Sample			*Dup Sample*				
	0103G004			0103G005				
Analyte	Result		RL	Result		RL	Units	RPD
ACETONE	48	B	10	19	B	10	UG/L	87
METHYLENE CHLORIDE	35		10	38		10	UG/L	8

All other target compounds were reported as nondetected.

Full Validation for Samples 0103G002 and 0103H003

4.7 GC/MS Tuning

The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes used.

4.7 Tentatively Identified Compounds (TICs)

The samples spectra and library searches were evaluated. TIC results were recalculated and found to be correct. All identified compounds were reported with the "NJ" qualifier.

System Performance

The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

5.0 CLP Semivolatile Organics

5.1 Laboratory Control Samples

Due to an accuracy problem in the LCS analysis, nondetected results for the following associated samples are qualified as estimated (UJ3):

LCS ID: BL0118WIBS1
BATCH ID: BL0118WI
MATRIX: WATER
PREP DATE: 1/18/01

Analyte	% Recovery LCS	% Recovery LCSD	Limits [1]	Q [2]
PHENOL	53	73 OK	60 - 140	J3/UJ3
2-CHLOROPHENOL	55	75 OK	60 - 140	J3/UJ3

Associated samples: 0103G002DL 0103G002 0103F002 0103F004

[1] Project-Established Limits

[2] According to the TtEMI Statement of Work, if the LCS recovery is less than the lower control limit, apply J3 to all associated detects and nondetects

False nondetects may have been reported.

Due to an accuracy problem in the LCS analysis, detected results for the following associated samples are qualified as estimated (J3):

LCS ID: BL0118WIBS1
BATCH ID: BL0118WI
MATRIX: WATER
PREP DATE: 1/18/01

Analyte	% Recovery LCS	% Recovery LCSD	Limits [1]	Q [2]
PYRENE	OK 130	144	60 - 140	J3/none

Associated samples: 0103G002DL 0103G002 0103F002 0103F004

[1] Project-Established Limits

[2] According to the TtEMI Statement of Work, if the LCS recovery is > than the upper control limit, apply J3 to all associated detects

5.2 Blanks

Due to common laboratory contamination, the following results are considered nondetected (U4):

MATRIX: WATER

Client ID	Analyte	Reported Result	Qualified Result	Units
0103G002	BIS(2-ETHYLHEXYL)PHTHALATE	1	10 U4	UG/L
0103G002	DI-N-BUTYLPHTHALATE	0.9	10 U4	UG/L
0103F002	BIS(2-ETHYLHEXYL)PHTHALATE	8	10 U4	UG/L
0103F004	BIS(2-ETHYLHEXYL)PHTHALATE	3	10 U4	UG/L

According to the TtEMI Statement of Work, if the concentration detected in a sample is at a level < RL, the value shall be elevated to the RL (U4); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U4).

5.3 Calibrations

Due to initial calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

ICAL Date	Analyte	ICAL RSD	Q
1/17/01	2,4-DINITROTOLUENE	33.6	J7 / UJ7
	2,4-DINITROPHENOL	32.1	J7 / UJ7
	HEXACHLOROCYCLOPENTADIENE	32.7	J7 / UJ7

Associated Samples: 0103F002

ICAL Date	Analyte	ICAL RSD	Q
1/23/01	BUTYLBENZYLPHTHALATE	31	J7 / UJ7
	CAPROLACTAM	38.8	J7 / UJ7
	BENZALDEHYDE	33.9	J7 / UJ7

Associated Samples: 0103G002DL 0103G002 0103F004

[1] According to the TtEMI Statement of Work, if the inital calibration RSD exceeds 30%, apply J7 to all detected results, apply UJ7 to all non-detects

5.3 Calibrations

Due to continuing calibrations problems, the following nondetected results are qualified as estimated (UJ7):

Date Analyzed: 1/19/01

Analyte	CC %D	Q
4-NITROANILINE	-26.5	J7 / UJ7

Associated Samples: 0103F002

Date Analyzed: 1/26/01

Analyte	CC %D	Q
3,3'-DICHLOROBENZIDINE	63.5	J7 / UJ7
BENZO(A)ANTHRACENE	27.1	J7 / UJ7
BIS(2-ETHYLHEXYL)PHTHALATE	55.7	J7 / UJ7
DI-N-OCTYLPHTHALATE	42.1	J7 / UJ7

Associated Samples: 0103G002DL 0103G002

Date Analyzed: 1/30/01

Analyte	CC %D	Q
ACENAPHTHYLENE	25.6	J7 / UJ7
BENZO(B)FLUORANTHENE	28.4	J7 / UJ7

Associated Samples: 0103F004

[1] According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

5.4 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q [1]
0103G002						
	1,1'-BIPHENYL	1	1	10	UG/L	J
	4-METHYLPHENOL	1	0.6	10	UG/L	J
	ACENAPHTHYLENE	1	1	10	UG/L	J
	ANTHRACENE	1	7	10	UG/L	J
	BENZO(A)ANTHRACENE	1	0.5	10	UG/L	J
	CAPROLACTAM	1	4	10	UG/L	J
	CHRYSENE	1	0.5	10	UG/L	J
	PYRENE	1	9	10	UG/L	J
0103G002DL						
	2-METHYLNAPHTHALENE	4	25	40	UG/L	J
	ANTHRACENE	4	5	40	UG/L	J
	CARBAZOLE	4	9	40	UG/L	J
	DIBENZOFURAN	4	36	40	UG/L	J
	FLUORANTHENE	4	12	40	UG/L	J
	FLUORENE	4	29	40	UG/L	J
	PHENANTHRENE	4	12	40	UG/L	J
	PYRENE	4	7	40	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

The following detected results are estimated (J8) due to calibration range exceedance:

Sample ID	Analyte	Reported Result	CRQL	Units	Q
0103G002	ACENAPHTHENE	100		UG/L	J8
	NAPHTHALENE	150		UG/L	J8

[1] According to the TtEMI Statement of Work, any result that exceeds the calibration range should be flagged J8

Analytes detected at concentrations exceeding the calibration range are quantitatively unreliable. The sample listed above was appropriately diluted and reanalyzed.

Full Validation for Sample 0103G002

5.6 GC/MS Tuning

The ion abundance criteria were met for the decafluorotriphenylphosphine (DFTPP) GC/MS performance checks. The sample was analyzed within 12 hours of the associated performance check.

Full Validation for Sample 0103G002

5.6 **Target Compound List Identification**

The relative retention times, mass spectra and peak identifications of the sample was evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits. All reported results reflect any dilutions and volumes.

Tentatively Identified Compounds (TICs)

The sample spectra and library searches were evaluated. TIC results were recalculated and found to be correct. All identified compounds were reported with the "NJ" qualifier.

System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

6.0 CLP Pesticides/PCBs

6.1 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

MB BATCH ID: 010119WE
MATRIX: WATER

Analyte	Result	PQL	Affected Samples	Result	PQL	Units	Q
GAMMA-CHLORDANE	0.0027	0.01					
Action Level: 0.0135							
			0103G002	0.011	0.01	UG/L	U1
HEPTACHLOR	0.015	0.01					
Action Level: 0.075							
			0103F002	0.02	0.01	UG/L	U1
			0103F004	0.018	0.01	UG/L	U1
			0103G002	0.03	0.01	UG/L	U1

[1] *According to the TtEMI Statement of Work, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if the concentration detected in an associated sample is at a level < RL, the value shall be elevated to the RL (U1); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U1).*

6.2 Laboratory Control Samples

Due to an accuracy problem in the LCS analysis, detected results for the following associated samples are qualified as estimated (J3):

LCS ID: 010119WEBS1P
BATCH ID: 010119WE
MATRIX: WATER
PREP DATE: 1/19/01

Analyte	% Recovery LCS	% Recovery LCSD	Limits [1]	Q [2]
GAMMA-CHLORDANE	86 ok	152 high	*60 - 140*	*J3/none*

Associated samples: 0103G002 0103F002 0103F004

[1] Project-Established Limits

Full Validation for Sample 0103G002

6.3 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

Full Validation for Sample 0103G002

6.3 System Performance

The sample was evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

Compound Identification

Due to confirmation problems, the following results are considered nondetected (U9):

Sample ID	Analyte	Reported Result	Conf Result	RL	%D	CRQL	Q[1]
0103G002	4,4'-DDD	0.02	0.68	0.02	999.9	0.1	U9

[1] According to the TtEMI Statement of Work, if the %D for any analyte is >50% and the reported sample concentration is is less than the RL, elevate the result to the RL and flag results as nondetected U9

7.0 TPH Extractables by GC/FID (Modified SW8015)

7.1 Holding Time

Due to a holding time problem, the following detected and non-detected results are qualified as estimated (J5/UJ5):

Lab ID	Client ID	Matrix	Collected	Prepared	Holding Time (Days) Prep	RTHT[1] (Days) Prep	Q
45643.02	0103G002RE	WATER	1/16/01	1/26/01	10	7	J5 / UJ5
45643.03	0103G004RE	WATER	1/16/01	1/26/01	10	7	J5 / UJ5
45643.04	0103G005RE	WATER	1/16/01	1/26/01	10	7	J5 / UJ5
45643.05	0103G006RE	WATER	1/16/01	1/26/01	10	7	J5 / UJ5
45643.11	0103F002RE	WATER	1/16/01	1/26/01	10	7	J5 / UJ5
45643.13	0103F004RE	WATER	1/16/01	1/26/01	10	7	J5 / UJ5
45652.02	0103F006RE	WATER	1/17/01	1/26/01	9	7	J5 / UJ5
45652.03	0103F007RE	WATER	1/17/01	1/26/01	9	7	J5 / UJ5
45652.04	0103F008RE	WATER	1/17/01	1/26/01	9	7	J5 / UJ5
45652.05	0103F009RE	WATER	1/17/01	1/26/01	9	7	J5 / UJ5
45652.07	0103H002RE	WATER	1/17/01	1/26/01	9	7	J5 / UJ5
45652.08	0103H003RE	WATER	1/17/01	1/26/01	9	7	J5 / UJ5
45652.09	0103H004RE	WATER	1/17/01	1/26/01	9	7	J5 / UJ5
45652.11	0103H006RE	WATER	1/17/01	1/26/01	9	7	J5 / UJ5

[1] Required technical holding time from sample collection to preparation

Note These are all re-extractions — why were they re-extracted? - Because LCS high ~~??~~ - ~~check case narrative~~

7.2 Laboratory Control Samples

Due to an accuracy problem in the LCS analysis, detected results for the following associated samples are qualified as estimated (J3):

LCS ID: 010118WBBS1P
BATCH ID: 010118WB
MATRIX: WATER
PREP DATE: 1/18/01

Analyte	% Recovery LCS	% Recovery LCSD	Limits[1]	Q[2]
DIESEL RANGE	158 High	132 OK	60 - 140	~~J3/UJ3~~ J3/None

Associated samples:

0103G002	0103G004	0103G005	0103G006	0103F002	0103F004
0103F006	0103F007	0103F008	0103F009	0103H002	0103H003
0103H004	0103H006				

[1] Project-Established Limits

[2] According to the TtEMI Statement of Work, if the LCS recovery is greater than the upper control limit, apply J3 to all associated detects

7.3 Blanks

Due to field blank contamination, the following results are considered nondetected (U2):

DateCollected: 1/17/01
Matrix: WATER

Blank ID	Analyte	Result	RL	Units
Equipment Rinsate Blank 0103H006	MOTOR OIL RANGE	880	250	UG/L

Associated Results:			**Reported Result**	**Qualified Result**		
0103F007	WATER	MOTOR OIL RANGE	300	300	U2	UG/L
0103F008	WATER	MOTOR OIL RANGE	280	280	U2	UG/L
0103F009RE	WATER	MOTOR OIL RANGE	390	390	U2	UG/L
0103H004	WATER	MOTOR OIL RANGE	560	560	U2	UG/L

Check if no detected in EB is due to carryover on instrument. . . . .

7.4 Calibrations

Due to continuing calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

Date Analyzed: 1/24/01

Analyte	**CC %D**	**Q**
DIESEL RANGE	-51.8	J7 / UJ7
MOTOR OIL RANGE	-46.7	J7 / UJ7

Associated Samples: 0103H004 ↳ no diesel 0103H006 ↳ no DRO - E.BLK

Date Analyzed: 1/27/01

Analyte	**CC %D**	**Q**
MOTOR OIL RANGE	-15.4	J7 / UJ7

Associated Samples:

0103F002RE	0103F004RE	0103F006RE
0103F007RE	0103F008RE	0103F009RE
0103H002RE	0103H003RE	0103H004RE
0103H006RE		

[1] According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 15%, apply J7 to all detected results, apply UJ7 to all non-detects

7.5 Field Duplicates

Two sets of field duplicates were collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for all target analytes in duplicate set 0103G004 / 0103G005. The following results were found for duplicate set 0103F006 / 0103F007:

	Primary Sample		*Dup Sample*			
	0103F006		0103F007			
Analyte	**Result**	**RL**	**Result**	**RL**	**Units**	**RPD**
DIESEL RANGE	250 U	250	250 U	250	UG/L	NC
MOTOR OIL RANGE	250 U	250	300	250	UG/L	NQ

near reporting limit

Full Validation for Samples 0103G002, 0103F006 and 0103H003

7.6 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

8.0 TPH Purgeables by GC/FID (Modified SW8015)

Due to temperature exceedance, detected and nondetected results for samples 0103G002, 0103G004, 0103G005 and 0103G006 are qualified as estimated (J/UJ).

