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HUNTERS POINT
SSIC NO. 5090.3

DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132-5190

5090
Ser 06CH.RM/277
April 12, 2000

U.S. Environmental Protection Agency
Region IX
Attn: Ms. Sheryl Lauth
Remedial Project Manager
Hazardous Waste Management Division, (SFD 8-2)
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Ms. Lauth:

Enclosure (1) is the final March 23, 2000, Parcel C Groundwater Evaluation meeting minutes, Hunters Point Shipyard, for your records.

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

Sincerely,

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

Enclosure: (1) Parcel C Groundwater Evaluation meeting minutes, March 23, 2000

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California Regional Quality Control Board
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PARCEL C GROUNDWATER EVALUATION MEETING
HUNTERS POINT SHIPYARD
MEETING MINUTES
March 23, 2000

These meeting minutes summarize the Hunters Point Shipyard (HPS) Parcel C groundwater evaluation meeting held from 1300-1500 on March 23, 2000, at the San Francisco office of Tetra Tech EM Inc. (TtEMI). These minutes include key points, decisions, and action items agreed upon at the meeting. A list of meeting attendees is included as Attachment A to these minutes.

ANNOUNCEMENTS

Richard Mach, the Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) for the Navy, reviewed the agenda and the overall purpose for the meeting. Mr. Mach explained that the overall purpose of the meeting is to follow-on with discussions from previous working meetings on March 7, 2000 and March 16, 2000 regarding groundwater data gaps at Parcel C. Mr. Mach indicated that a primary objective of the meeting is to review hydropunch and grab groundwater sampling data to assist in identifying groundwater data gaps at Parcel C.

PARCEL C GROUNDWATER EVALUATION

Julie Crosby, Remedial Project Manager (RPM) for the Navy, reviewed the information provided for BRAC Cleanup Team (BCT) review during the monthly BCT meeting on March 21, 2000. This information included the following:

- **Table 1—Hydropunch Groundwater Sample Results that Exceed Screening Criteria, Parcel C, Hunters Point Shipyard, San Francisco, California:** Five-page table summarizing results that exceed either a State or Federal maximum contaminant level (MCL) or a Hunters Point groundwater ambient level (HGAL). Note that upon subsequent review of the tables, the Navy found several typographical errors in Table 1; therefore, the Navy is issuing a revised Table 1 to reflect the following corrections (Attachment B to these minutes):
  - Table 1, page 4: barium result at boring IR49B025 is 1,340 micrograms per liter (μg/L)
  - Table 1, all pages: results are reported to a maximum of three significant figures

- **Table 2—Grab Groundwater Sample Results that Exceed Screening Criteria, Parcel C, Hunters Point Shipyard, San Francisco, California:** Four-page table summarizing results that exceed either a State or Federal MCL or an HGAL. Note that upon subsequent review of the tables, the Navy found several typographical errors in Table 2; therefore, the Navy is issuing a revised Table 2 to reflect the following corrections (Attachment C to these minutes):
  - Table 2, page 1: antimony result at boring IR28B089 is 17.8 μg/L
  - Table 2, page 3: IR-29 station with benzene result is boring IR29MW72F
  - Table 2, all pages: results are reported to a maximum of three significant figures

- **Parcel C Groundwater Remedial Units—Navy Recommendations:** 11"x17" figure depicting the revised remedial units and groundwater monitoring wells proposed for re-sampling by the Navy (as discussed during the March 16, 2000 meeting)

- **Parcel C Grab and Hydropunch Sample Locations:** Two, 11"x17" figures depicting (1) all groundwater monitoring wells (with station IDs) and all grab and hydropunch sample locations (without station IDs), and (2) all groundwater monitoring wells (without station IDs) and all grab and hydropunch sample locations (with station IDs)

- **Key to Hydropunch/Grab Sample Locations, Parcel C, Hunters Point Shipyard, San Francisco, California:** One-page table summarizing estimated distances from hydropunch and grab sample locations (as listed in Tables 1 and 2) to the nearest groundwater monitoring well

Ms. Crosby presented revised groundwater remedial units (based on drinking water pathway) and the grab and hydropunch sample locations for Parcel C using the Geographic Information System (GIS). Ms. Crosby explained that the wells proposed for re-sampling by the Navy have not been revised to reflect BCT comments from the March 16, 2000 meeting. Ms. Crosby indicated that the Navy's sampling plan for existing Parcel C wells would be presented in the data quality objectives (DQO) submittal (currently scheduled for April 17, 2000).

