

*Memorandum: Analytical Results Exceeding Remediation
Goals or Trigger Levels, Fourth Quarter (4Q2010),
Hunters Point Shipyard, San Francisco, CA*

To: Base Realignment and Closure Cleanup Team

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

Date: March 4, 2011

**Subject: Groundwater Analytical Results Exceeding Remediation Goals
or Trigger Levels
Fourth Quarter 2010 (4Q2010)
Hunters Point Shipyard, San Francisco, California**

Introduction

This memorandum presents a summary of validated analytical results that exceeded Remediation Goals or Trigger Levels in groundwater samples collected during the Fourth Quarter 2010 (October to December 2010; 4Q2010) at Hunters Point Shipyard in San Francisco, California. This sampling event was conducted in accordance with the Basewide Groundwater Monitoring Program (BGMP) Final Sampling and Analysis Plan (Final SAP) (CE2-Kleinfelder Joint Venture, 2009).

Remediation Goals

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

Groundwater Trigger Levels

Groundwater Trigger Levels are similar to Remediation Goals except that they are criteria 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. HPS 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 (as of the date of this Memorandum) Remediation Goals and Trigger Levels are as specified in the following HPS 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)*
- *Draft Final Remedial Action Monitoring Plan, Parcel D-1, Hunters Point Shipyard (October 15, 2010)*
- *Draft Feasibility Study Report for Parcel E, Hunters Point Shipyard (July 2009)*
- *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.

REFERENCES

CE2-Kleinfelder Joint Venture, 2009. Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Basewide Groundwater Monitoring Program, Hunters Point Shipyard, San Francisco, California. March 5.

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Table 1. Exceedances of Remediation Goals or Trigger Levels (4Q2010).

Well ID	Parcel	4Q2010 Sampling Goal	Target Analyte	Remediation Goal ¹ (ug/L)	Trigger Level ^{1,2} (ug/L)	Result Exceeding RG or TL (ug/L)
IR06MW22A	C	MN	Benzene	0.5		1.9
			Tetrachloroethylene	0.54		1.2
			Trichloroethylene	2.9		7.5
			Vinyl chloride	0.5		120
IR06MW40A	C	MN	Vinyl chloride	0.5		75
IR06MW59A1	C	MN	Benzene	0.5		0.87
			Tetrachloroethylene	0.54		13
			Trichloroethylene	2.9		32
			Vinyl chloride	0.5		12
IR25MW16A	C	MN	Vinyl chloride	0.5		4.7
IR28MW125A	C	MN	Chromium (hexavalent)		50	236
IR28MW211F	C	MN	1,2-Dichloroethane	2.3		4.9
			Tetrachloroethylene	0.54		0.68
			Trichloroethylene	2.9		25
			Vinyl chloride	0.5		62
IR28MW355F	C	MN	Chloroform	0.7		2.4
			Trichloroethylene	2.9		27
IR28MW407	C	MN	1,4-Dichlorobenzene	2.1		22
			Vinyl chloride	0.5		46

Table 1. Exceedances of Remediation Goals or Trigger Levels (4Q2010).

Well ID	Parcel	4Q2010 Sampling Goal	Target Analyte	Remediation Goal ¹ (ug/L)	Trigger Level ^{1,2} (ug/L)	Result Exceeding RG or TL (ug/L)
IR58MW31A	C	MN	1,4-Dichlorobenzene	3.6		560
			Benzene	0.63		52 J
			Chlorobenzene	390		5,200
			Vinyl chloride	0.5		2.8 J
IR02MW373A	E	MN	Copper		28	570
			Nickel		96.5	624
			Zinc		81	4,630
IR02MWB-2	E	MN	Nickel		96.5	231
IR03MW218A1	E	MN	Zinc		81	130
IR03MW218A2	E	MN	Naphthalene	22		34
			Zinc		81	144
IR03MW371A	E	MN	Zinc		81	150
IR03MWO-1	E	MN	Arsenic		36	167
IR04MW39A	E	MN	Trichloroethylene	2.9		4.1
IR12MW17A	E	MN	Benzene	0.5		1.7
IR12MW19A	E	MN	1,1-Dichloroethane	6.5		18
			Chloroform	0.7		18
			Tetrachloroethylene	0.5		0.82
			Trichloroethylene	2.9		5.5

Table 1. Exceedances of Remediation Goals or Trigger Levels (4Q2010).

Well ID	Parcel	4Q2010 Sampling Goal	Target Analyte	Remediation Goal ¹ (ug/L)	Trigger Level ^{1,2} (ug/L)	Result Exceeding RG or TL (ug/L)
IR36MW237A	E	MN	Vinyl chloride	0.5		26
IR36MW239A	E	MN	Trichloroethylene	4.8		5.7
IR01MW38A	E-2	MN	Cyanide		1.0	8.7 J
IR01MW60A	E-2	MN	Cyanide		1.0	6.9 J

Notes:

¹ Remediation Goals and Trigger Levels are current as of the date of this Memorandum.

² Includes the following numerical criteria identified in HPS CERCLA documents: "Protection of the Environment," "Migration to Surface Water of the Bay," "Screening Levels," and "Aquatic Evaluation Criteria."

Abbreviations:

J: Detected below the practical quantitation limit but above the method detection limit; estimated value

MN: Monitoring Network

RG: Remediation Goal

TL: Trigger Level

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Date: 14 April, 2011

To: Diane Silva, Command Records Manager
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2965 Mole Rd., Bldg. 3519
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Re: Contract No. N62473-09-D-2627 CTO #0003

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

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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 if you have any questions.

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