8.1 Surrogate Recovery

Due to surrogate recovery problems, the nondetected result for the following sample is qualified as estimated (UJ3):

Lab ID	Client ID	Matrix	DF	Analyte	% Rec	*Limits* [1]	Q
45643.13	0103F004	WATER	1	TRIFLUOROTOLUENE	65	*75- 125*	*J3/UJ3*

[1] Project-established Limits

[1] According to the Statement of Work, if any surrogate recovery is > 10% and below the LCL, flag detected/nondetected results J3/UJ3

8.2 Field Duplicates

Two sets of field duplicates were collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for duplicate set 0103F006 / 0103F007. The following results were found for duplicate set 0103G004 / 0103G005:

	Primary Sample		*Dup Sample*			
	0103G004		0103G005			
Analyte	**Result**	**RL**	**Result**	**RL**	**Units**	**RPD**
TOTAL GRO	28 Z	20	20 U	20	UG/L	NQ

Full Validation for Samples 0103G002, 0103F006 and 0103H003

8.3 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

8.4 System Performance

The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

9.0 CLP Total and Dissolved Metals by ICP/CVAA

9.1 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

Matrix: WATER

Blank ID	Analyte	Result	DL	Units
CCB	CALCIUM	53.3	8	UG/L
CCB	COPPER	1.8	1	UG/L
CCB	IRON	11.3	7	UG/L
ICB	LEAD	1.5	1	UG/L
CCB	MAGNESIUM	225.5	21	UG/L

Associated Results:

			Qualified Result			
0103H006	WATER	CALCIUM	34	U1	8	UG/L
0103F003	WATER	CALCIUM	99.1	U1	8	UG/L
0103F004	WATER	CALCIUM	71	U1	8	UG/L
0103F002	WATER	CALCIUM	118	U1	8	UG/L
0103F009	WATER	COPPER	1.6	U1	1	UG/L
0103F002	WATER	COPPER	1.6	U1	1	UG/L
0103F003	WATER	COPPER	1.4	U1	1	UG/L
0103F004	WATER	COPPER	1.5	U1	1	UG/L
0103F006	WATER	COPPER	1.1	U1	1	UG/L
0103F008	WATER	COPPER	4.5	U1	1	UG/L
0103G002	WATER	COPPER	1.2	U1	1	UG/L
0103G004	WATER	COPPER	3	U1	1	UG/L
0103H004	WATER	COPPER	1.5	U1	1	UG/L
0103G006	WATER	COPPER	2.7	U1	1	UG/L
0103H002	WATER	COPPER	2.6	U1	1	UG/L
0103H005	WATER	COPPER	3.8	U1	1	UG/L
0103G005	WATER	COPPER	5.7	U1	1	UG/L
0103G005	WATER	IRON	16.5	U1	7	UG/L
0103H006	WATER	IRON	10.7	U1	7	UG/L
0103H003	WATER	IRON	11.5	U1	7	UG/L
0103H004	WATER	IRON	23.5	U1	7	UG/L
0103F003	WATER	IRON	13.2	U1	7	UG/L
0103F003	WATER	LEAD	3.2	U1	1	UG/L
0103F007	WATER	LEAD	1	U1	1	UG/L
0103H003	WATER	LEAD	1.7	U1	1	UG/L
0103F004	WATER	LEAD	1	U1	1	UG/L
0103F004	WATER	MAGNESIUM	152	U1	21	UG/L
0103F002	WATER	MAGNESIUM	241	U1	21	UG/L
0103H006	WATER	MAGNESIUM	89.3	U1	21	UG/L
0103F003	WATER	MAGNESIUM	202	U1	21	UG/L

9.1 Blanks (cont.)

Matrix: WATER

Blank ID	Analyte	Result	DL	Units
TBLK29	ARSENIC	3.4	2	UG/L

Associated Results:

			Qualified Result			
0103G006	WATER	ARSENIC	5.3	U1	2	UG/L
0103G005	WATER	ARSENIC	8.1	U1	2	UG/L
0103G004	WATER	ARSENIC	5.9	U1	2	UG/L
0103G002	WATER	ARSENIC	4.4	U1	2	UG/L
0103F007	WATER	ARSENIC	2.8	U1	2	UG/L
0103F006	WATER	ARSENIC	2.9	U1	2	UG/L
0103F004	WATER	ARSENIC	5.6	U1	2	UG/L
0103F003	WATER	ARSENIC	2.5	U1	2	UG/L
0103F002	WATER	ARSENIC	2.1	U1	2	UG/L

9.1 Blanks

Due to negative drift observed in laboratory blanks, the following results are considered estimated (J1/UJ1):

Matrix: WATER

Blank ID	Analyte	Result	Units
CCB	ALUMINUM	-32.9	UG/L
CCB	ANTIMONY	-8.7	UG/L
CCB	SELENIUM	-4.7	UG/L
ICB	THALLIUM	-4.1	UG/L

Associated Results:

			Qualified Result		DL	
0103F003	WATER	ALUMINUM	6	UJ1	6	UG/L
0103F004	WATER	ALUMINUM	6	UJ1	6	UG/L
0103G002	WATER	ALUMINUM	6	UJ1	6	UG/L
0103G004	WATER	ALUMINUM	6	UJ1	6	UG/L
0103G005	WATER	ALUMINUM	6	UJ1	6	UG/L
0103G006	WATER	ALUMINUM	6	UJ1	6	UG/L
0103H002	WATER	ALUMINUM	6	UJ1	6	UG/L
0103H003	WATER	ALUMINUM	6	UJ1	6	UG/L
0103H004	WATER	ALUMINUM	6	UJ1	6	UG/L
0103H005	WATER	ALUMINUM	6	UJ1	6	UG/L
0103H006	WATER	ALUMINUM	6	UJ1	6	UG/L
0103F002	WATER	ALUMINUM	6	UJ1	6	UG/L
0103F006	WATER	ALUMINUM	6	UJ1	6	UG/L
0103F007	WATER	ALUMINUM	6	UJ1	6	UG/L
0103F008	WATER	ALUMINUM	6	UJ1	6	UG/L
0103F009	WATER	ALUMINUM	6	UJ1	6	UG/L
0103F003	WATER	ANTIMONY	2.7	J1	2	UG/L
0103F004	WATER	ANTIMONY	2	UJ1	2	UG/L
0103G002	WATER	ANTIMONY	3.7	J1	2	UG/L
0103G004	WATER	ANTIMONY	2	UJ1	2	UG/L
0103G005	WATER	ANTIMONY	2	UJ1	2	UG/L
0103G006	WATER	ANTIMONY	2	UJ1	2	UG/L
0103H002	WATER	ANTIMONY	2	UJ1	2	UG/L
0103H003	WATER	ANTIMONY	2	UJ1	2	UG/L
0103H004	WATER	ANTIMONY	2	UJ1	2	UG/L
0103H005	WATER	ANTIMONY	2	UJ1	2	UG/L
0103H006	WATER	ANTIMONY	2	UJ1	2	UG/L
0103F002	WATER	ANTIMONY	2	UJ1	2	UG/L
0103F006	WATER	ANTIMONY	2	UJ1	2	UG/L
0103F007	WATER	ANTIMONY	2	UJ1	2	UG/L
0103F008	WATER	ANTIMONY	2	UJ1	2	UG/L
0103F009	WATER	ANTIMONY	2	UJ1	2	UG/L

9.1 Blanks (cont.)

Associated Results:

			Qualified Result		DL	
0103F003	WATER	SELENIUM	3	UJ1	3	UG/L
0103F004	WATER	SELENIUM	3	UJ1	3	UG/L
0103G002	WATER	SELENIUM	3	UJ1	3	UG/L
0103G004	WATER	SELENIUM	3	UJ1	3	UG/L
0103G005	WATER	SELENIUM	3	UJ1	3	UG/L
0103G006	WATER	SELENIUM	3	UJ1	3	UG/L
0103H002	WATER	SELENIUM	3.4	J1	3	UG/L
0103H003	WATER	SELENIUM	3	UJ1	3	UG/L
0103H004	WATER	SELENIUM	3	UJ1	3	UG/L
0103H005	WATER	SELENIUM	3	UJ1	3	UG/L
0103H006	WATER	SELENIUM	3	UJ1	3	UG/L
0103F002	WATER	SELENIUM	3	UJ1	3	UG/L
0103F006	WATER	SELENIUM	3	UJ1	3	UG/L
0103F007	WATER	SELENIUM	3	UJ1	3	UG/L
0103F008	WATER	SELENIUM	3	UJ1	3	UG/L
0103F009	WATER	SELENIUM	3	UJ1	3	UG/L
0103F003	WATER	THALLIUM	2	UJ1	2	UG/L
0103F004	WATER	THALLIUM	2	UJ1	2	UG/L
0103G002	WATER	THALLIUM	2	UJ1	2	UG/L
0103G004	WATER	THALLIUM	8.3	J1	2	UG/L
0103G005	WATER	THALLIUM	8.2	J1	2	UG/L
0103G006	WATER	THALLIUM	2	UJ1	2	UG/L
0103H002	WATER	THALLIUM	4.4	J1	2	UG/L
0103H003	WATER	THALLIUM	2	UJ1	2	UG/L
0103H004	WATER	THALLIUM	3.2	J1	2	UG/L
0103H005	WATER	THALLIUM	2	UJ1	2	UG/L
0103H006	WATER	THALLIUM	3.9	J1	2	UG/L
0103F002	WATER	THALLIUM	2	UJ1	2	UG/L
0103F006	WATER	THALLIUM	2	UJ1	2	UG/L
0103F007	WATER	THALLIUM	2	UJ1	2	UG/L
0103F008	WATER	THALLIUM	2.4	J1	2	UG/L
0103F009	WATER	THALLIUM	2	UJ1	2	UG/L

According to the TtEMI Statement of Work for Hunters Point, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if negative drift >IDL is found, qualify all nondetected and detected results < 5X the value as estimated (J1/UJ1).

9.1 Blanks

Due to field blank contamination, the following results are considered nondetected (U2):

Field Blank ID	ANALYTE	Result	DL	Units
0103F002				
Source Blank				
	NICKEL	7.3	6	UG/L
	ZINC	240	3	UG/L
0103H006				
Equipment Rinsate Blank				
	SILVER	1.9	1	UG/L

Affected Samples:			Qualified Result			
0103F007	WATER	NICKEL	8.7	U2	6	UG/L
0103F008	WATER	NICKEL	19.8	U2	6	UG/L
0103G004	WATER	NICKEL	25.5	U2	6	UG/L
0103G005	WATER	NICKEL	25.6	U2	6	UG/L
0103G006	WATER	NICKEL	11.3	U2	6	UG/L
0103H002	WATER	NICKEL	14.3	U2	6	UG/L
0103H003	WATER	NICKEL	8.9	U2	6	UG/L
0103H004	WATER	NICKEL	15.6	U2	6	UG/L
0103H005	WATER	NICKEL	13.7	U2	6	UG/L
0103F009	WATER	SILVER	1	U2	1	UG/L
0103G005	WATER	SILVER	1.5	U2	1	UG/L
0103H003	WATER	SILVER	1.1	U2	1	UG/L
0103H004	WATER	SILVER	1.1	U2	1	UG/L
0103G002	WATER	ZINC	5.2	U2	3	UG/L
0103G006	WATER	ZINC	10.5	U2	3	UG/L

Source blk and EB were from same water source - but Zn was only detected @ 3.6 ug/L in the EB vs. 240 ug/L in the source blank. ??

9.2 Matrix Spikes

Due to accuracy problems in the MS analysis, the following detected results are qualified as estimated (J3):

MS Batch ID:	P010118-1	**Dil Factor:**	1
MS/MSD ID:	0103G006MS	**Prep Date:**	1/18/01
Spiked Sample:	45643.06	**Analysis Date:**	1/22/01
Matrix:	WATER		

Analyte	% Recovery	Limits [1]	Q [2]
ALUMINUM	65.5	75 - 125	J3/UJ3
ZINC	63.9	75 - 125	J3/UJ3

Associated samples:

0103G002	0103G004	0103G005
0103G006	0103F002	0103F003
0103F004		

MS Batch ID:	P010119-2	**Dil Factor:**	1
MS/MSD ID:	0103F006MS	**Prep Date:**	1/19/01
Spiked Sample:	45652.02	**Analysis Date:**	1/24/01
Matrix:	WATER		

Analyte	% Recovery	Limits [1]	Q [2]
ZINC	72.1	75 - 125	J3/UJ3

Associated samples:

0103F006	0103F007	0103F008
0103F009	0103H002	0103H003
0103H004	0103H005	0103H006

1 Project-established Limits

2 According to TtEMI Statement of Work, if the MS or MSD recovery is < LCL, flag detected results for that analyte J3 and flag nondetects UJ3; for metals, qualifiers apply to all batch samples

9.3 ICP Serial Dilution

Due to ICP serial dilution problems, detected results in the following associated samples are qualified as estimated (J4):

Prep Batch ID: P010119-2
Prep Date: 1/19/01

SD Sample	Analyte	Sample Value (µg/L)	SD Value (µg/L)	50X IDL	SD %D	Q [1]
0103F006	BARIUM	120	134.29	100	11.8	J4

relatively low levels of Ca, Mg, K, Na.

Associated Samples:

0103F006	0103F007	0103F008
0103F009	0103H002	0103H003
0103H004	0103H005	0103H006

[1] According to the TtEMI Statement of Work, if the %D for any analyte is >10%, and the original sample result is > 50X the IDL, flag results J4 (only applies to detects)

9.4 Other Qualifications

Forty-six detected results reported were below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

9.5 Field Duplicates

Two set of field duplicates was collected for analysis by this method. The following results were found:

Analyte	Primary Sample 0103F006 Result		DL	Dup Sample 0103F007 Result		DL	Units	RPD
ARSENIC	2.9	B	2	2.8	B	2	UG/L	4
BARIUM	120	BE	2	127	BE	2	UG/L	6
CALCIUM	38800		8	40200		8	UG/L	4
COBALT	1	U	1	1.3	B	1	UG/L	NQ
COPPER	1.1	B	1	1	U	1	UG/L	NQ
LEAD	1	U	1	1	B	1	UG/L	NQ
MAGNESIUM	92200		21	95500		21	UG/L	4
MANGANESE	166		1	171		1	UG/L	3
NICKEL	6	U	6	8.7	B	6	UG/L	NQ
POTASSIUM	4350	B	30	4300	B	30	UG/L	1
SODIUM	261000		310	270000		155	UG/L	3
VANADIUM	3.4	B	1	3.9	B	1	UG/L	14

Analyte	Primary Sample 0103G004 Result		DL	Dup Sample 0103G005 Result		DL	Units	RPD
ARSENIC	5.9	B	2	8.1	B	2	UG/L	31
BARIUM	46.6	BE	2	50.6	BE	2	UG/L	8
BERYLLIUM	1	B	1	1.3	B	1	UG/L	26
CADMIUM	1.1	B	1	1.6	B	1	UG/L	37
CALCIUM	223000		8	232000		8	UG/L	4
CHROMIUM	6.3	B	1	9	B	1	UG/L	35
COBALT	1	U	1	1.6	B	1	UG/L	NQ
COPPER	3	B	1	5.7	B	1	UG/L	62
IRON	7	U	7	16.5	B	7	UG/L	NQ
MAGNESIUM	767000		32	801000		32	UG/L	4
NICKEL	25.5	B	6	25.6	B	6	UG/L	0
POTASSIUM	270000		472	300000		472	UG/L	11
SILVER	1	U	1	1.5	B	1	UG/L	NQ
SODIUM	1650000		3100	8070000		3100	UG/L	132
THALLIUM	8.3	B	2	8.2	B	2	UG/L	1
VANADIUM	1	U	1	2.3	B	1	UG/L	NQ

low level and

Suggested guidelines: 25% RPD guidelines

Full Validation for Samples 0103G002, 0103H003 and 0103F006

9.6 Analyte Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

10.0 Overall Assessment of Data

Usability

Due to holding time exceedance in the LVOA analyses, detected and nondetected results for one sample are qualified as estimated. Due calibration problems, 1,2-dibromo-3-chloropropane, methyl acetate and 1,1,2,2-tetrachloroethane results for four samples are qualified as estimated. Due to common laboratory contamination, detected methylene chloride and detected acetone results for one sample results for four samples are qualified as nondetected.

Due to holding time exceedance in the VOA analyses, detected and nondetected results for five samples are qualified as estimated. Due to low LCS recovery, nondetected 1,1-dichloroethene results for ten samples are qualified as estimated. Due to calibration problems, acetone results for fifteen samples, and dichlorodifluoromethane, trichlorofluoromethane and methylcyclohexane results for five samples are qualified as estimated. Due to common laboratory contamination, detected acetone results for ten samples and detected methylene chloride results for fourteen samples are qualified as nondetected.

Due to low LCS recovery in the SVOA analyses, nondetected phenol and 2-chlorophenol results for four samples are qualified as estimated. In addition, detected pyrene results for two samples are qualified as estimated due to high LCS recovery. Due to calibration problems, hexachlorocyclopentadiene, 2,4-dinitrophenol, 2,4-dinitrotoluene, 4-nitroaniline and hexachlorocyclopentadiene results for one sample, benzaldehyde, caprolactam and butylbenzylphthalate results for three samples, 3,3'-dichlorobenzidine, benzo(a)anthracene, bis(2-ethylhexyl)phthalate and di-n-octylphthalate results for two samples, and acenaphthylene and benzo(b)fluoranthene results for one sample are qualified as estimated. Due to calibration range exceedance, detected acenaphthene and naphthalene results for one sample are qualified as estimated. Due to common laboratory contamination, bis(2-ethylhexyl)phthalate results for three samples and the detected di-n-butylphthalate result for one sample are qualified as nondetected.