The group then discussed hydropunch and grab groundwater results in the vicinity of revised remedial units (RU)-C1, RU-C2, RU-C4, RU-C5, and RU-C7. Hydropunch and grab samples were only considered if they were greater than 100 feet from a well. If a well was located within 100 feet, the analyses from that well was used. Sheryl Lauth of the U.S. Environmental Protection Agency (EPA), Chein Kao and Eileen Hughes of the Department of Toxic Substances Control (DTSC), and Chris Maxwell of the Regional Water Quality Control Board (RWQCB) each shared their specific comments. The specific agency comments are documented in hand-written notes; however, these specific comments were omitted from these meeting minutes for brevity. The key points of the discussion are summarized as follows:

- ***Several areas of potential concern around revised RU-C1 were identified based on hydropunch and grab groundwater results as follows:***
  - ***Antimony detection at boring IR28B089 (located northeast of RU-C1) appears anomalous—note: upon verification, Navy determined that the reported antimony concentration in Table 2 was a typographical error, and the correct antimony concentration was 17.8 µg/L; a revised Table 2 is included as an attachment to these minutes***
  - ***Volatile organic compound (VOC) detections at boring IR28B101 (located northeast of RU-C1) may warrant further evaluation based on drinking water pathway***
  - ***Volatile organic compound (VOC) detections at boring IR28B108 (located northwest of RU-C1) may warrant further evaluation based on drinking water pathway***
  - ***Benzo(a)pyrene detection at boring IR28B141, and benzene and 1,4-dichlorobenzene detections at boring IR28B164 may warrant further evaluation/investigation (for example, evaluate potential petroleum hydrocarbon sources and/or install additional borings/wells)***
- ***An area of potential concern near RU-C2 was identified based on hydropunch and grab groundwater results as follows: VOC detections at borings IR58B010 and IR58B011 (located north of RU-C2) may warrant further evaluation based on drinking water pathway***
- ***Benzene detections at boring IR30B028 and nearby bedrock-zone well IR29MW72F (both located west of RU-C7) may warrant further evaluation based on drinking water pathway***

Mr. Mach reviewed and summarized the general conclusions of the group discussion. Mr. Mach also clarified that, although the revised groundwater remedial units are being extended during the groundwater reevaluation, the overall intent of the reevaluation process is to identify areas for data

refinement. Mr. Mach stated that, based on the results of additional data evaluation, the remedial units may be revised to reflect any additional data. The BCT concurred with Mr. Mach's clarification.

The group then discussed other Parcel C groundwater data gaps. The key points of this discussion are summarized as follows:

- ***The extent of revised RU-C5 needs to be reevaluated considering the following points:***
  - ***Additional characterization is necessary in the vicinity of RU-C5***
  - ***Screening samples may be used in determining necessity and/or location of additional wells surrounding RU-C5***
  - ***Potential impacts to Parcel B groundwater will need to be addressed based on results of additional characterization***
  - ***RU-C5 boundary should be extended into IR-06, and possibly, IR-10 and IR-24) to capture VOC detections that exceed MCLs***
  - ***A qualitative review of the soil gas data from the Parcel C treatability study may be useful in a preliminary evaluation of RU-C5—however, due to laboratory quality assurance concerns expressed by EPA, the data may not be used in a formal evaluation***
- ***The RU-C2 boundary may require further evaluation and/or investigation to better determine the distribution of the chemicals of concern, and the hydrogeologic interaction between the different water-bearing units in the vicinity***

The meeting concluded with the discussion of several miscellaneous items as summarized below:

