

*Memorandum: Analytical Results Exceeding Remediation  
Goals or Trigger Levels, Second Quarter 2011 (2Q2011),  
Hunters Point Naval Shipyard, San Francisco, CA*

August 2011  
CEKA-2627-0003-0011

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**To:** Base Realignment and Closure Cleanup Team

**From:** Hamide Kayaci  
Project Manager  
Hunters Point Naval Shipyard

**Date:** August 5, 2011

**Subject:** Groundwater Analytical Results Exceeding Remediation Goals  
or Trigger Levels  
Second Quarter 2011 (2Q2011)  
Hunters Point Naval Shipyard, San Francisco, California

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## Introduction

This memorandum presents a summary of validated analytical results that exceeded Remediation Goals or Trigger Levels in groundwater samples collected during the Second Quarter 2011 (April to May 2011(2Q2011)) at Hunters Point Naval Shipyard (HPNS) in San Francisco, California. This sampling event was conducted in accordance with the *Draft Amended Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Basewide Groundwater Monitoring Program, Hunters Point Shipyard, San Francisco, California* (CE2-Kleinfelder Joint Venture, December 2010).

## Remediation Goals

Remediation Goals are analyte-specific and location-specific numerical criteria specified in Comprehensive Environmental Response and Compensation Liability Act of 1980 (CERCLA) documents prepared for HPNS including: Feasibility Study (FS) reports, Records of Decision (RODs), and/or Remedial Action Monitoring Plans (RAMPs). The remediation goals are based on exposure scenarios (i.e., residential, industrial, and/or construction worker) presented in those documents.

## Trigger Levels

Trigger Levels are analyte-specific and location specific numerical criteria for groundwater derived for the protection of the environment (e.g. surface water quality), and are derived from nomographs based on distance of the well from the point of surface water discharge. HPNS CERCLA documents also refer to the following other numerical criteria which are grouped herein into the Trigger Level category of action limits: "Protection of the Environment," "Migration of Surface Water to the Bay," "Screening Levels," and "Aquatic Evaluation Criteria."

### Current Remediation Goals and Trigger Levels

Current (as of the date of this Memorandum) Remediation Goals and Trigger Levels are as specified in the following HPNS CERCLA documents:

- *Final Remedial Action Monitoring Plan – Parcel B - Excluding Installation Restoration Sites 7 and 18, Hunters Point Shipyard* (December 10, 2010)

- *Final Remedial Action Monitoring Plan – Installation Restoration Sites 7 and 18 - Parcel B, Hunters Point Shipyard (January 8, 2010)*
- *Final Record of Decision for Parcel C, Hunters Point Shipyard (September 30, 2010)*
- *Final Remedial Action Monitoring Plan, Parcel D-1, Hunters Point Shipyard (February 11, 2011)*
- *Draft Final Feasibility Study Report for Parcel E, Hunters Point Shipyard (July 2011)*
- *Draft Final Remedial Investigation/Feasibility Study Report for Parcel E-2, Hunters Point Shipyard (February 2009)*
- *Final Remedial Action Monitoring Plan - Parcel G, Hunters Point Shipyard (October 4, 2010)*
- *Final Remedial Action Monitoring Plan, Parcels UC-1 and UC-2, Hunters Point Shipyard (December 22, 2010)*

Table 1 presents the analytical results that exceeded Remediation Goals or Trigger Levels in the referenced sampling event.

Table 1. Exceedances of Remediation Goals and Trigger Levels (2Q2011).

Well ID	Parcel	Target Analyte	Remediation Goal <sup>1</sup> (µg/L)	Trigger Level <sup>1,2</sup> (µg/L)	Result Equaling or Exceeding RG or TL (µg/L)
IR06MW22A	C	1,2-Dichloroethylene (total)	6.0		17
		Tetrachloroethylene	0.54		0.84
		Trichloroethylene	2.9		4.3
		Vinyl chloride	0.5		32
IR06MW32A	C	Vinyl chloride	0.5		0.66
IR06MW35A	C	Vinyl chloride	0.5		0.66
IR06MW40A	C	Vinyl chloride	0.5		19
IR06MW59A1	C	1,2-Dichloroethylene (total)	6.0		66
		Benzene	0.5		1.5
		Tetrachloroethylene	0.54		19
		Trichloroethylene	2.9		65
		Vinyl chloride	0.5		54
IR25MW16A	C	1,2-Dichloroethylene (total)	6.0		9.3
		Vinyl chloride	0.5		4.2
IR28MW125A	C	Chromium (hexavalent)		50	176
IR28MW200A	C	Trichloroethylene	2.9		13
IR28MW211F	C	1,2-Dichloroethane	2.3		14
		1,4-Dichlorobenzene	2.1		3.5
		Benzene	0.5		1.0
		Vinyl chloride	0.5		65
IR28MW298A	C	Trichloroethylene	2.9		4.1
IR28MW355F	C	Chloroform	0.7		2.4
		Trichloroethylene	2.9		46