Due to high LCS recovery in the Pesticides/PCBs analyses, the detected gamma-chlordane result for one sample is qualified as estimated. Due to laboratory blank contamination, the detected gamma-chlordane results for one sample and detected heptachlor results for three samples are qualified as nondetected. Due to confirmation problems, the detected 4'4-DDD result for one sample is qualified as nondetected.

Due to holding time exceedance in the TPH-extractables analyses, detected and nondetected results for fourteen reanalysis are qualified as estimated. Due to high LCS recovery, the detected diesel result for one sample is qualified as estimated. Due to calibration problems, diesel and motor oil results for two samples are qualified as estimated. In addition, motor oil results from ten reanalysis are qualified as estimated due to calibration problems. Due to field blank contamination, motor oil results for three original samples and one reanalysis are qualified as nondetected.

Due to temperature exceedance in the TPH-purgeables analyses, detected and nondetected gasoline results for four samples are qualified as estimated. Due to low surrogate recovery, gasoline results for one sample are qualified as estimated.

Usability (cont.)

Due to low MS recovery in the metals analyses, aluminum results for seven samples and zinc results for sixteen samples are qualified as estimated. Due to serial dilution problems, barium results for eight samples are qualified as estimated. Due to laboratory blank negative drift, aluminum, antimony, selenium and thallium results for sixteen samples are qualified as estimated. Due to laboratory blank contamination, detected copper results for thirteen samples, detected arsenic results for nine samples, detected iron results for five samples, detected calcium, lead and magnesium results for four samples are qualified as nondetected. Due to field blank contamination, detected nickel results for nine samples, detected silver results for four samples, and detected zinc results for two samples are qualified as nondetected.

Due to high LCS and MS recoveries, TPH-extractables were re-extracted. All re-extracted samples were within QC limits; however, the samples were extracted outside of required holding time. Most samples were reported as nondetect, therefore the high bias in the original analysis should have no impact and original results should be used as the final validated results. ✓ - also, suspect re-extracts had instrument carryover problem.

For the SVOA analyses, sample 0103G002 required dilution to accurately quantitate several compounds. All reporting limits and concentrations were adjusted for the dilution. Nondetected results and compounds within the calibration range should be used from the original analysis, and compounds outside the calibration range (flagged J8) should be used from the appropriate dilution.

The quality control reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the absence of rejected data and the small number of qualifiers added to the Pesticides data indicates high usability. The high number of qualifications made to the LVOA, VOA, SVOA, TPH-extractables, TPH-purgeables and metals data indicates several analytical and/or matrix problems that limit the usability of the data.

11.0 References

"Data Validation Guidelines for CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for Non-CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Organic Data Review" (February 1994)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

45643

Data Quality Summary

Sample Delivery Group

45643

LVOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**192**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**60**	31.3%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U4 - Compound is nondetected due to common lab contamination	3	1.6%	5.0%	H
UJ5 - Compound is estimated due to holding time exceedance	43	22.4%	71.7%	L
UJ57 - Multiple Reasons	3	1.6%	5.0%	L
U4J5 - Multiple Reasons	2	1.0%	3.3%	N
UJ7 - Compound is estimated due to cal. exceedance	9	4.7%	15.0%	N

Data Quality Summary

Sample Delivery Group

45643

VOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**720**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**285**	39.6%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U4 - Common lab contamination	9	1.3%	3.2%	H
U4J7 - Multiple Reasons	5	0.7%	1.8%	H
J5 - Holding time exceedance	4	0.6%	1.4%	L
UJ3 - Compound is estimated due to surr/LCS exceedance	10	1.4%	3.5%	L
UJ35 - Multiple Reasons	5	0.7%	1.8%	L
UJ5 - Holding time exceedance	221	30.7%	77.5%	L
J - Result is > the MDL but < the PQL	1	0.1%	0.4%	N
U4J5 - Multiple Reasons	5	0.7%	1.8%	N
U4J57 - Multiple Reasons	5	0.7%	1.8%	N
UJ7 - Compound is estimated due to cal. exceedance	20	2.8%	7.0%	N

Data Quality Summary

Sample Delivery Group

45643

SVOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	195	-	-	-
TOTAL QUALIFIED DATA POINTS:	50	25.6%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
J3 - Compound is estimated due to surr/MS/LCS exceedance	2	1.0%	4.0%	H
U4 - Common lab contamination	3	1.5%	6.0%	H
U4J7 - Multiple Reasons	1	0.5%	2.0%	H
UJ3 - Compound is estimated due to surr/MS/LCS exceedance	8	4.1%	16.0%	L
J - Result is > the MDL but < the PQL	12	6.2%	24.0%	N
J7 - Compound is estimated due to cal. exceedance	2	1.0%	4.0%	N
J8 - Compound is estimated due to cal. range exceedance	2	1.0%	4.0%	N
UJ7 - Compound is estimated due to cal. exceedance	20	10.3%	40.0%	N

Data Quality Summary

Sample Delivery Group

45643

PEST

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	84	-	-	-
TOTAL QUALIFIED DATA POINTS:	5	6.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Compound is nondetected due to laboratory blank contamination	3	3.6%	60.0%	H
U1J3 - Multiple Reasons	1	1.2%	20.0%	H
U9 - Compound is nondetected due to confirmation problems	1	1.2%	20.0%	H

Data Quality Summary

Sample Delivery Group

45643

TPHEXT

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	56	-	-	-
TOTAL QUALIFIED DATA POINTS:	35	62.5%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
J3 - Compound is estimated due to surr/MS/LCS exceedance	1	1.8%	2.9%	H
U2 - Compound is nondetected due to field blank contamination	2	3.6%	5.7%	H
U2J7 - Multiple Reasons	1	1.8%	2.9%	H
J5 - Holding time exceedance	5	8.9%	14.3%	L
J57 - Multiple Reasons	1	1.8%	2.9%	L
UJ5 - Holding time exceedance	13	23.2%	37.1%	L
UJ57 - Multiple Reasons	8	14.3%	22.9%	L
J7 - Compound is estimated due to cal. exceedance	1	1.8%	2.9%	N
U2J5 - Multiple Reasons	1	1.8%	2.9%	N
UJ7 - Compound is estimated due to cal. exceedance	2	3.6%	5.7%	N

Data Quality Summary

Sample Delivery Group

45643

TPHPRG

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**14**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**6**	42.9%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
J - Compound is estimated due to temperature exceedance	2	14.3%	33.3%	L
UJ - Compound is estimated due to temperature exceedance	2	14.3%	33.3%	L
UJ3 - Compound is estimated due to surr/LCS exceedance	1	7.1%	16.7%	L
J - Result is > the MDL but < the PQL	1	7.1%	16.7%	N

Data Quality Summary

Sample Delivery Group

45643

METALS

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	384	-	-	-
TOTAL QUALIFIED DATA POINTS:	140	36.5%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Analyte is nondetected due to laboratory blank contamination	39	10.2%	27.9%	H
U2 - Analyte is nondetected due to field blank contamination	13	3.4%	9.3%	H
J3 - Compound is estimated due to MS/LCS exceedance	1	0.3%	0.7%	L
UJ13 - Multiple Reasons	7	1.8%	5.0%	L
UJ3 - Compound is estimated due to MS/LCS exceedance	8	2.1%	5.7%	L
J1 - Analyte is estimated due to negative drift	9	2.3%	6.4%	N
J3 - Compound is estimated due to MS/LCS exceedance	3	0.8%	2.1%	N
J4 - Analyte is estimated due to serial dilution exceedance	8	2.1%	5.7%	N
U2J3 - Multiple Reasons	2	0.5%	1.4%	N
UJ1 - Analyte is estimated due to negative drift	48	12.5%	34.3%	N
UJ3 - Compound is estimated due to MS/LCS exceedance	2	0.5%	1.4%	N

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/15/01 by R. Moggi / TtEMI

Hunters Point Shipyard

Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Southwest Laboratory of Oklahoma, Inc.
Laboratory Project ID
45662

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 11.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborne
Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis methods are associated with this Sample Delivery Group:

DMETAL

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45662.07	0103F013MD		WATER	1/18/01
45662.05	0103F013MS		WATER	1/18/01
45662.02	0103F011	Full Validation Sample	WATER	1/18/01
45662.04	0103F013		WATER	1/18/01
45662.08	0103F014		WATER	1/18/01
45662.10	0103H008	Full Validation Sample	WATER	1/18/01
45662.15	0103H013		WATER	1/18/01
45662.16	0103H014		WATER	1/18/01
45670.05	0103L002	Equipment Rinsate Blank	WATER	1/19/01
45670.08	0103H017		WATER	1/19/01

LVOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45670.03	0103L001MS		WATER	1/19/01
45670.04	0103L001MSD		WATER	1/19/01
45662.01	0103F010	Trip Blank	WATER	1/18/01
45662.03	0103F012		WATER	1/18/01
45662.12	0103H010		WATER	1/18/01
45662.13	0103H011	Dup of 0103H010	WATER	1/18/01
45662.14	0103H012		WATER	1/18/01
45670.01	0103L003	Trip Blank	WATER	1/19/01
45670.02	0103L001	Full Validation Sample	WATER	1/19/01
45670.05	0103L002	Equipment Rinsate Blank	WATER	1/19/01
45670.07	0103H016		WATER	1/19/01

PEST

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45662.05	0103F013MS		WATER	1/18/01
45662.05	0103F013MSRE		WATER	1/18/01
45662.06	0103F013MSD		WATER	1/18/01
45662.06	0103F013MSDRE		WATER	1/18/01
45662.04	0103F013		WATER	1/18/01
45662.10	0103H008	Full Validation Sample	WATER	1/18/01
45662.11	0103H009	Dup of 0103H008	WATER	1/18/01
45662.04	0103F013RE		WATER	1/18/01
45662.10	0103H008RE		WATER	1/18/01
45662.11	0103H009RE		WATER	1/18/01

2.0 Sample Collection, Preservation and Handling

SVOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45662.05	0103F013MS		WATER	1/18/01
45662.06	0103F013MSD		WATER	1/18/01
45662.04	0103F013		WATER	1/18/01
45662.10	0103H008	Full Validation Sample	WATER	1/18/01
45662.11	0103H009	Dup of 0103H008	WATER	1/18/01

TPHEXT

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45662.05	0103F013MS		WATER	1/18/01
45662.06	0103F013MSD		WATER	1/18/01
45662.04	0103F013		WATER	1/18/01
45662.10	0103H008	Full Validation Sample	WATER	1/18/01
45662.15	0103H013		WATER	1/18/01
45662.16	0103H014		WATER	1/18/01
45670.05	0103L002	Equipment Rinsate Blank	WATER	1/19/01
45670.08	0103H017		WATER	1/19/01

TPHPRG

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45662.05	0103F013MS		WATER	1/18/01
45662.06	0103F013MSD		WATER	1/18/01
45662.04	0103F013		WATER	1/18/01
45662.10	0103H008	Full Validation Sample	WATER	1/18/01
45662.15	0103H013		WATER	1/18/01
45662.16	0103H014		WATER	1/18/01
45670.05	0103L002	Equipment Rinsate Blank	WATER	1/19/01
45670.08	0103H017		WATER	1/19/01

VOA

Lab ID	Field ID	Sample Type	Matrix	Date Collected
45662.05	0103F013MS		WATER	1/18/01
45662.06	0103F013MSD		WATER	1/18/01
45662.04	0103F013		WATER	1/18/01
45662.09	0103H007	Trip Blank	WATER	1/18/01
45662.10	0103H008	Full Validation Sample	WATER	1/18/01
45662.11	0103H009	Dup of 0103H008	WATER	1/18/01
45662.15	0103H013		WATER	1/18/01
45662.16	0103H014		WATER	1/18/01
45670.06	0103H015	Trip Blank	WATER	1/19/01
45670.08	0103H017		WATER	1/19/01

2.0 Sample Collection, Preservation and Handling

All samples were received intact and properly labeled. Custody seals and sample tags were not present for samples 0103H015 through 0103H017 and 0103L001 through 0103L003. Custody seals were present for samples 0103F010 through 0103F014 and 0103H007 through 0103H014; however, sample tags were not present. Cooler temperature was 2 - 6°C upon arrival at the laboratory.

3.0 CLP Low-Level Volatile Organics

3.1 Blanks

Due to common laboratory contamination, the following results are considered nondetected (U4):

MATRIX: WATER

Client ID	Analyte	Reported Result	Qualified Result	Units
0103F010	METHYLENE CHLORIDE	1	1 U4	UG/L
0103F012	METHYLENE CHLORIDE	4	4 U4	UG/L
0103H010	METHYLENE CHLORIDE	1	1 U4	UG/L
0103H011	METHYLENE CHLORIDE	1	1 U4	UG/L
0103H012	METHYLENE CHLORIDE	1	1 U4	UG/L
0103H016	METHYLENE CHLORIDE	1	1 U4	UG/L
0103L001	METHYLENE CHLORIDE	1	1 U4	UG/L
0103L002	METHYLENE CHLORIDE	1	1 U4	UG/L
0103L003	METHYLENE CHLORIDE	1	1 U4	UG/L

According to the TtEMI Statement of Work, if the concentration detected in a sample is at a level < RL, the value shall be elevated to the RL (U4); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U4).

3.2 Calibrations

Due to initial calibrations problems, the following nondetected results are qualified as estimated (UJ7):

ICAL Date: 10/26/00

Analyte	ICAL RSD	Q
1,2-DIBROMO-3-CHLOROPROPANE	45.7	J7 / UJ7

Associated Samples: 0103F010, 0103F012, 0103H010, 0103H011, 0103H012, 0103L003, 0103L001, 0103L002, 0103H016

[1] According to the TtEMI Statement of Work, if the inital calibration RSD exceeds 30%, apply J7 to all detected results, apply UJ7 to all non-detects

3.2 Calibrations

Due to continuing calibrations problems, the following nondetected results are qualified as estimated (UJ7):

Date Analyzed: 1/25/01

Analyte	CC %D	Q
1,1,2,2-TETRACHLOROETHANE	27.6	J7 / UJ7
METHYL ACETATE	35.3	J7 / UJ7

Associated Samples: 0103F010, 0103F012, 0103H010, 0103H011, 0103H012, 0103L003, 0103L001, 0103L002, 0103H016

[1] According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

3.3 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for most target compounds. The following detected results were found:

	Primary Sample		*Dup Sample*			
	0103H010		0103H011			
Analyte	**Result**	**RL**	**Result**	**RL**	**Units**	**RPD**
METHYLENE CHLORIDE	1	0.5	1	0.5	UG/L	0

Full Validation for Sample 0103L001

3.4 GC/MS Tuning

The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The sample was analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra, and peak identifications of the sample was evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes used.

Tentatively Identified Compounds (TICs)

The sample spectra and library searches were evaluated. TIC results were recalculated and found to be correct. All identified compounds were reported with the "NJ" qualifier.