- ***RWQCB concerns regarding Parcel C groundwater need to be documented in meeting minutes—note: meeting minutes from March 7, 2000 meeting were subsequently revised to include complete summary of RWQCB concerns***
- ***RWQCB stated that the schedule for submitting a petroleum hydrocarbon corrective action plan (CAP) needs to be clarified—note: the CAP is not part of the Federal Facility Agreement schedule, and the Navy currently proposes a facility-wide CAP***
- ***The Navy will not hold any more groundwater evaluation meetings with the BCT until after the groundwater DQO submittal is reviewed by the BCT***
- ***The DQO submittal will focus on phase I sampling activities at Parcels C and D (for example, re-sampling existing wells and installing B-aquifer wells)—potential phase II activities may be referenced but will not be discussed in detail***
- ***The DQO submittal is scheduled to be submitted to the BCT on April 17, 2000—the Navy will notify the BCT of any potential delays for the DQO submittal***
- ***DTSC requested that the DQO submittal reference the proposed analytical methods, not merely the chemicals of concern***
- ***The Navy is currently assessing the condition of groundwater monitoring wells throughout HPS—the results of the assessment will assist the Navy in identifying wells that may require re-development prior to further sampling***
- ***Future characterization activities around RU-C5 will be adequately coordinated with the continued Parcel B Remedial Action***
- ***The BCT will need to discuss the appropriate means of documenting the results of the groundwater reevaluation at Parcels C and D***
- ***Groundwater evaluation meetings for Parcel E will be conducted at an appropriate time, following the groundwater reevaluation at Parcels C and D***

SCHEDULED MEETINGS

March 30, 11:00 to 4:00 Parcel B Remedial Action meeting

April 6, 10:00 to 3:00 Parcel C risk management review response to comments meeting

ACTION ITEMS

Action items from this meeting are presented in the following table.

Action	Responsible Party	Date Due/*Date Accomplished*
Parcel B, C, D, and E. The Navy will provide the BCT with a summary of DQOs for the Navy's proposed groundwater data gaps investigation.	Julie Crosby (Navy)	April 17, 2000
Parcel B, C, D, and E. The Navy will provide the BCT with a proposed schedule for the proposed groundwater data gaps investigation.	Julie Crosby (Navy)	April 18, 2000

ATTACHMENT A:

Hunters Point Shipyard
Meeting Attendance Sheet

Topic: **Parcels C Groundwater Evaluation**

Date: **March 23, 2000**

Time: **1:00 p.m. – 3 p.m.**

Location: **TtEMI Office**

Organization	Name	Phone Number	E-Mail Address
Navy	Richard Mach	619.532.0913	MachRG@efdsw.navfac.navy.mil
	Dave DeMars	619.532.0912	DeMarsDB@efdsw.navfac.navy.mil
	Julie Crosby	619.532.0932	CrosbyJA@efdsw.navfac.navy.mil
	Martin Offenhauer	619.532.0931	OffenhauerMB@efdsw.navfac.navy.mil
U.S. EPA	Sheryl Lauth	415.744.2387	Lauth.sheryl@epamail.epa.gov
DTSC	Chein Kao	510.540.8322	ckao@dtsc.ca.gov
	Eileen Hughes	510.540.3748	ehughes@dtsc.ca.gov
RWQCB	Chris Maxwell	510.622.2377	cm@rb2.swrcb.ca.gov
City of SF	Amy Brownell	415.252.3967	amy_brownell@dph.sf.ca.us
	Don Bradshaw	510.652.4500	don.bradshaw@lfr.com
	Ian Austin	415.243.3786	Ian_Austin@URSCorp.com
Tetra Tech EM Inc. *CLEAN contractor*	Doug Bielskis	415.222.8242	bielskd@ttemi.com
	Mike Wanta	415.222.8241	wantam@ttemi.com
	Kim Huynh	415.222.8284	huynhk@ttemi.com
IT Corporation *RAC contractor*	Mike Garant	925.288.2115	MGarant@theitgroup.com