**Table 1. Exceedances of Remediation Goals and Trigger Levels (2Q2011).**

Well ID	Parcel	Target Analyte	Remediation Goal <sup>1</sup> (µg/L)	Trigger Level <sup>1,2</sup> (µg/L)	Result Equaling or Exceeding RG or TL (µg/L)
IR28MW407	C	1,4-Dichlorobenzene	2.1		20
		Trichloroethylene	2.9		3.8
		Vinyl chloride	0.5		200
PA28MW52A	C	Tetrachloroethylene	0.9		4.2
IR02MW373A	E	Copper		28	923
		Lead		14.4	25.6
		Nickel		96.5	590
		Zinc		81	5,720
IR02MWB-2	E	Nickel		96.5	817
IR03MW218A1	E	Total PCBs <sup>3</sup>		0.03	0.66
		Total TPH		3,216	9,813
IR03MW218A2	E	Naphthalene	22		22
		Total TPH		3,216	9,194 J
IR03MWO-1	E	Arsenic	39	36	120
IR01MW38A	E-2	Ammonia (un-ionized)		25	17,000
		Cyanide		1.0	11.2 J
IR01MW48A	E-2	Ammonia (un-ionized)		25	13,400
		Cyanide		1.0	8.8 J
IR01MW60A	E-2	Ammonia (un-ionized)		25	7,600
		Cyanide		1.0	5.7 J
IR01MW64A	E-2	Ammonia (un-ionized)		25	1,900

**Notes**

<sup>1</sup> Remediation Goals and Trigger Levels are current as of the date of this Memorandum.

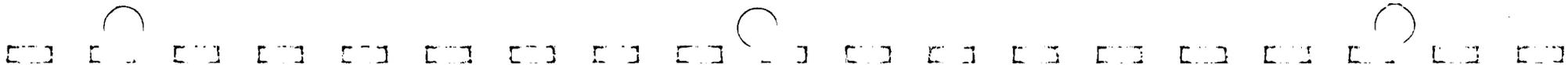


- <sup>2</sup> Includes the following numerical criteria identified in HPNS CERCLA documents: "Protection of the Environment," "Migration to Surface Water of the Bay," "Screening Levels," and "Aquatic Evaluation Criteria."
- <sup>3</sup> Includes Aroclor-1254 and Aroclor-1260 congeners  
"Migration to Surface Water of the Bay," "Screening Levels," and "Aquatic Evaluation Criteria."

#### **Abbreviations and Acronyms**

J: Detected below the practical quantitation limit but above the method detection limit; estimated value  
PCBs: Polychlorinated biphenyls (comprising one or more Aroclor congeners)  
RG: Remediation Goal  
TL: Trigger Level  
TPH: Total Petroleum Hydrocarbons (comprising gasoline-, diesel-, and motor oil-ranges)  
µg/L: micrograms per liter (equivalent to parts per billion)

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# TRANSMITTAL FORM



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Date: 9 August, 2011

To: Diane Silva, Command Records Manager  
Naval Facilities Engineering Command, Southwest  
2965 Mole Rd., Bldg. 3519  
San Diego, CA 92136

Re: Contract No. N62473-09-D-2627 CTO #0003

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3	August 2011	Compact disc with electronic version of above referenced document, and document(s) in native file format.

### IF MATERIAL NOT AS LISTED PLEASE NOTIFY US AT ONCE

**Remarks:** Dear Ms. Silva,

Enclosed documents are for the Base Information and Administrative Record copies. Please contact Nicki Cook of CE2-Kleinfelder Joint Venture at (925) 400-4577 or via e-mail at [cook@ce2corp.com](mailto:cook@ce2corp.com) if you have any questions.

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Nicola Cook  
CE2 Corporation

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