Full Validation for Sample 0103L001

3.4 System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

4.0 CLP Volatile Organics

4.1 Matrix Spike/Matrix Spike Duplicates

Due to accuracy problems in the MS/MSD analysis, the following nondetected results are qualified as estimated (UJ3):

MS BATCH ID:	L010124A	**Dil Factor:**	1
MS/MSD ID:	0103F013MS	**Prep Date:**	1/24/01
Spiked Sample:	45662.05	**Analysis Date:**	1/24/01
MATRIX:	WATER		

	% Recovery			Limits [1]		
ANALYTE	**MS**	**MSD**	**RPD**	**Rec**	**RPD**	**Q**
BENZENE	52	64	21	*76 - 127*	*11*	*J3/UJ3*
TRICHLOROETHENE	66	66	0	*71 - 120*	*14*	*J3/UJ3*

Associated samples:

0103F013	0103H007	0103H008	0103H009
0103H013	0103H014	0103H015	0103H017

[1] Project-established Limits - flagging applies to spiked sample only

4.2 Blanks

Due to common laboratory contamination, the following results are considered nondetected (U4):

MATRIX: WATER

Client ID	Analyte	Reported Result	Qualified Result	Units
0103F013	METHYLENE CHLORIDE	2	10 U4	UG/L
0103H007	METHYLENE CHLORIDE	2	10 U4	UG/L
0103H008	ACETONE	1	10 U4	UG/L
	METHYLENE CHLORIDE	1	10 U4	UG/L
0103H013	METHYLENE CHLORIDE	2	10 U4	UG/L
0103H014	ACETONE	2	10 U4	UG/L
	METHYLENE CHLORIDE	1	10 U4	UG/L
0103H015	METHYLENE CHLORIDE	1	10 U4	UG/L
0103H017	METHYLENE CHLORIDE	1	10 U4	UG/L

According to the TtEMI Statement of Work, if the concentration detected in a sample is at a level < RL, the value shall be elevated to the RL (U4); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U4).

4.3 Calibrations

Due to initial calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

ICAL Date: 1/23/01

Analyte	ICAL RSD	Q
ACETONE	32.4	J7 / UJ7

Associated Samples: 0103F013, 0103H007, 0103H008, 0103H009, 0103H013, 0103H014, 0103H015, 0103H017

[1] According to the TtEMI Statement of Work, if the inital calibration RSD exceeds 30%, apply J7 to all detected results, apply UJ7 to all non-detects

Due to continuing calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

Date Analyzed: 1/24/01

Analyte	CC %D	Q
DICHLORODIFLUOROMETHANE	100.8	J7 / UJ7
TRICHLOROFLUOROMETHANE	28.9	J7 / UJ7
METHYLCYCLOHEXANE	29.2	J7 / UJ7

Associated Samples: 0103F013, 0103H007, 0103H008, 0103H009, 0103H013, 0103H014, 0103H015, 0103H017

[1] According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

4.4 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q [1]
0103H008	CHLOROBENZENE	1	2	10	UG/L	J
0103H013	TRICHLOROFLUOROMETHANE	1	5	10	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

4.5 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for most target compounds. The following detected results were found:

	Primary Sample			*Dup Sample*				
	0103H008			0103H009				
Analyte	Result		RL	Result		RL	Units	RPD
ACETONE	1	J	10	10	U	10	UG/L	NQ
CHLOROBENZENE	2	J	10	10	U	10	UG/L	NQ
METHYLENE CHLORIDE	1	J	10	10	U	10	UG/L	NQ

The accuracy of the above detected results is questionable, due to being near the limit of detection.

Full Validation for Sample 0103H008

4.6 GC/MS Tuning

The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The sample was analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra, and peak identifications of the sample was evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes used.

Full Validation for Sample 0103H008

4.6 Tentatively Identified Compounds (TICs)

The sample spectra and library searches were evaluated. TIC results were recalculated and found to be correct. All identified compounds were reported with the "NJ" qualifier.

System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

5.0 CLP Semivolatile Organics

5.1 Laboratory Control Samples

Due to accuracy problems in the LCS analysis, nondetected results for the following associated samples are qualified as estimated (UJ3):

LCS ID: BL0120WBBS1
BATCH ID: BL0120WB
MATRIX: WATER
PREP DATE: 1/20/01

Analyte	% Recovery LCS	% Recovery LCSD	Limits [1]	Q [2]
PHENOL	61	59	60 - 140	J3/UJ3
2-CHLOROPHENOL	60	56	60 - 140	J3/UJ3
4-NITROPHENOL	51	61	60 - 140	J3/UJ3
2,4-DINITROTOLUENE	48	52	60 - 140	J3/UJ3

Associated samples: 0103F013 0103H008 0103H009

[1] Project-Established Limits

[2] According to the TtEMI Statement of Work, if the LCS recovery is less than the lower control limit, apply J3 to all associated detects and UJ3 to all nondetects

Detected results for the listed compounds may be biased low, and false nondetects may have been reported.

5.2 Blanks

Due to common laboratory contamination, the following results are considered nondetected (U4);

MATRIX: WATER

Client ID	Analyte	Reported Result	Qualified Result	Units
0103F013	BIS(2-ETHYLHEXYL)PHTHALATE	2	10 U4	UG/L
0103H008	BIS(2-ETHYLHEXYL)PHTHALATE	1	10 U4	UG/L
	DI-N-BUTYLPHTHALATE	0.5	10 U4	UG/L
0103H009	BIS(2-ETHYLHEXYL)PHTHALATE	4	10 U4	UG/L

According to the TtEMI Statement of Work, if the concentration detected in a sample is at a level < RL, the value shall be elevated to the RL (U4); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U4).

5.3 Calibrations

Due to initial calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

ICAL Date: 01/23/01

Analyte	ICAL RSD	Q
BENZALDEHYDE	33.9	J7 / UJ7
BUTYLBENZYLPHTHALATE	31	J7 / UJ7
CAPROLACTAM	38.8	J7 / UJ7

Associated Samples: 0103F013 0103H008 0103H009

[1] According to the TtEMI Statement of Work, if the inital calibration RSD exceeds 30%, apply J7 to all detected results, apply UJ7 to all non-detects

Due to continuing calibrations problems, the following detected and nondetected results are qualified as estimated (J7/UJ7):

Date Analyzed: 1/24/01

Analyte	CC %D	Q
4-CHLORO-3-METHYLPHENOL	28.3	J7 / UJ7
BIS(2-ETHYLHEXYL)PHTHALATE	54.3	J7 / UJ7
DI-N-OCTYLPHTHALATE	53.3	J7 / UJ7

Associated Samples: 0103H008 0103H009

Date Analyzed: 1/25/01

Analyte	CC %D	Q
3,3'-DICHLOROBENZIDINE	44.7	J7 / UJ7
BIS(2-ETHYLHEXYL)PHTHALATE	60	J7 / UJ7
DI-N-BUTYLPHTHALATE	26.5	J7 / UJ7
DI-N-OCTYLPHTHALATE	50.3	J7 / UJ7

Associated Samples: 0103F013

[1] According to the TtEMI Statement of Work, if the continuing calibration %D exceeds 25%, apply J7 to all detected results, apply UJ7 to all non-detects

5.4 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q [1]
0103F013	CAPROLACTAM	1	2	10	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

5.5 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for most target compounds. The following detected results were found:

	Primary Sample			*Dup Sample*				
	0103H008			0103H009				
Analyte	Result		RL	Result		RL	Units	RPD
BIS(2-ETHYLHEXYL)PHTHALATE	1	J	10	4	J	10	UG/L	120
DI-N-BUTYLPHTHALATE	0.5	J	10	10	U	10	UG/L	NQ

The accuracy of the above detected results is questionable, due to being near the limit of detection.

Full Validation for Sample 0103H008

5.6 GC/MS Tuning

The ion abundance criteria were met for the decafluorotriphenylphosphine (DFTPP) GC/MS performance checks. The sample was analyzed within 12 hours of the associated performance check.

Target Compound List Identification

The relative retention times, mass spectra and peak identifications of the sample was evaluated. Target compound identification was considered to be correct.

Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits. All reported results reflect any dilutions and volumes.

Tentatively Identified Compounds (TICs)

The sample spectra and library searches were evaluated. TIC results were recalculated and found to be correct. All identified compounds were reported with the "NJ" qualifier.

Full Validation for Sample 0103H008

5.6 System Performance

The sample was evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution and peak tailing. A slight baseline elevation was noticed at approximately 18 minutes within the sample analysis.

6.0 CLP Pesticides/PCBs

6.1 Holding Time

Due to a holding time problem, the following detected and non-detected results are qualified as estimated (J5/UJ5):

Lab ID	Client ID	Matrix	Collected	Prepared	Holding Time (Days) Prep	RTHT[1] (Days) Prep	Q
45662.04	0103F013RE	WATER	1/18/01	1/26/01	8	7	J5 / UJ5
45662.10	0103H008RE	WATER	1/18/01	1/26/01	8	7	J5 / UJ5
45662.11	0103H009RE	WATER	1/18/01	1/26/01	8	7	J5 / UJ5

[1] Required technical holding time from sample collection to preparation

6.2 Matrix Spike/Matrix Spike Duplicates

Due to accuracy problems in the MS/MSD analysis, the following detected and nondetected results are qualified as estimated (J3/UJ3):

MS BATCH ID: 010120WA
MS/MSD ID: 0103F013MS
Spiked Sample: 45662.05
MATRIX: WATER

Dil Factor: 1
Prep Date: 1/21/01
Analysis Date: 1/25/01

ANALYTE	% Recovery MS	MSD	RPD	Limits[1] Rec	RPD	Q
GAMMA-BHC (LINDANE)	47	45	4	56 - 123	15	J3/UJ3
HEPTACHLOR EPOXIDE	42	39	7	50 - 150	50	J3/UJ3
DIELDRIN	45	43	5	52 - 126	18	J3/UJ3
4,4'-DDE	43	43	0	50 - 150	50	J3/UJ3
ENDOSULFAN SULFATE	43	42	2	50 - 150	50	J3/UJ3
GAMMA-CHLORDANE	40	41	2	50 - 150	50	J3/UJ3

Associated samples: 0103F013 0103H008 0103H009

MS BATCH ID: 010126WB
MS/MSD ID: 0103F013MSRE
Spiked Sample: 45662.05
MATRIX: WATER

Dil Factor: 1
Prep Date: 1/26/01
Analysis Date: 1/31/01

ANALYTE	% Recovery MS	MSD	RPD	Limits[1] Rec	RPD	Q
HEPTACHLOR EPOXIDE	42	~~39~~ 60	7 35	50 - 150	50	J3/UJ3

Associated samples: 0103F013RE 0103H008RE 0103H009RE

[1] Project-established Limits - flagging applies to spiked sample only

6.3 Laboratory Control Samples

Due to accuracy problems in the LCS analysis, detected and nondetected results for the following associated samples are qualified as estimated (J3/UJ3):

LCS ID: 010120WABS1
BATCH ID: 010120WA
MATRIX: WATER
PREP DATE: 1/20/01

Analyte	% Recovery LCS	% Recovery LCSD	Limits [1]	Q [2]
GAMMA-BHC (LINDANE)	46	42	60 - 140	J3/UJ3
HEPTACHLOR EPOXIDE	48	43	60 - 140	J3/UJ3
DIELDRIN	49	45	60 - 140	J3/UJ3
4,4'-DDE	49	47	60 - 140	J3/UJ3
ENDRIN	62	57	60 - 140	J3/UJ3
ENDOSULFAN SULFATE	45	43	60 - 140	J3/UJ3
GAMMA-CHLORDANE	47	44	60 - 140	J3/UJ3

Associated samples: 0103F013 0103H008 0103H009

Samples were re-extracted - only HE was out - see below.

LCS ID: 010126WBBS1
BATCH ID: 010126WB
MATRIX: WATER
PREP DATE: 1/26/01

Analyte	% Recovery LCS	% Recovery LCSD	Limits [1]	Q [2]
HEPTACHLOR EPOXIDE	58	83	60 - 140	J3/UJ3

Associated samples: 0103F013RE 0103H008RE 0103H009RE

[1] Project-Established Limits

[2] According to the TtEMI Statement of Work, if the LCS recovery is less than the lower control limit, apply J3 to all associated detects and nondetects

Detected results for the listed compounds may be biased low, and false nondetects may have been reported.

6.4 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

MB BATCH ID: 010120WA
MATRIX: WATER

Analyte		Result	PQL	Affected Samples	Result	PQL	Units	Q
HEPTACHLOR		0.009	0.01					
Action Level:	0.045							
				0103F013	0.009	0.01	UG/L	U1
				0103H008	0.018	0.01	UG/L	U1
				0103H009	0.012	0.01	UG/L	U1

[1] According to the TtEMI Statement of Work, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if the concentration detected in an associated sample is at a level < RL, the value shall be elevated to the RL (U1); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U1).

6.5 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for most target compounds. The following detected results were found:

	Primary Sample		*Dup Sample*			
	0103H008		0103H009			
Analyte	**Result**	**RL**	**Result**	**RL**	**Units**	**RPD**
HEPTACHLOR	0.018	0.01	0.012	0.01	UG/L	40

Low conc —

Full Validation for Sample 0103H008

6.6 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The sample was evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

6.6 Compound Identification

Due to confirmation problems, the following results are considered nondetected (U9):

Sample ID	Analyte	Reported Result	Conf Result	RL	%D	CRQL	Q[1]
0103F013RE	HEPTACHLOR EPOXIDE	0.013	0.025	0.01	92.3	0.05	U9
0103H008RE	HEPTACHLOR EPOXIDE	0.008	0.019	0.01	147	0.05	U9
0103H009RE	GAMMA-CHLORDANE	0.005	0.15	0.01	999	0.05	U9

[1] According to the TtEMI Statement of Work, if the %D for any analyte is >50% and the reported sample concentration is less than the RL, elevate the result to the RL and flag results as nondetected U9

7.0 TPH Extractables by GC/FID (Modified SW8015)

7.1 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

MB BATCH ID: 010120WH
MATRIX: WATER

Analyte	Result	PQL	Affected Samples	Result	PQL	Units	Q
MOTOR OIL RANGE	340	250					
Action Level: 1700							
			0103F013	280	250	UG/L	U1
			0103H013	260	250	UG/L	U1
			0103H017	380	250	UG/L	U1

[1] According to the TtEMI Statement of Work, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if the concentration detected in an associated sample is at a level < RL, the value shall be elevated to the RL (U1); if the concentration detected in an associated sample is > RL, but less than 5X RL, the result shall be qualified as nondetected at the level detected (U1).

Carryover . . . .

Full Validation for Sample 0103H008

7.2 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The sample was evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

8.0 TPH Purgeables by GC/FID (Modified SW8015)

All cursory requirements were met by this method.

Full Validation for Sample 0103H008

8.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

System Performance

The sample was evaluated for baseline shifts, extraneous peaks, loss of resolution and peak tailing. No system degradation was noted.