TABLE 1

HYDROPUNCH GROUNDWATER SAMPLE RESULTS THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Site	Station	Analyte	Maximum Results (µg/L)	EPA Primary MCL (µg/L)[a]	California Primary MCL (µg/L)[b]	HGAL (µg/L)[c]	EPA Region 9 Tap Water PRG (µg/L)[d]
IR-28	IR28B084	1,1-Dichloroethane	9	--	5	--	810
	IR28B084	cis-1,2-Dichloroethene	75	70	6	--	61
	IR28B084	Vinyl chloride	320	2	0.5	--	0.02
	IR28B086	cis-1,2-Dichloroethene	5,500	70	6	--	61
	IR28B086	Trichloroethene	120	5	5	--	1.6
	IR28B086	Vinyl chloride	760	2	0.5	--	0.02
	IR28B090	Antimony	6.4[e]	6	6	43.26	15
	IR28B090	Vinyl chloride	190	2	0.5	--	0.02
	IR28B092	cis-1,2-Dichloroethene	2,300	70	6	--	61
	IR28B092	Tetrachloroethene	70	5	5	--	1.1
	IR28B092	Vinyl chloride	640	2	0.5	--	0.02
	IR28B094	Antimony	8.5[e]	6	6	43.26	15
	IR28B094	Tetrachloroethene	12	5	5	--	1.1
	IR28B094	Trichloroethene	21	5	5	--	1.6
	IR28B094	Vinyl chloride	140	2	0.5	--	0.02
	IR28B101	cis-1,2-Dichloroethene	8	70	6	--	61
	IR28B101	Vinyl chloride	2	2	0.5	--	0.02
	IR28B105	cis-1,2-Dichloroethene	36	70	6	--	61
	IR28B105	Tetrachloroethene	27	5	5	--	1.1
	IR28B105	Trichloroethene	16	5	5	--	1.6
	IR28B105	Vinyl chloride	8	2	0.5	--	0.02

ATTACHMENT B (Continued)

TABLE 1 (Continued)
HYDROPUNCH GROUNDWATER SAMPLE RESULTS THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Site	Station	Analyte	Maximum Results (µg/L)	EPA Primary MCL (µg/L)[a]	California Primary MCL (µg/L)[b]	HGAL (µg/L)[c]	EPA Region 9 Tap Water PRG (µg/L)[d]
IR-28 (cont.)	IR28B106	cis-1,2-Dichloroethene	32	70	6	--	61
	IR28B106	Tetrachloroethene	39	5	5	--	1.1
	IR28B106	Trichloroethene	20	5	5	--	1.6
	IR28B107	cis-1,2-Dichloroethene	1,000	70	6	--	61
	IR28B107	trans-1,2-Dichloroethene	210	100	10	--	120
	IR28B107	Vinyl chloride	17	2	0.5	--	0.02
	IR28B108	cis-1,2-Dichloroethene	15	70	6	--	61
	IR28B108	Vinyl chloride	120	2	0.5	--	0.02
	IR28B112	cis-1,2-Dichloroethene	1,300	70	6	--	61
	IR28B112	Vinyl chloride	160	2	0.5	--	0.02
	IR28B114	cis-1,2-Dichloroethene	560	70	6	--	61
	IR28B114	Trichloroethene	7	5	5	--	1.6
	IR28B114	Vinyl chloride	170	2	0.5	--	0.02
	IR28B115	Benzene	5	5	1	--	0.41
	IR28B115	cis-1,2-Dichloroethene	25	70	6	--	61
	IR28B115	Vinyl chloride	4	2	0.5	--	0.02
	IR28B120	cis-1,2-Dichloroethene	8	70	6	--	61
	IR28B120	Vinyl chloride	4	2	0.5	--	0.02
	IR28B121	cis-1,2-Dichloroethene	86	70	6	--	61
	IR28B121	Trichloroethene	240	5	5	--	1.6
	IR28B128A	Benzene	12	5	1	--	0.41

TABLE 1 (Continued)
HYDROPUNCH GROUNDWATER SAMPLE RESULTS THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Site	Station	Analyte	Maximum Results (µg/L)	EPA Primary MCL (µg/L)[a]	California Primary MCL (µg/L)[b]	HGAL (µg/L)[c]	EPA Region 9 Tap Water PRG (µg/L)[d]
IR-28 (cont.)	IR28B128A	cis-1,2-Dichloroethene	310	70	6	--	61
	IR28B128A	trans-1,2-Dichloroethene	15	100	10	--	120
	IR28B128A	Trichloroethene	99	5	5	--	1.6
	IR28B128A	Vinyl chloride	70	2	0.5	--	0.02
	IR28B133	cis-1,2-Dichloroethene	17	70	6	--	61
	IR28B133	Tetrachloroethene	8	5	5	--	1.1
	IR28B133	Trichloroethene	7	5	5	--	1.6
	IR28B133	Vinyl chloride	5	2	0.5	--	0.02
	IR28B141	Antimony	12.9[e]	6	6	43.26	15
	IR28B141	Benzo(a)pyrene	1	0.2	0.2	--	0.0092 (0.0015[f])
	IR28B164	1,4-Dichlorobenzene	30	75	5	--	0.50
	IR28B164	Benzene	2	5	1	--	0.41
	IR28B179	Carbon tetrachloride	6	5	0.5	--	0.17
	IR28B195	Antimony	10[e]	6	6	43.26	15
	IR28B199	cis-1,2-Dichloroethene	10	70	6	--	61
	IR28B199	Vinyl chloride	18	2	0.5	--	0.02
	IR28B207	Vinyl chloride	22	2	0.5	--	0.02
	IR28B209	cis-1,2-Dichloroethene	8	70	6	--	61
	IR28B209	Trichloroethene	36	5	5	--	1.6
	IR28B209	Vinyl chloride	0.8	2	0.5	--	0.02
	IR28B258	cis-1,2-Dichloroethene	110	70	6	--	61