9.0 CLP Total and Dissolved Metals by ICP/CVAA

9.1 Blanks

Due to laboratory blank contamination, the following results are considered nondetected (U1):

Matrix: WATER

Blank ID	Analyte	Result	Units
#Name?	ALUMINUM	#Name?	UG/L
#Name?	ANTIMONY	#Name?	UG/L
#Name?	CALCIUM	#Name?	UG/L
#Name?	CHROMIUM	#Name?	UG/L
#Name?	COPPER	#Name?	UG/L
#Name?	IRON	#Name?	UG/L
#Name?	MAGNESIUM	#Name?	UG/L
#Name?	NICKEL	#Name?	UG/L
#Name?	POTASSIUM	#Name?	UG/L
#Name?	SODIUM	#Name?	UG/L

Associated Results:

			Qualified Result		DL	
0103H013	WATER	ALUMINUM	15.5	U1	6	UG/L
0103F014	WATER	ALUMINUM	10.4	U1	6	UG/L
0103H008	WATER	ALUMINUM	9.4	U1	6	UG/L
0103F011	WATER	ALUMINUM	56.3	U1	6	UG/L
0103H014	WATER	ALUMINUM	18.4	U1	6	UG/L
0103F011	WATER	ANTIMONY	3.9	U1	2	UG/L
0103L002	WATER	CALCIUM	99.9	U1	8	UG/L
0103F011	WATER	CHROMIUM	1	U1	1	UG/L
0103F013	WATER	CHROMIUM	1.7	U1	1	UG/L
0103F014	WATER	CHROMIUM	2.2	U1	1	UG/L
0103H013	WATER	CHROMIUM	2.9	U1	1	UG/L
0103L002	WATER	CHROMIUM	1.2	U1	1	UG/L
0103H014	WATER	CHROMIUM	1.2	U1	1	UG/L
0103H017	WATER	CHROMIUM	5.2	U1	1	UG/L
0103F013	WATER	COPPER	1.4	U1	1	UG/L
0103H013	WATER	COPPER	4	U1	1	UG/L
0103H017	WATER	COPPER	2.1	U1	1	UG/L
0103F014	WATER	COPPER	1.8	U1	1	UG/L
0103H014	WATER	COPPER	1.2	U1	1	UG/L
0103H013	WATER	IRON	18.2	U1	7	UG/L
0103F014	WATER	IRON	25.5	U1	7	UG/L
0103L002	WATER	IRON	31.6	U1	7	UG/L
0103F011	WATER	IRON	64.2	U1	7	UG/L
0103L002	WATER	MAGNESIUM	57.4	U1	21	UG/L
0103F013	WATER	NICKEL	4.4	U1	1	UG/L
0103L002	WATER	POTASSIUM	32.2	U1	30	UG/L
0103L002	WATER	SODIUM	97.3	U1	6	UG/L

9.1 Blanks

Due to negative drift observed in laboratory blanks, the following results are considered estimated (J1/UJ1):

Matrix: WATER

Blank ID	Analyte	Result	Units
ICB	ARSENIC	-2.2	UG/L
CCB	COBALT	-1.1	UG/L
CCB	SILVER	-1.1	UG/L
CCB	THALLIUM	-3.1	UG/L

Associated Results:

			Qualified Result		DL	
0103F011	WATER	ARSENIC	2.1	J1	2	UG/L
0103F013	WATER	ARSENIC	2.7	J1	2	UG/L
0103F014	WATER	ARSENIC	2.4	J1	2	UG/L
0103H008	WATER	ARSENIC	2.8	J1	2	UG/L
0103H013	WATER	ARSENIC	3.8	J1	2	UG/L
0103H014	WATER	ARSENIC	3.9	J1	2	UG/L
0103H017	WATER	ARSENIC	3.1	J1	2	UG/L
0103L002	WATER	ARSENIC	2	UJ1	2	UG/L
0103F011	WATER	COBALT	1	UJ1	1	UG/L
0103F013	WATER	COBALT	1.2	J1	1	UG/L
0103F014	WATER	COBALT	1	UJ1	1	UG/L
0103H008	WATER	COBALT	1	UJ1	1	UG/L
0103H013	WATER	COBALT	1	UJ1	1	UG/L
0103H017	WATER	COBALT	1	UJ1	1	UG/L
0103L002	WATER	COBALT	1	UJ1	1	UG/L
0103F011	WATER	SILVER	1	UJ1	1	UG/L
0103F013	WATER	SILVER	1	UJ1	1	UG/L
0103F014	WATER	SILVER	1	UJ1	1	UG/L
0103H008	WATER	SILVER	1	UJ1	1	UG/L
0103H013	WATER	SILVER	1	UJ1	1	UG/L
0103H014	WATER	SILVER	1	UJ1	1	UG/L
0103H017	WATER	SILVER	1	UJ1	1	UG/L
0103L002	WATER	SILVER	1	UJ1	1	UG/L
0103F011	WATER	THALLIUM	2	UJ1	2	UG/L
0103F013	WATER	THALLIUM	2	UJ1	2	UG/L
0103F014	WATER	THALLIUM	2	UJ1	2	UG/L
0103H008	WATER	THALLIUM	2	UJ1	2	UG/L
0103H013	WATER	THALLIUM	2.3	J1	2	UG/L
0103H014	WATER	THALLIUM	2	UJ1	2	UG/L
0103H017	WATER	THALLIUM	2	UJ1	2	UG/L
0103L002	WATER	THALLIUM	2	UJ1	2	UG/L

According to the TtEMI Statement of Work, all results are considered for qualification using the 5X rule applied to the highest blank contaminant concentration as stated in the National Functional Guidelines (EPA 1994); if negative drift >IDL is found, qualify all nondetected and detected results < 5X the value as estimated (J1/UJ1).

9.1 Blanks

Due to field blank contamination, the following results are considered nondetected (U2):

Field Blank ID		ANALYTE	Result	RL	Units
0103L002					
Equipment Rinsate Blank		ZINC	3.6	3	UG/L
Affected Samples:			**Qualified Result**		
0103F013	WATER	ZINC	3.9 U2	3	UG/L
0103H013	WATER	ZINC	3.7 U2	3	UG/L

9.2 Matrix Spikes

Due to accuracy problems in the MS analysis, the following detected and nondetected results are qualified as estimated (J3/UJ3):

MS Batch ID:	P010122-1	**Dil Factor:**	1
MS/MSD ID:	0103F013MS	**Prep Date:**	1/22/01
Spiked Sample:	45662.05	**Analysis Date:**	2/7/01
Matrix:	WATER		

Analyte	% Recovery	Limits [1]	Q [2]
IRON	51.7	75 - 125	J3/UJ3
MANGANESE	39.2	75 - 125	J3/UJ3

Associated samples:

0103F011	0103F013	0103F014
0103H008	0103H013	0103H014
0103H017		

[1] Project-established Limits

[2] According to the Statement of Work, if the MS or MSD recovery is < LCL, flag detected results for that analyte J3 and flag nondetects UJ3; for metals, qualifiers apply to all batch samples

9.3 Matrix Duplicates

Due to precision problems in the matrix duplicate analysis, the following detected results are estimated (J2):

Analyte	*Primary Sample* 0103F013	*Dup Sample* 0103F013MD	CRDL	Units	RPD	Limit [1]	Q
SODIUM	596000	479690	5000	UG/L	22	20	J2

Associated samples:

0103F011	0103F013	0103F014
0103H008	0103H013	0103H014
0103H017		

[1] According to the project guidelines, if the RPD is >20% and the sample result is >5X CRDL, flag all associated batch samples J2; if the RPD is >20% and sample result is <5X CRDL, the control limit shall be +/- 2X CRDL for soil and +/- 1X CRDL for water

9.4 ICP Serial Dilution

Due to ICP serial dilution problems, detected results in the following associated samples are qualified as estimated (J4):

Prep Batch ID: P010122-1
Prep Date: 1/22/01

SD Sample	Analyte	Sample Value (µg/L)	SD Value (µg/L)	50X IDL	SD %D	Q [1]
0103F013	SODIUM	11913	10216	300	14.2	J4

Associated Samples:

0103F011	0103F013	0103F014
0103H008	0103H013	0103H014
0103H017		

[1] According to the TtEMI Statement of Work, if the %D for any analyte is >10%, and the original sample result is > 50X the IDL, flag results J4 (only applies to detects)

9.5 Other Qualifications

The following results are qualified as estimated (J):

Sample ID	Analyte	DF	Reported Result	RL	Units	Q [1]
0103F011	BARIUM	1	131	2	UG/L	J
	MERCURY	1	0.12	0.1	UG/L	J
	NICKEL	1	6.8	1	UG/L	J
	POTASSIUM	1	4740	30	UG/L	J
	SELENIUM	1	3.4	3	UG/L	J
	VANADIUM	1	3.3	1	UG/L	J
0103F014	BARIUM	1	50	2	UG/L	J
	LEAD	1	1.3	1	UG/L	J
	MOLYBDENUM	1	9	2	UG/L	J
	NICKEL	1	12.1	1	UG/L	J
	POTASSIUM	25	68500	11800	UG/L	J
0103H013	BARIUM	1	17.3	2	UG/L	J
	NICKEL	1	39.4	1	UG/L	J
	POTASSIUM	1	1080	30	UG/L	J
	VANADIUM	1	4.6	1	UG/L	J
0103H014	COBALT	1	5.6	1	UG/L	J
	NICKEL	1	39.2	1	UG/L	J
0103H017	BARIUM	1	112	2	UG/L	J
	NICKEL	1	14.3	1	UG/L	J
	VANADIUM	1	2.2	1	UG/L	J
0103L002	ALUMINUM	1	81.7	6	UG/L	J
	ZINC	1	3.6	3	UG/L	J

[1] According to the TtEMI Statement of Work, any detected results reported below the RL should be flagged J

Detected results reported below the RL are considered qualitatively acceptable, but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

Full Validation for Samples 0103F011 and 0103H008

9.6 Analyte Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate results. The samples were found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required reporting limits and reflect any dilutions and volumes used.

10.0 Overall Assessment of Data

Method Compliance and Additional Comments

Low level detects were reported on the hardcopy data package and were not reported in the EDD. The EDD was corrected to match the hardcopy.

Usability

Due to calibration problems in the LVOA analyses, nondetected 1,2-dibromo-3-chloropropane, methyl acetate and 1,1,2,2-tetrachloroethane results for nine samples are qualified as estimated. Due to common laboratory contamination, detected methylene chloride results for nine samples are qualified as nondetected.

Due to low MS/MSD recovery in the VOA analyses, nondetected benzene and trichloroethene results for one sample are qualified as estimated. Due to calibration problems, acetone, dichlorodfluoromethane, trichlorofluoromethane and methylcyclohexane results for eight samples are qualified as estimated. Due to common laboratory contamination, detected acetone results for two samples and detected methylene chloride results for seven samples are qualified as nondetected.

Due to low LCS/LCSD recovery in the SVOA analyses, nondetected phenol, 2-chlorophenol, 4-nitrophenol and 2,4-dinitrotoluene results for three samples are qualified as estimated. Due to calibration problems, benzaldehyde, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam and di-n-octylphthalate results for three samples, 4-chloro-3-methylphenol results for two samples, and 3,3'-dichlorobenzidiene and di-n-butylphthalate results for one sample are qualified as estimated. Due to common laboratory contamination, detected bis(2-ethylhexyl)phthalate results for three samples and the detected di-n-butylphthalate result for one sample are qualified as nondetected.

Due to holding time exceedance in the Pesticides/PCBs analyses, results for all target compounds for three re-extracts are qualified as estimated. Due to low MS/MSD and LCS/LCSD recovery, gamma-BHC (Lindane), heptachlor epoxide, dieldrin, 4,4'-DDE, endosulfan sulfate and gamma-chlordane results for three original analysis and heptachlor epoxide results for three re-extracts are qualified as estimated. In addition, endrin results for three original analysis and three re-extracts are also qualified as estimated due to low LCS/LCSD. Due to laboratory blank contamination, detected heptachlor results for three original samples are qualified as nondetected. Due to confirmation problems in the re-extracts, the detected gamma-chlordane result for one sample and heptachlor epoxide results for two samples are qualified as nondetected (U9).

Due to laboratory blank contamination in the TPH-extractables analyses, detected motor oil results for three samples are qualified as nondetected.

Usability

Due to laboratory blank negative drift in the metals analyses, arsenic, silver and thallium results for eight samples, and cobalt results for seven samples are qualified as estimated. Due to low MS recovery, iron and manganese results for seven samples are qualified as estimated. Due to poor sample duplicate precision, sodium results for seven samples are qualified as estimated. Due to serial dilution problems, sodium results for seven samples are qualified as estimated. Due to laboratory blank contamination, chromium results for seven samples, aluminum and copper results for five samples, iron results for four samples, antimony, calcium, magnesium, nickel, potassium and sodium results for one sample are qualified as nondetected. Due to field blank contamination, zinc results for two samples are qualified as nondetected.

Due to low LCS and MS recoveries, Pesticides/PCBs were re-extracted. All re-extracted samples were within QC limits except heptachlor epoxide; however, the samples were extracted outside of required holding time. Although re-extracts are qualified due to holding time exceedance, most target compounds were within required recovery limits, therefore the re-extracts should be used as the final validated results.

The quality control reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the absence of rejected data and the small number of qualifiers added to the LVOA, VOA, SVOA, TPH-extractables, TPH-purgeables data indicates high usability. The high number of qualifications made to the Pesticide/PCBs and metals data indicates several analytical and/or matrix problems that limits the usability of the data.

11.0 References

"Data Validation Guidelines for CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for Non-CLP Organic Analyses", TtEMI, March 20, 1997

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Organic Data Review" (February 1994)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

45662

Data Quality Summary

Sample Delivery Group

45662

LVOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	432	-	-	-
TOTAL QUALIFIED DATA POINTS:	36	8.3%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
U4 - Compound is nondetected due to common lab contamination	9	2.1%	25.0%	H
UJ7 - Compound is estimated due to cal. exceedance	27	6.3%	75.0%	N

Data Quality Summary

Sample Delivery Group

45662

VOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**384**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**42**	10.9%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U4 - Common lab contamination	7	1.8%	16.7%	H
U4J7 - Multiple Reasons	2	0.5%	4.8%	H
UJ3 - Compound is estimated due to surr/LCS exceedance	2	0.5%	4.8%	L
J - Result is > the MDL but < the PQL	1	0.3%	2.4%	N
J7 - Compound is estimated due to cal. exceedance	2	0.5%	4.8%	N
UJ7 - Compound is estimated due to cal. exceedance	28	7.3%	66.7%	N

Data Quality Summary

Sample Delivery Group

45662

SVOA

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	195	-	-	-
TOTAL QUALIFIED DATA POINTS:	32	16.4%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
UJ7 - Compound is estimated due to cal. exceedance	10	5.1%	31.3%	
U4 - Common lab contamination	1	0.5%	3.1%	H
U4J7 - Multiple Reasons	3	1.5%	9.4%	H
UJ3 - Compound is estimated due to surr/MS/LCS exceedance	12	6.2%	37.5%	L
J7 - Compound is estimated due to cal. exceedance	1	0.5%	3.1%	N
UJ7 - Compound is estimated due to cal. exceedance	5	2.6%	15.6%	N

Data Quality Summary

Sample Delivery Group

45662

PEST

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	**168**	-	-	-
TOTAL QUALIFIED DATA POINTS:	**108**	64.3%	-	-
TOTAL REJECTED DATA POINTS:	**0**	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Compound is nondetected due to laboratory blank contamination	3	1.8%	2.8%	H
J5 - Compound is estimated due to holding time exceedance	4	2.4%	3.7%	L
U9J3 - Multiple Reasons	2	1.2%	1.9%	L
U9J5 - Multiple Reasons	1	0.6%	0.9%	L
UJ3 - Compound is estimated due to surr/MS/LCS exceedance	20	11.9%	18.5%	L
UJ35 - Multiple Reasons	1	0.6%	0.9%	L
UJ5 - Compound is estimated due to holding time exceedance	76	45.2%	70.4%	L
UJ3 - Compound is estimated due to surr/MS/LCS exceedance	1	0.6%	0.9%	N

Data Quality Summary

Sample Delivery Group

45662

TPHEXT

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	12	-	-	-
TOTAL QUALIFIED DATA POINTS:	3	25.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Compound is nondetected due to laboratory blank contamination	3	25.0%	100.0%	H

Data Quality Summary

Sample Delivery Group

45662

TPHPRG

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	6	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

Data Quality Summary

Sample Delivery Group

45662

METALS

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	192	-	-	-
TOTAL QUALIFIED DATA POINTS:	100	52.1%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-
Qualified/Rejected as a result of:				
U1 - Analyte is nondetected due to laboratory blank contamination	23	12.0%	23.0%	H
U1J2 - Multiple Reasons	1	0.5%	1.0%	H
U2 - Analyte is nondetected due to field blank contamination	2	1.0%	2.0%	H
J1 - Analyte is estimated due to negative drift	9	4.7%	9.0%	L
J3 - Compound is estimated due to surr/MS/LCS exceedance	10	5.2%	10.0%	L
UJ1 - Analyte is estimated due to negative drift	22	11.5%	22.0%	L
UJ3 - Compound is estimated due to surr/MS/LCS exceedance	1	0.5%	1.0%	L
J - Result is > the MDL but < the PQL	22	11.5%	22.0%	N
J24 - Multiple Reasons	7	3.6%	7.0%	N
U1J3 - Multiple Reasons	3	1.6%	3.0%	N

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/8/01 by R. Morgi/TFEMI

Hunters Point Shipyard - Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
149742

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborn
Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis method are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
149742-001	0103G002	Full Validation Sample	WATER	1/16/01
149742-002	0103G004		WATER	1/16/01
149742-003	0103G005	Dup of 0103G004	WATER	1/16/01
149742-004	0103G006		WATER	1/16/01
QC135037	0103G006MS		WATER	1/16/01
QC135038	0103G006MSD		WATER	1/16/01

All samples were received in a bucket on ice and properly labeled. Temperature was recorded as "chilled".

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method.

3.1 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for hexavalent chromium.

Full Validation for Sample 0103G002

3.2 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes utilized.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and full data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

149742

Data Quality Summary

Sample Delivery Group

149742

HEXAVALENT CHROMIUM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	4	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/8/01 by R. Moggi / TtEMI

Hunters Point Shipyard - Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
149743

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborne
Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis method are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
149743-001	0103F002	Source Blank	WATER	1/16/01
149743-002	0103F004	Equipment Rinsate Blank	WATER	1/16/01

All samples were received in a bucket on ice and properly labeled. Temperature was recorded as "chilled".

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method. Full validation was not required.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

149743

Data Quality Summary

Sample Delivery Group

149743

HEXAVALENT CHROMIUM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	2	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/8/01 by R. Moggi / TtEMI

Hunters Point Shipyard - Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
149775

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Bocarne
Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis method are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
149775-001	0103F006	Full Validation Sample	WATER	1/17/01
149775-002	0103F007	Dup of 0103F006	WATER	1/17/01
149775-003	0103F008		WATER	1/17/01
149775-004	0103F009		WATER	1/17/01

All samples were received in a bucket on ice and properly labeled. Temperature was recorded as "chilled".

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method.

3.1 Field Duplicates

One set of field duplicates was collected for analysis by this method. Results for both the primary sample and duplicate sample were non-detect for hexavalent chromium.

Full Validation for Sample 0103F006

3.2 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes utilized.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and full data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

149775

Data Quality Summary

Sample Delivery Group

149775

HEXAVALENT CHROMIUM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	4	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/8/01 by R. Moggi / THEMI

Hunters Point Shipyard - Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
149776

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborne
Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis method are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
149776-001	0103H002		WATER	1/17/01
149776-002	0103H003	Full Validation Sample	WATER	1/17/01
149776-003	0103H004		WATER	1/17/01
149776-004	0103H006	Equipment Rinsate Blank	WATER	1/17/01
QC135232	0103H006MS		WATER	1/17/01
QC135233	0103H006MSD		WATER	1/17/01

All samples were received in a bucket on ice and properly labeled. Temperature was recorded as "chilled".

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method.

Full Validation for Sample 0103H003

3.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes utilized.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and full data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

149776

Data Quality Summary

Sample Delivery Group

149776

HEXAVALENT CHROMIUM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	4	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/8/01 by R. Maggi/TtEMI

Hunters Point Shipyard - Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
149805

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborne
Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis method are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
149805-001	0103H008	Full Validation Sample	WATER	1/18/01
149805-002	0103H013		WATER	1/18/01
149805-003	0103H014		WATER	1/18/01

A cooler receipt form was not filled out describing sample condition at time of receipt; although it was noted in the laboratory narrative that all samples were received cold and intact.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method.

Full Validation for Sample 0103H008

3.1 Compound Quantitation and Reported Detection Limits

Sample results were recalculated with the proper dilution factors and volumes used to calculate the sample results. The sample was found to be correctly quantitated. The reported detection limits were consistent with TtEMI's required report limits and reflect any dilutions and volumes utilized.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and full data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

149805

Data Quality Summary

Sample Delivery Group

149805

HEXAVALENT CHROMIUM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	3	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/8/01 by R. Moggi / T+EMI

Hunters Point Shipyard - Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
149806

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborne
Certified by

2.0 Sample Collection, Preservation and Handling

The following samples and analysis method are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
149806-001	0103F013		WATER	1/18/01
QC135436	0103F013MS		WATER	1/18/01
QC135437	0103F013MSD		WATER	1/18/01

A cooler receipt form was not filled out describing sample condition at time of receipt; although it was noted in the laboratory narrative that all samples were received cold and intact.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method. Full validation was not required.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

149806

Data Quality Summary

Sample Delivery Group

149806

HEXAVALENT CHROMIUM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	1	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/8/01 by R. Moggi / TtEMI

Hunters Point Shipyard - Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
149831

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborne
Certified by

2.0 Sample Collection, Preservation and Handling

The following sample and analysis method are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
149831-001	0103H017		WATER	1/19/01

Although a cooler receipt form was not filled out, the sample was received cold and intact as recorded on the chain-of-custody.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method. Full validation was not required.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

149831

Data Quality Summary

Sample Delivery Group

149831

HEXAVALENT CHROMIUM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	1	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

DATA VALIDATION REPORT

Tech Review 3/8/01 by R. Moggi / TtEMI

Hunters Point Shipyard - Parcel B Ramp Wells

CTO270

Prepared for

Tetra tech EMI

Curtis & Tompkins, Ltd.
Laboratory Project ID
149833

1.0 Introduction

This report summarizes the technical review of analytical laboratory sample results generated in support of sampling and analysis activities at Hunters Point Shipyard. The criteria applied for this review are consistent with the project specific guidelines, in conjunction with analytical method protocols (see section 5.0 for specific references). In cases where specific guidance was not available from either of these sources, the data have been evaluated using professional judgement consistent with industry standards. The review included evaluation of sample collection, holding time, and summary information for blanks (to assess contamination), sample duplicates (to assess precision), laboratory control samples and calibrations (to assess accuracy) and matrix spike and surrogate recoveries (to assess matrix effect). Verification of laboratory system performance, compound identification, analyte quantitation, and reporting limits was performed on designated samples.

The report is arranged by method; within each method section is a sub-section identifying each non-compliance, qualifier and associated samples. Appendix A summarizes all qualified data, and Table 1 defines data validation qualifiers and comments.

I certify that all data validation criteria described above were assessed, and any qualifications made to the data were in accordance with the cited reference documents.

Donna Osborne
Certified by

2.0 Sample Collection, Preservation and Handling

The following sample and analysis method are associated with this Sample Delivery Group:

CHROM

Lab ID	Field ID	Sample Type	Matrix	Date Collected
149833-001	0103L002	Equipment Rinsate Blank	WATER	1/19/01

Although a cooler receipt form was not filled out, the sample was received cold and intact as recorded on the chain-of-custody.

3.0 Hexavalent Chromium (SW7196)

All cursory requirements were met by this method. Full validation was not required.

4.0 Overall Assessment of Data

Usability

The quality control reviewed were met and are considered acceptable. Based upon the cursory and data validation all results are considered valid and usable for all purposes.

5.0 References

"Data Validation Guidelines for CLP Inorganic Analyses", TtEMI, March 20, 1997

"TtEMI Comprehensive Long-term Environmental Action Navy II Analytical Services Statement of Work" (May 5, 1997)

"USEPA Contract Laboratory Program National Guidelines for Inorganic Data Review" (February 1994)

Appendix A

Data Quality Summary

by Analysis Type

Laboratory Project ID

149833

Data Quality Summary

Sample Delivery Group

149833

HEXAVALENT CHROMIUM

	Data Points	% of Data	% of Qualified Data	Bias (low/none/high)
TOTAL DATA POINTS:	1	-	-	-
TOTAL QUALIFIED DATA POINTS:	0	0.0%	-	-
TOTAL REJECTED DATA POINTS:	0	0.0%	-	-

Qualified/Rejected as a result of:

No qualified data

TABLE 1

DATA VALIDATION QUALIFIERS AND CODES

U1	Compound is nondetected due to laboratory blank contamination
U2	Compound is nondetected due to field blank contamination
U4	Compound is nondetected because of common laboratory contamination
J0/UJ0	Compound is estimated due to internal standard exceedance
J1/UJ1	Compound is estimated due to noncompliant instrument performance criteria
J2/UJ2	Compound is estimated due to laboratory duplicate precision exceedance
J4/UJ4	Analyte is estimated due to serial dilution exceedance
J3/UJ3	Compound is estimated due to surrogate/MS/LCS exceedance
J6	Analyte is estimated due to field duplicate precision exceedance
J5/UJ5	Compound is estimated due to holding time exceedance
J7/UJ7	Compound is estimated due to calibration exceedance
J8	Compound is estimated due to calibration range exceedance
J9	Compound is estimated due to interference check exceedance (metals) or confirmation problems (dual column analyses)
R0	Compound is rejected due to internal standard exceedance
R1	Compound is rejected due to holding time exceedance
R2	Compound is rejected due to surrogate/MS/LCS exceedance
R3	Compound is rejected due to noncompliant instrument performance criteria
R7	Compound is rejected due to calibration exceedance
J	Result is above the MDL but less than the CRQL

APPENDIX E

FIELD DUPLICATE PAIR RESULTS

(18 Pages)

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR07MW20A1: Field Duplicate Samples 0103G004 and 0103G005 (CHROM, DMETAL, TPHEXT, TPHPRG, VOA)								
IR07MW20A1	0103G004	16-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	ALUMINUM	6	UJ13	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	ALUMINUM	6	UJ13	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	ANTIMONY	2	UJ1	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	ARSENIC	5.9	U1	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	ARSENIC	8.1	U1	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	BARIUM	46.6	J	µg/L	8
IR07MW20A1	0103G005	16-Jan-01	DMETAL	BARIUM	50.6	J	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	BERYLLIUM	1	J	µg/L	26
IR07MW20A1	0103G005	16-Jan-01	DMETAL	BERYLLIUM	1.3	J	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	CADMIUM	1.1	J	µg/L	37
IR07MW20A1	0103G005	16-Jan-01	DMETAL	CADMIUM	1.6	J	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	CALCIUM	223,000		µg/L	4
IR07MW20A1	0103G005	16-Jan-01	DMETAL	CALCIUM	232,000		µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	CHROMIUM	6.3	J	µg/L	35
IR07MW20A1	0103G005	16-Jan-01	DMETAL	CHROMIUM	9	J	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	COBALT	1	U	µg/L	NQ
IR07MW20A1	0103G005	16-Jan-01	DMETAL	COBALT	1.6	J	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	COPPER	3	U1	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	COPPER	5.7	U1	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	IRON	7	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	IRON	16.5	U1	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	LEAD	1	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	LEAD	1	U	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	MAGNESIUM	767,000		µg/L	4
IR07MW20A1	0103G005	16-Jan-01	DMETAL	MAGNESIUM	801,000		µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	MANGANESE	1	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	MANGANESE	1	U	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	MERCURY	0.1	U	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	MOLYBDENUM	7	U	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	NICKEL	25.5	U2	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	NICKEL	25.6	U2	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	POTASSIUM	270,000		µg/L	11
IR07MW20A1	0103G005	16-Jan-01	DMETAL	POTASSIUM	300,000		µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	SELENIUM	3	UJ1	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR07MW20A1	0103G004	16-Jan-01	DMETAL	SILVER	1	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	SILVER	1.5	U2	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	SODIUM	1,650,000		µg/L	132
IR07MW20A1	0103G005	16-Jan-01	DMETAL	SODIUM	8,070,000		µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	THALLIUM	8.3	J1	µg/L	1
IR07MW20A1	0103G005	16-Jan-01	DMETAL	THALLIUM	8.2	J1	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	VANADIUM	1	U	µg/L	NQ
IR07MW20A1	0103G005	16-Jan-01	DMETAL	VANADIUM	2.3	J	µg/L	
IR07MW20A1	0103G004	16-Jan-01	DMETAL	ZINC	6	UJ3	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	DMETAL	ZINC	6	UJ3	µg/L	
IR07MW20A1	0103G004	16-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	
IR07MW20A1	0103G004	16-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L	
IR07MW20A1	0103G004	16-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	28	J	µg/L	NQ
IR07MW20A1	0103G005	16-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	UJ	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,1-DICHLOROETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,1-DICHLOROETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ35	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,1-DICHLOROETHENE	10	UJ35	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,2-DIBROMOETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,2-DIBROMOETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,2-DICHLOROBENZENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,2-DICHLOROBENZENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,2-DICHLOROETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,2-DICHLOROETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,2-DICHLOROPROPANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,2-DICHLOROPROPANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	1,3-DICHLOROBENZENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,3-DICHLOROBENZENE	10	UJ5	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR07MW20A1	0103G004	16-Jan-01	VOA	1,4-DICHLOROBENZENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	1,4-DICHLOROBENZENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	2-BUTANONE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	2-BUTANONE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	2-HEXANONE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	2-HEXANONE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	4-METHYL-2-PENTANONE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	4-METHYL-2-PENTANONE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	ACETONE	48	U4J57	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	ACETONE	19	U4J57	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	BENZENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	BENZENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	BROMODICHLOROMETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	BROMODICHLOROMETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	BROMOFORM	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	BROMOFORM	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	BROMOMETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	BROMOMETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CARBON DISULFIDE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CARBON DISULFIDE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CARBON TETRACHLORIDE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CARBON TETRACHLORIDE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CHLOROBENZENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CHLOROBENZENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CHLOROETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CHLOROETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CHLOROFORM	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CHLOROFORM	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CHLOROMETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CHLOROMETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	CYCLOHEXANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	CYCLOHEXANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	ETHYLBENZENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	ETHYLBENZENE	10	UJ5	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR07MW20A1	0103G004	16-Jan-01	VOA	ISOPROPYLBENZENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	ISOPROPYLBENZENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	METHYL ACETATE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	METHYL ACETATE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	METHYLENE CHLORIDE	35	U4J5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	METHYLENE CHLORIDE	38	U4J5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	STYRENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	STYRENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	TETRACHLOROETHENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	TETRACHLOROETHENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	TOLUENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	TOLUENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	TRICHLOROETHENE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	TRICHLOROETHENE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	VINYL CHLORIDE	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	VINYL CHLORIDE	10	UJ5	µg/L	
IR07MW20A1	0103G004	16-Jan-01	VOA	XYLENES (TOTAL)	10	UJ5	µg/L	--
IR07MW20A1	0103G005	16-Jan-01	VOA	XYLENES (TOTAL)	10	UJ5	µg/L	

IR10MW12A: Field Duplicate Samples 0103H010 and 0103H011 (LVOA)