ATTACHMENT B (Continued)

TABLE 1 (Continued)
HYDROPUNCH GROUNDWATER SAMPLE RESULTS THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Site	Station	Analyte	Maximum Results (µg/L)	EPA Primary MCL (µg/L)[a]	California Primary MCL (µg/L)[b]	HGAL (µg/L)[c]	EPA Region 9 Tap Water PRG (µg/L)[d]
IR-28 (cont.)	IR28B258	Vinyl chloride	140	2	0.5	--	0.02
	IR28B264	Benzene	8	5	1	--	0.41
	IR28B264	cis-1,2-Dichloroethene	39	70	6	--	61
	IR28B264	Vinyl chloride	120	2	0.5	--	0.02
	IR28B265	cis-1,2-Dichloroethene	92	70	6	--	61
	IR28B265	Vinyl chloride	38	2	0.5	--	0.02
	IR28B266	Trichloroethene	17	5	5	--	1.6
	IR28B267	Benzene	6	5	1	--	0.41
	IR28B267	cis-1,2-Dichloroethene	7	70	6	--	61
	IR28B267	Vinyl chloride	22	2	0.5	--	0.02
	IR28B279	1,2-Dichlorobenzene	1,200	600	600	--	370
	IR28B279	1,4-Dichlorobenzene	3,800	75	5	--	0.50
	IR28B279	Benzene	190	5	1	--	0.41
	IR28B282	Tetrachloroethene	36	5	5	--	1.1
	IR28B282	Trichloroethene	6	5	5	--	1.6
	IR28MW127A	cis-1,2-Dichloroethene	210	70	6	--	61
	IR28MW127A	trans-1,2-Dichloroethene	40	100	10	--	120
	IR28MW275F	cis-1,2-Dichloroethene	9	70	6	--	61
	IR28MW275F	Trichloroethene	130	5	5	--	1.6
	IR49B025	Antimony	7.1[e]	6	6	43.26	15
	IR49B025	Barium	1,340	2,000	1,000	504.2	2,600
	IR49B025	Thallium	3.5[e]	2	2	12.97	--
IR-29	IR49B015	Antimony	9.7[e]	6	6	43.26	15

ATTACHMENT B (Continued)

TABLE 1 (Continued)
HYDROPUNCH GROUNDWATER SAMPLE RESULTS THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Site	Station	Analyte	Maximum Results (µg/L)	EPA Primary MCL (µg/L)[a]	California Primary MCL (µg/L)[b]	HGAL (µg/L)[c]	EPA Region 9 Tap Water PRG (µg/L)[d]
	IR49B016A	Antimony	9.2[e]	6	6	43.26	15
	IR49B016A	Thallium	3.1[e]	2	2	12.97	--
	IR50B017	Antimony	17.7[e]	6	6	43.26	15
	IR50B017	Cadmium	7.4	5	5	5.04	18
IR-58	IR58B010	1,4-Dichlorobenzene	9	75	5	--	0.50
	IR58B010	Vinyl chloride	0.7	2	0.5	--	0.02
	IR58B028	1,4-Dichlorobenzene	77	75	5	--	0.50
	IR58B028	cis-1,2-Dichloroethene	370	70	6	--	61
	IR58B028	Vinyl chloride	370	2	0.5	--	0.02
	IR58MW31A	Tetrachloroethene	10	5	5	--	1.1

Notes: HydroPunch groundwater samples are not considered representative of Parcel C groundwater; data are presented for informational purposes only.