IR10MW12A	0103H010	18-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR10MW12A	0103H010	18-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	ACETONE	10	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	ACETONE	10	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	BENZENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	BENZENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR10MW12A	0103H010	18-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	STYRENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	STYRENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	
IR10MW12A	0103H010	18-Jan-01	LVOA	XYLENES (TOTAL)	0.5	U	µg/L	--
IR10MW12A	0103H011	18-Jan-01	LVOA	XYLENES (TOTAL)	0.5	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR18MW21A:	**Field Duplicate Samples 0103H008 and 0103H009 (PEST, SVOA, VOA)**							
IR18MW21A	0103H008	18-Jan-01	PEST	4,4'-DDD	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	4,4'-DDD	0.02	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	4,4'-DDE	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	4,4'-DDE	0.02	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	4,4'-DDT	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	4,4'-DDT	0.02	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	ALDRIN	0.01	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ALDRIN	0.01	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	ALPHA-BHC	0.01	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ALPHA-BHC	0.01	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	ALPHA-CHLORDANE	0.01	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ALPHA-CHLORDANE	0.01	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	AROCLOR-1016	0.1	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	AROCLOR-1016	0.1	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	AROCLOR-1221	0.2	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	AROCLOR-1221	0.2	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	AROCLOR-1232	0.1	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	AROCLOR-1232	0.1	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	AROCLOR-1242	0.1	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	AROCLOR-1242	0.1	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	AROCLOR-1248	0.1	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	AROCLOR-1248	0.1	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	AROCLOR-1254	0.1	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	AROCLOR-1254	0.1	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	AROCLOR-1260	0.1	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	AROCLOR-1260	0.1	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	BETA-BHC	0.01	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	BETA-BHC	0.01	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	DELTA-BHC	0.01	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	DELTA-BHC	0.01	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	DIELDRIN	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	DIELDRIN	0.02	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	ENDOSULFAN I	0.01	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ENDOSULFAN I	0.01	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	ENDOSULFAN II	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ENDOSULFAN II	0.02	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	ENDOSULFAN SULFATE	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ENDOSULFAN SULFATE	0.02	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	ENDRIN	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ENDRIN	0.02	UJ5	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR18MW21A	0103H008	18-Jan-01	PEST	ENDRIN ALDEHYDE	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ENDRIN ALDEHYDE	0.02	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	ENDRIN KETONE	0.02	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	ENDRIN KETONE	0.02	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	GAMMA-BHC (LINDANE)	0.01	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	GAMMA-BHC (LINDANE)	0.01	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	GAMMA-CHLORDANE	0.01	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	GAMMA-CHLORDANE	0.01	U9	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	HEPTACHLOR	0.03	J5	µg/L	40
IR18MW21A	0103H009	18-Jan-01	PEST	HEPTACHLOR	0.02	J5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	HEPTACHLOR EPOXIDE	0.01	U9	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	HEPTACHLOR EPOXIDE	0.01	UJ35	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	METHOXYCHLOR	0.1	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	METHOXYCHLOR	0.1	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	PEST	TOXAPHENE	1	UJ5	µg/L	--
IR18MW21A	0103H009	18-Jan-01	PEST	TOXAPHENE	1	UJ5	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2,2'-OXYBIS(1-CHLOROPROPANE)	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2,2'-OXYBIS(1-CHLOROPROPANE)	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2,4,5-TRICHLOROPHENOL	25	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2,4,5-TRICHLOROPHENOL	25	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2,4,6-TRICHLOROPHENOL	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2,4,6-TRICHLOROPHENOL	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2,4-DICHLOROPHENOL	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2,4-DICHLOROPHENOL	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2,4-DIMETHYLPHENOL	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2,4-DIMETHYLPHENOL	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2,4-DINITROPHENOL	25	UJ3	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2,4-DINITROPHENOL	25	UJ3	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2,4-DINITROTOLUENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2,4-DINITROTOLUENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2,6-DINITROTOLUENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2,6-DINITROTOLUENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2-CHLORONAPHTHALENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2-CHLORONAPHTHALENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2-CHLOROPHENOL	10	UJ3	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2-CHLOROPHENOL	10	UJ3	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2-METHYLNAPHTHALENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2-METHYLNAPHTHALENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2-METHYLPHENOL	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2-METHYLPHENOL	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	2-NITROANILINE	25	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2-NITROANILINE	25	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR18MW21A	0103H008	18-Jan-01	SVOA	2-NITROPHENOL	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	2-NITROPHENOL	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	3,3'-DICHLOROBENZIDINE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	3,3'-DICHLOROBENZIDINE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	3-NITROANILINE	25	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	3-NITROANILINE	25	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	4,6-DINITRO-2-METHYLPHENOL	25	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	4,6-DINITRO-2-METHYLPHENOL	25	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	4-BROMOPHENYL-PHENYLETHER	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	4-BROMOPHENYL-PHENYLETHER	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	4-CHLORO-3-METHYLPHENOL	10	UJ7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	4-CHLORO-3-METHYLPHENOL	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	4-CHLOROANILINE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	4-CHLOROANILINE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	4-CHLOROPHENYL-PHENYLETHER	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	4-CHLOROPHENYL-PHENYLETHER	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	4-METHYLPHENOL	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	4-METHYLPHENOL	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	4-NITROANILINE	25	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	4-NITROANILINE	25	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	4-NITROPHENOL	25	UJ3	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	4-NITROPHENOL	25	UJ3	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	ACENAPHTHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	ACENAPHTHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	ACENAPHTHYLENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	ACENAPHTHYLENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	ACETOPHENONE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	ACETOPHENONE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	ANTHRACENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	ANTHRACENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	ATRAZINE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	ATRAZINE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BENZALDEHYDE	10	UJ7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BENZALDEHYDE	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BENZO(A)ANTHRACENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BENZO(A)ANTHRACENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BENZO(A)PYRENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BENZO(A)PYRENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BENZO(B)FLUORANTHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BENZO(B)FLUORANTHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BENZO(G,H,I)PERYLENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BENZO(G,H,I)PERYLENE	10	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR18MW21A	0103H008	18-Jan-01	SVOA	BENZO(K)FLUORANTHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BENZO(K)FLUORANTHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BIPHENYL	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BIPHENYL	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BIS(2-CHLOROETHOXY)METHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BIS(2-CHLOROETHOXY)METHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BIS(2-CHLOROETHYL)ETHER	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BIS(2-CHLOROETHYL)ETHER	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BIS(2-ETHYLHEXYL)PHTHALATE	10	U4J7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BIS(2-ETHYLHEXYL)PHTHALATE	10	U4J7	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	BUTYLBENZYLPHTHALATE	10	UJ7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	BUTYLBENZYLPHTHALATE	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	CAPROLACTAM	10	UJ7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	CAPROLACTAM	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	CARBAZOLE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	CARBAZOLE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	CHRYSENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	CHRYSENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	DIBENZ(A,H)ANTHRACENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	DIBENZ(A,H)ANTHRACENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	DIBENZOFURAN	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	DIBENZOFURAN	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	DIETHYLPHTHALATE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	DIETHYLPHTHALATE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	DIMETHYLPHTHALATE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	DIMETHYLPHTHALATE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	DI-N-BUTYLPHTHALATE	10	U4	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	DI-N-BUTYLPHTHALATE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	DI-N-OCTYLPHTHALATE	10	UJ7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	DI-N-OCTYLPHTHALATE	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	FLUORANTHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	FLUORANTHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	FLUORENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	FLUORENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	HEXACHLOROBENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	HEXACHLOROBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	HEXACHLOROBUTADIENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	HEXACHLOROBUTADIENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	HEXACHLOROCYCLOPENTADIENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	HEXACHLOROCYCLOPENTADIENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	HEXACHLOROETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	HEXACHLOROETHANE	10	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR18MW21A	0103H008	18-Jan-01	SVOA	INDENO(1,2,3-CD)PYRENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	INDENO(1,2,3-CD)PYRENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	ISOPHORONE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	ISOPHORONE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	NAPHTHALENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	NAPHTHALENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	NITROBENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	NITROBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	N-NITROSO-DI-N-PROPYLAMINE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	N-NITROSO-DI-N-PROPYLAMINE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	N-NITROSODIPHENYLAMINE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	N-NITROSODIPHENYLAMINE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	PENTACHLOROPHENOL	25	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	PENTACHLOROPHENOL	25	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	PHENANTHRENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	PHENANTHRENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	PHENOL	10	UJ3	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	PHENOL	10	UJ3	µg/L	
IR18MW21A	0103H008	18-Jan-01	SVOA	PYRENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	SVOA	PYRENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,1,1-TRICHLOROETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,1,2,2-TETRACHLOROETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,1,2-TRICHLOROETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,1-DICHLOROETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,1-DICHLOROETHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,2,4-TRICHLOROBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,2-DIBROMO-3-CHLOROPROPANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,2-DIBROMOETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,2-DICHLOROBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,2-DICHLOROETHANE	10	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR18MW21A	0103H008	18-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,2-DICHLOROPROPANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,3-DICHLOROBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	1,4-DICHLOROBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	2-BUTANONE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	2-BUTANONE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	2-HEXANONE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	2-HEXANONE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	4-METHYL-2-PENTANONE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	ACETONE	10	U4J7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	ACETONE	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	BENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	BENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	BROMODICHLOROMETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	BROMOFORM	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	BROMOFORM	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	BROMOMETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	BROMOMETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CARBON DISULFIDE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CARBON TETRACHLORIDE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CHLOROBENZENE	10	J	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CHLOROBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CHLOROETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CHLOROETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CHLOROFORM	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CHLOROFORM	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CHLOROMETHANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CIS-1,2-DICHLOROETHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CIS-1,3-DICHLOROPROPENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	CYCLOHEXANE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	DIBROMOCHLOROMETHANE	10	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
IR18MW21A	0103H008	18-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	DICHLORODIFLUOROMETHANE	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	ETHYLBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	ISOPROPYLBENZENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	METHYL ACETATE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	METHYL ACETATE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	METHYLCYCLOHEXANE	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	METHYLENE CHLORIDE	10	U4	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	METHYLENE CHLORIDE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	STYRENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	STYRENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	TERT-BUTYL METHYL ETHER	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	TETRACHLOROETHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	TOLUENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	TOLUENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	TRANS-1,2-DICHLOROETHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	TRANS-1,3-DICHLOROPROPENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	TRICHLOROETHENE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ7	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	TRICHLOROFLUOROMETHANE	10	UJ7	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	VINYL CHLORIDE	10	U	µg/L	
IR18MW21A	0103H008	18-Jan-01	VOA	XYLENES (TOTAL)	10	U	µg/L	--
IR18MW21A	0103H009	18-Jan-01	VOA	XYLENES (TOTAL)	10	U	µg/L	

PA50MW01A: Field Duplicate Samples 0103F006 and 0103F007 (CHROM, LVOA, TMETAL, TPHEXT, TPHPRG)

PA50MW01A	0103F006	17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	CHROM	CHROMIUM VI	10	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,1,1-TRICHLOROETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,1,2,2-TETRACHLOROETHANE	0.5	UJ7	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.5	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
PA50MW01A	0103F006	17-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,1,2-TRICHLOROETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,1-DICHLOROETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,1-DICHLOROETHENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,2,4-TRICHLOROBENZENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,2-DIBROMO-3-CHLOROPROPANE	0.5	UJ7	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,2-DIBROMOETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,2-DICHLOROBENZENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,2-DICHLOROETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,2-DICHLOROPROPANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,3-DICHLOROBENZENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	1,4-DICHLOROBENZENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	2-BUTANONE	10	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	2-HEXANONE	10	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	4-METHYL-2-PENTANONE	10	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	ACETONE	10	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	ACETONE	10	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	BENZENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	BENZENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	BROMODICHLOROMETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	BROMOFORM	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	BROMOMETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CARBON DISULFIDE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CARBON TETRACHLORIDE	0.5	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
PA50MW01A	0103F006	17-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CHLOROBENZENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CHLOROETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CHLOROFORM	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CHLOROMETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CIS-1,2-DICHLOROETHENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CIS-1,3-DICHLOROPROPENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	CYCLOHEXANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	DIBROMOCHLOROMETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	DICHLORODIFLUOROMETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	ETHYLBENZENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	ISOPROPYLBENZENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	METHYL ACETATE	0.5	UJ7	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	METHYLCYCLOHEXANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	METHYLENE CHLORIDE	1	U4	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	METHYLENE CHLORIDE	2	U4	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	STYRENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	STYRENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	TERT-BUTYL METHYL ETHER	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	TETRACHLOROETHENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	TOLUENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	TRANS-1,2-DICHLOROETHENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	TRANS-1,3-DICHLOROPROPENE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	TRICHLOROETHENE	0.5	U	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
PA50MW01A	0103F006	17-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	TRICHLOROFLUOROMETHANE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	VINYL CHLORIDE	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	LVOA	XYLENES (TOTAL)	0.5	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	LVOA	XYLENES (TOTAL)	0.5	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	ALUMINUM	6	UJ1	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	ALUMINUM	6	UJ1	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	ANTIMONY	2	UJ1	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	ANTIMONY	2	UJ1	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	ARSENIC	2.9	U1	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	ARSENIC	2.8	U1	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	BARIUM	120	J4	µg/L	6
PA50MW01A	0103F007	17-Jan-01	TMETAL	BARIUM	127	J4	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	BERYLLIUM	1	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	BERYLLIUM	1	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	CADMIUM	1	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	CADMIUM	1	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	CALCIUM	38,800		µg/L	4
PA50MW01A	0103F007	17-Jan-01	TMETAL	CALCIUM	40,200		µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	CHROMIUM	1	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	CHROMIUM	1	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	COBALT	1	U	µg/L	NQ
PA50MW01A	0103F007	17-Jan-01	TMETAL	COBALT	1.3	J	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	COPPER	1.1	U1	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	COPPER	1	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	IRON	7	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	IRON	7	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	LEAD	1	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	LEAD	1	U1	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	MAGNESIUM	92,200		µg/L	4
PA50MW01A	0103F007	17-Jan-01	TMETAL	MAGNESIUM	95,500		µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	MANGANESE	166		µg/L	3
PA50MW01A	0103F007	17-Jan-01	TMETAL	MANGANESE	171		µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	MERCURY	0.1	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	MERCURY	0.1	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	MOLYBDENUM	7	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	MOLYBDENUM	7	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	NICKEL	6	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	NICKEL	8.7	U2	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	POTASSIUM	4,350	J	µg/L	1
PA50MW01A	0103F007	17-Jan-01	TMETAL	POTASSIUM	4,300	J	µg/L	

FIELD DUPLICATE RESULTS
JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Monitoring Well	Sample Number	Sampling Date	Analytical Group	Analyte	Analytical Result (µg/L)	Qualifier	Units	RPD[a]
PA50MW01A	0103F006	17-Jan-01	TMETAL	SELENIUM	3	UJ1	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	SELENIUM	3	UJ1	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	SILVER	1	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	SILVER	1	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	SODIUM	261,000		µg/L	3
PA50MW01A	0103F007	17-Jan-01	TMETAL	SODIUM	270,000		µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	THALLIUM	2	UJ1	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	THALLIUM	2	UJ1	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	VANADIUM	3.4	J	µg/L	14
PA50MW01A	0103F007	17-Jan-01	TMETAL	VANADIUM	3.9	J	µg/L	
PA50MW01A	0103F006	17-Jan-01	TMETAL	ZINC	3	UJ3	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TMETAL	ZINC	3	UJ3	µg/L	
PA50MW01A	0103F006	17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TPHEXT	DIESEL RANGE ORGANICS	250	U	µg/L	
PA50MW01A	0103F006	17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	250	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TPHEXT	MOTOR OIL RANGE ORGANICS	300	U2	µg/L	
PA50MW01A	0103F006	17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	--
PA50MW01A	0103F007	17-Jan-01	TPHPRG	GASOLINE RANGE ORGANICS	20	U	µg/L	

Notes:

a The suggested quality control guideline is +/-25 RPD for field duplicate water samples, except in the case of low concentrations.

CHROM	Chromium
DMETAL	Dissolved metal
LVOA	Low-level volatile organic compound
NQ	Not quantifiable
PEST	Pesticide
RPD	Relative percent difference
SVOA	Semivolatile volatile organic compound
TMETAL	Total metal
TPHEXT	Total petroleum hydrocarbon - extractable
TPHPRG	Total petroleum hydrocarbon - purgeable
VOA	Volatile organic compound
µg/L	*Micrograms per liter*

Qualifiers:

J	Qualified as estimated
R	Qualified as rejected
U	Not detected

Qualifier codes:

1	System performance
2	Precision - matrix duplicate
3	Accuracy - surrogate, matrix, or blank spike
4	Serial dilution
5	Holding time
7	Calibration
8	Exceeds calibration range
U1	Non-detected due to method blank contamination
U2	Non-detected due to field blank contamination
U4	Non-detected - common laboratory contaminant

RESPONSE TO AGENCY COMMENTS ON DRAFT OCTOBER TO DECEMBER 2000 FIFTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

This document presents the Navy's responses to comments from the Department of Toxic Substances Control (DTSC) on the Draft October to December 2000 Fifth Quarterly Groundwater Sampling Report for Parcel B, Hunters Point Shipyard (HPS), San Francisco, California, dated January 19, 2001. The comments addressed below were received from DTSC on March 5, 2001.

RESPONSES TO DTSC

General Comments

1. **Comment:** **The third paragraph, Section 2.2, Groundwater Sampling Procedures states that disposable bailers were employed when the use of a submersible pump was not possible or if pump failure occurred. According to the monitoring well sample sheets in Appendix B, pump malfunction occurred while purging IR18MW 100B. This well and another B zone well, IR18MW101B, were the only two wells in which a submersible pump was used for purging. A disposable bailer was used for both purging and sampling the remaining wells, and a peristaltic pump was also used in three of the wells for comparison with the bailed wells. DTSC recommends that a spare pump be available for use in the event of malfunction of the primary pump. As stated before, DTSC recommends that dedicated bladder pumps be installed in the monitoring wells to minimize water agitation that may result in non-representative samples and to minimize the loss of Volatile Organic Compounds (VOCs).**

   Response: The Navy will evaluate the use of dedicated pumps (bladder or other types of submersible pumps) in the proposed revision of the remedial action monitoring plan (RAMP) and will consider having a second pump available in the event of a malfunction.

   During the seventh quarter sampling in April, the Navy used the reliable and consistent Redi-Flo2 Grunfos submersible pump for all the monitoring wells except for IR10MW28A (inside Building 123), which had a very low yield and recharge rate.

2. **Comment:** **The monitoring well sampling sheet for IR10MW12A indicate that "lots of roots" were found apparently in the bailer during the initial five gallons of well purging. The next five gallons of purge water indicated that a "few roots" were found. These comments suggest that the well integrity has been compromised. DTSC recommends that the Navy investigate the reason for the presence of this material in the purge water and describe the measures taken to insure the well will be repaired and, if necessary, replaced.**

Response: The reason for plant roots in the well will be investigated and an evaluation of the well casing integrity will be conducted. Video survey and re-development of the well may be conducted. Recommendations for repair or replacement will be made after the well integrity investigation.

3. **Comment:** **DTSC recommends that the location of the following monitoring wells be shown on the various maps in the report: IR18MW100B, IR18MW101B, IR25MW16A, IR26MW43A, and PA24MW02A.**

Response: The locations of monitoring wells IR25MW16A, IR26MW43A, and PA24MW02A are shown in Figure 3 (groundwater potentiometric contour map). They are not shown in Figure 2 (location of RAMP wells) because they are not RAMP analytical wells; they were included only in the RAMP water level program. Monitoring wells IR18MW100B and IR18MW101B are not indicated on the figures because they are not part of the RAMP program.

4. **Comment:** **Please give reference(s) to support the statement in the second paragraph of Section 3.2.3 that beryllium occurs naturally in the native rock and fill materials of HPS and that Naval or other tenant activity would not be the source of beryllium.**

Response: The HPS ambient level (HPAL) of 0.28 milligrams per kilogram for beryllium in soils was calculated in the "Calculation of Hunters Point Ambient Levels" report by PRC Environmental Management, Inc., dated August 17, 1995. The Hunters Point Shipyard groundwater ambient level (HGAL) of 1.4 micrograms per liter (μg/L) for beryllium in groundwater was calculated in the "Estimation of Groundwater Ambient Levels" by Tetra Tech EM Inc., dated September 16, 1996.

Because the ambient levels were calculated as the 95th upper confidence level on the 95th percentile of data from areas outside known affected areas, the HGAL and the HPAL indicate that beryllium occurs naturally in the native rock and fill materials of HPS.

5. **Comment:** **DTSC recommends that water level measurements be taken for all new monitoring wells and that at least initially all of them be included in the groundwater potentiometric contour map.**

Response: On the first day of each RAMP sampling event, water level measurements are taken for all wells in the RAMP program in addition to a number of non-RAMP wells adequate to prepare a representative potentiometric surface map. Water level measurements will also be collected from new wells in Parcel B on the first day of RAMP sampling events.

RESPONSE TO AGENCY COMMENTS ON DRAFT JANUARY TO MARCH 2001 SIXTH QUARTERLY GROUNDWATER SAMPLING REPORT FOR PARCEL B HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

This document presents the Navy's responses to comments from the DTSC on the Draft January to March 2001 Sixth Quarterly Groundwater Sampling Report for Parcel B, HPS, San Francisco, California, dated April 20, 2001. The comments addressed below were received from DTSC on May 10, 2001.

RESPONSES TO DTSC

General Comments

1. **Comment:** **It was noticed that pH values in several monitoring wells were lower (< 5pH units) than the values measured in previous monitoring events, which were generally between 6 and 8 pH units. There should be a discussion on why these values were lower for this monitoring event. If equipment malfunction is suspected, then that topic should also be discussed, along with a plan for corrective action.**

   Response: One of the field crews did not remove a clear protective band from the pH probe they were using, because they were unfamiliar with the model of the pH meter. This was likely the cause of the erroneous readings. A corrective action plan for field equipment training has been issued and will be discussed with the field crew prior to each sampling event. The text in Section 2.2 has been revised to explain why the low pH values were collected.

2. **Comment:** **Section 2.0, Groundwater Sampling Procedures and Methods, states that groundwater samples from 18 RAMP wells were collected. However, the Well Sampling Sheets in Appendix B indicate that 22 monitoring wells were sampled. Please correct this discrepancy or, if some of the sampled wells are not part of the RAMP monitoring wells, please state which of these wells are non-RAMP wells.**

   Response: The text will be clarified to state that groundwater samples were collected from 20 monitoring wells, of which eighteen were RAMP wells (one well is both a point-of-compliance [POC] and a volatile well). Two volatiles wells (IR10MW12A and IR10MW13A1) added to the program in the fifth quarter were also sampled, in addition to new well IR25MW37A that was installed and sampled for the first time this quarter.

   Well Sampling Sheets for wells IR10MW14A and IR25MW17A were included in Appendix B but these wells were not sampled; they were included because they contain field notes as to why they could not be sampled.

3. **Comment:** **Section 2.2, Groundwater Sampling Procedures, states that submersible pumps were used to purge the monitoring wells and that disposable bailers were employed when use of a submersible pump was not possible or if pump failure occurred. The Well Sampling Sheets in Appendix B indicate that a disposable bailer was used for most of the wells. Please describe under what conditions a submersible pump is not used. Also, the sample collection method is not indicated for several wells on the Sampling Sheets. Was a submersible pump used for these wells? Please show the sample collection method for each well on the Well Sampling Sheets in Appendix B.**

Response: In the sixth quarter, the sampling crews were not satisfied with reliability of the operation of the ES-60 submersible pump and thus used bailers for all of the standard purge shallow RAMP wells. In the seventh quarter, the samplers switched to a different type of submersible pump, the Redi-Flo2 Grunfos.

Appendix B will be revised to note that the sample collection method was bailers where that information was omitted.

4. **Comment:** **Table 7 lists three wells from which unfiltered and filtered samples were collected. The unfiltered samples were collected using low-flow sampling techniques (peristaltic pump). One of the low-flow wells was IR07MWS-4, but there is no Well Sampling Sheet for the low-flow purging for this well in Appendix B. Please include the Well Sampling Sheet for this well.**

Response: The Well Sampling Sheet for the low-flow purging for well IR07MWS-4 will be included in Appendix B.

RESPONSE TO AGENCY COMMENTS ON
DRAFT JANUARY TO MARCH 2001 SIXTH QUARTERLY
GROUNDWATER SAMPLING REPORT FOR PARCEL B
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

This document presents the Navy's responses to comments from the U.S. Environmental Protection Agency (EPA) on the Draft January to March 2001 Sixth Quarterly Groundwater Sampling Report for Parcel B, HPS, San Francisco, California, dated April 20, 2001. The comments addressed below were received from EPA on May 10, 2001.

RESPONSES TO EPA

General Comments

1. **Comment:** **EPA's previous comment on the Fifth Quarterly Groundwater Sampling Report (5th QSR) was not addressed. EPA requested that groundwater contours from both the 5th QSR and the Sixth Quarterly Groundwater Sampling Report (the Report) be included in the next sampling event report. This request was made to better understand the groundwater mounding near IR25 and IR06. Please include both the 5th and 6th quarterly sampling event contours in the next Quarterly Groundwater Sampling report for Parcel B.**

   Response: The Navy acknowledges EPA's comment but since the Navy intends for the quarterly reports to present only the quarterly data, and for trend analysis and comparison between quarterly data to be evaluated in the Annual Reports, the 5th and 6th quarter contours will not be included in the 7th quarter report.

2. **Comment:** **Evaluation of changes in groundwater elevations in two POC monitoring wells between the 5th and 6th quarter sampling events at IR10MW31A1 and IR07MW19A, found that groundwater at these wells appears to be at a lower elevation relative to the other POC monitoring wells. Groundwater elevations in the other POC monitoring wells have risen. This is most likely due to the location of these two wells relative to the tidally influenced zone (TIZ). This information is of interest because it may provide evidence that POCs located more inland of the TIZ groundwater elevations behave differently that those located within the high tide line in the tidal mixing zone. Please revise the text to include an evaluation of POC groundwater elevation in the context of the tidal mixing zone.**

   Response: Groundwater level fluctuations caused by tidal influence at the near-shore monitoring wells will be evaluated in the second Annual Report. Tidal influences on each of the POC monitoring wells will be quantified through a comprehensive tidal study. In the future sampling events and quarterly reports, a tidal correction procedure will be applied to the water levels measured in wells that show significant tidal influences. The Navy does not intend to re-evaluate or re-define the tidally influenced zone (TIZ) as related to POC locations for Parcel B.

Specific Comments

3. **Comment:** **Section 1.0 Introduction, Page 1: The description of the POC Monitoring wells is unclear and differs from the Remedial Action Monitoring Plan dated August 19, 1999 (the RAMP). The RAMP describes the approach for monitoring groundwater at Parcel B as ensuring "that National Ambient Water Quality Criteria (NAWQC), Hunters Point groundwater ambient levels (HGAL) which ever is higher, are not exceeded at the high-tide line of the Parcel B tidally influenced zone (TIZ), which is the point of compliance (POC)." However, the text of this section of the Report states that the POC monitoring wells are located near the inland edge of the TIZ. The high tide line of the TIZ and the inland edge of the TIZ are different. Please revise the text to reflect the RAMP definition that the NAWQC and HGALs are not exceeded at the high-tide line of the Parcel B TIZ.**

Response: The text will be revised to state that the POC wells are located near the high-tide line of the TIZ.

4. **Comment:** **Section 3.2.7, Low-Flow Groundwater Sampling, Page 8: The Monitoring Well Sampling Sheet for low flow purging for monitoring well IR07MWS-4 could not be found in Appendix B. The Monitoring Well Sampling Sheet for traditional purging and sampling of monitoring well IR07MWS-4 is included in the Report but the low flow sheet is not present. Also, Table 7 indicates that the date on which the traditional purging and sampling of this well took place was January 17, 2001 while the Monitoring Well Sampling Sheet indicates that the date was January 16, 2001. Also, Table 7 indicates that the date the low flow purging took place was also on January 17, 2001. Please revise the report to include the well sampling sheet for low flow purging of well IR07MWS-4 and correct the discrepancy between the dates on the Monitoring Well Sampling Sheet and Table 7.**

Response: The low-flow Well Sampling Sheet for monitoring well IR07MWS-4 will be included in Appendix B. The date for the standard purge will be revised to January 16, 2001.

5. **Comment:** **Section 3.3, Data Quality, Page 9: The results of field duplicate analyses on groundwater samples collected during this sampling event are not discussed in the Data Quality Section of the Report. The results of field duplicates and their corresponding primary samples are not presented as they were in the past in Appendix E. Also, the Report does not calculate or discuss the relative percent differences (RPD) in sampling results. Please revise the Report to include calculation of RPD for duplicate results and discussion of any RPD criteria exceedences. Also, please continue to include the results of field duplicates and their corresponding primary samples in Appendix E.**

Response: The Final Sixth Quarterly Report will include an Appendix E presenting the field duplicate results and relative percent differences (also presented in the validation reports in Appendix D), and the results will be discussed in the Data Quality Section 3.3.

6. **Comment:** **Table 2, Summary of Wells Sampled and Analyses Performed: CLP Metals were not sampled in one of the POC monitoring wells. IR26MW45A was not sampled and analyzed for CLP Metals. Please revise the Report to explain why this POC well was not analyzed for CLP Metals as required by the RAMP.**

Response: Table 2 will be revised to reflect that monitoring well IR26MW45A was sampled and analyzed for metals; note that the metals results for this well are presented in Appendix A.

7. **Comment:** **Table 5: Comparison of Trigger Level Criteria: Table 5 does not include the comparison criteria for TPH-d and TPH-g of 1,250 µg/L as required by the RAMP. Please include this comparison criteria in Table 5 of the Report. If a change in this requirement was made, please note this in the text.**

Response: Because total petroleum hydrocarbons (TPH) are not Comprehensive Environmental Response, Compensation, and Liability Act contaminants, the 1,250 µg/L trigger level was included in the RAMP for screening purposes only. A footnote will be added to Table 5 to clarify the TPH trigger levels. The TPH trigger levels will also be clarified in the RAMP if it is revised.

8. **Comment:** **Table 5: Comparison of Trigger Level Criteria: The note "m" for Table 5 states "POC and Sentinel well trigger levels for trichloroethene were reduced from 200 µg/L and 2,000 µg/L, respectively, as listed in the Parcel B RAMP, to 85 µg/L because trichloroethene criteria are human-health based." Table 5 lists 114 µg/L rather than 85 µg/L. Please correct this discrepancy.**

Response: The footnote in Table 5 will be revised to list 114 µg/L for the trichlorothene criteria.

9. **Comment:** **Figure 3: IR10MW14A is not included on Figure 3. Please include this monitoring well on the map until a decision regarding the disposition of this well is made.**

Response: Monitoring well IR10MW14A is not included in Figure 3 because a water level measurement could not be collected from this well (see Table 1). Please refer to Figure 2 for the location of this well.