µg/L Microgram per liter
EPA U.S. Environmental Protection Agency
MCL Maximum contaminant level
HGAL Hunters Point groundwater ambient level
PRG Preliminary remediation goal
-- Not available
[a] EPA Office of Ground Water and Drinking Water. 1999. "Current Drinking Water Standards." Accessed on November 17, 1999. On-Line Address: http://www.epa.gov/OGWDW/wot/appa.html.
[b] California Department of Health Services. 1999. "Drinking Water Standards, Action Levels, and Unregulated Chemicals Requiring Monitoring." Accessed on November 17, 1999. On-Line Address: http://www.dhs.cahwnet.gov/org/ps/ddwem/chemicals/mcl/mclindex.htm.
[c] PRC Environmental Management, Inc. 1996. "Estimation of Hunters Point Shipyard Groundwater Ambient Levels Technical Memorandum." September 16.
[d] EPA. 1999b. "Region 9 Preliminary Remediation Goals 1999." October 1. PRGs are presented for informational purposes.
[e] The concentration exceeded the most stringent MCL but was less than the HGAL.
[f] California-modified PRG.

ATTACHMENT C:

TABLE 2

RESULTS FOR GRAB GROUNDWATER SAMPLES THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Site	Station	Analyte	Maximum Results (µg/L)	EPA Primary MCL (µg/L)[a]	California Primary MCL (µg/L)[b]	HGAL (µg/L)[c]	EPA Region 9 Tap Water PRG (µg/L)[d]
IR-25	IR25B012	Tetrachloroethene	37	5	5	--	1.1
	IR25B012	Thallium	2.51[e]	2	2	12.97	--
	IR25B012	Trichloroethene	14	5	5	--	1.6
	IR25B012	Trichloroethene	14	5	5	--	1.6
	IR25B012	Vinyl chloride	310	2	0.5	--	0.02
	IR25B013	Tetrachloroethene	59,000	5	5	--	1.1
	IR25B013	Thallium	2.73[e]	2	2	12.97	--
	IR25B013	Trichloroethene	12,000	5	5	--	1.6
IR-28	IR28B085	Antimony	12.7[e]	6	6	43.26	15
	IR28B085	Trichloroethene	220	5	5	--	1.6
	IR28B085	Vinyl chloride	82	2	0.5	--	0.02
	IR28B088	Antimony	16.8[e]	6	6	43.26	15
	IR28B089	Antimony	17.8[e]	6	6	43.26	15
	IR28B091	Antimony	11.8[e]	6	6	43.26	15
	IR28B091	Trichloroethene	23	5	5	--	1.6
	IR28B091	Vinyl chloride	250	2	0.5	--	0.02
	IR28B093	Antimony	13.6[e]	6	6	43.26	15
	IR28B093	Trichloroethene	18	5	5	--	1.6
	IR28B093	Vinyl chloride	170	2	0.5	--	0.02
	IR28B095	Antimony	8.3[e]	6	6	43.26	15
	IR28B095	Tetrachloroethene	11	5	5	--	1.1
	IR28B095	Trichloroethene	10	5	5	--	1.6
IR-28 (cont.)	IR28B096	Barium	1,050	2,000	1,000	504.2	2,600

ATTACHMENT C (Continued)

TABLE 2 (Continued)
RESULTS FOR GRAB GROUNDWATER SAMPLES THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Site	Station	Analyte	Maximum Results (µg/L)	EPA Primary MCL (µg/L)[a]	California Primary MCL (µg/L)[b]	HGAL (µg/L)[c]	EPA Region 9 Tap Water PRG (µg/L)[d]
	IR28B098	Benzene	12	5	1	--	0.41
	IR28B098	Vinyl chloride	8	2	0.5	--	0.02
	IR28B113	Benzene	36	5	1	--	0.41
	IR28B113	cis-1,2-Dichloroethene	910	70	6	--	61
	IR28B113	Vinyl chloride	300	2	0.5	--	0.02
	IR28B174	Carbon tetrachloride	29	5	0.5	--	0.17
	IR28B176	Trichloroethene	13	5	5	--	1.6
	IR28B180	Carbon tetrachloride	30	5	0.5	--	0.17
	IR28B180	Trichloroethene	16	5	5	--	1.6
	IR28B186	1,2-Dichloroethane	0.9	5	0.5	--	0.12
	IR28B186	cis-1,2-Dichloroethene	14	70	6	--	61
	IR28B186	Vinyl chloride	11	2	0.5	--	0.02
	IR28B196	Antimony	6.5[e]	6	6	43.26	15
	IR28B196	Nickel	150	--	100	96.48	730
	IR28B196	Thallium	5.4[e]	2	2	12.97	--
	IR28B204	cis-1,2-Dichloroethene	7,700	70	6	--	61
	IR28B204	Tetrachloroethene	1,800	5	5	--	1.1
	IR28B204	Trichloroethene	6,700	5	5	--	1.6
	IR28B204	Vinyl chloride	600	2	0.5	--	0.02
	IR28B205	Trichloroethene	44,000	5	5	--	1.6
	IR28B210	Trichloroethene	11	5	5	--	1.6
IR-28 (cont.)	IR28B226	Trichloroethene	9	5	5	--	1.6
	IR28B237	Trichloroethene	31	5	5	--	1.6

ATTACHMENT C (Continued)

TABLE 2 (Continued)
RESULTS FOR GRAB GROUNDWATER SAMPLES THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Site	Station	Analyte	Maximum Results (µg/L)	EPA Primary MCL (µg/L)[a]	California Primary MCL (µg/L)[b]	HGAL (µg/L)[c]	EPA Region 9 Tap Water PRG (µg/L)[d]
	IR28B254	cis-1,2-Dichloroethene	100	70	6	--	61
	IR28B254	trans-1,2-Dichloroethene	16	100	10	--	120
	IR28B254	trans-1,2-Dichloroethene	16	100	10	--	120
	IR28B254	Trichloroethene	8	5	5	--	1.6
	IR28B254	Vinyl chloride	230	2	0.5	--	0.02
	IR28B261	Carbon tetrachloride	6	5	0.5	--	0.17
	IR28B261	Trichloroethene	50	5	5	--	1.6
	IR28B278	Carbon tetrachloride	0.9	5	0.5	--	0.17
	IR28B280	1,4-Dichlorobenzene	410	75	5	--	0.50
	IR28B280	Benzene	17	5	1	--	0.41
IR-29	IR29B046	Heptachlor epoxide	0.01	0.2	0.01	--	0.0074
	IR29MW72F	Benzene	5	5	1	--	0.41
	IR49B014	Antimony	9.5[e]	6	6	43.26	15
IR-30	IR30B028	Benzene	2	5	1	--	0.41
IR-58	IR58B011	Trichloroethene	14	5	5	--	1.6

ATTACHMENT C (Continued)

TABLE 2 (Continued)
RESULTS FOR GRAB GROUNDWATER SAMPLES THAT EXCEED SCREENING CRITERIA
PARCEL C
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA

Notes: Grab groundwater samples are not considered representative of Parcel C groundwater; data are presented for informational purposes only.

µg/L	Microgram per liter
EPA	U.S. Environmental Protection Agency
MCL	Maximum contaminant level
HGAL	Hunters Point groundwater ambient level
PRG	Preliminary remediation goal
--	Not available
a	EPA Office of Ground Water and Drinking Water. 1999. "Current Drinking Water Standards." Accessed on November 17, 1999. On-Line Address: http://www.epa.gov/OGWDW/wot/appa.html.
b	California Department of Health Services. 1999. "Drinking Water Standards, Action Levels, and Unregulated Chemicals Requiring Monitoring." Accessed on November 17, 1999. On-Line Address: http://www.dhs.cahwnet.gov/org/ps/ddwem/chemicals/mcl/mclindex.html.
c	PRC Environmental Management, Inc. 1996. "Estimation of Hunters Point Shipyard Groundwater Ambient Levels Technical Memorandum. September16.
d	EPA. 1999b. "Region IX Preliminary Remediation Goals 1999." October 1. PRGs are presented for informational purposes only.
e	The concentration exceeded the most stringent MCL but was less than the HGAL.