

*Memorandum: Analytical Results Exceeding Remediation  
Goals or Trigger Levels, Third Quarter (3Q2010),  
Hunters Point Shipyard, San Francisco, CA*

*December 23, 2010  
CEKA-2627-0003-0006*

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

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

**Date:** November 10, 2010

**Subject:** Groundwater Analytical Results Exceeding Remediation Goals  
or Trigger Levels  
Third Quarter 2010 (3Q2010)  
Hunters Point 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 Third Quarter 2010 (July to September 2010; 3Q2010) at Hunters Point Shipyard in San Francisco, California. This sampling event was conducted according to the Basewide Groundwater Monitoring Program (BGMP) Final Sampling and Analysis Plan (Final SAP) (CE2-Kleinfelder Joint Venture, 2009) and subsequent SAP Annual Update (CE2-Kleinfelder Joint Venture, 2010).

## 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)*

*Draft Final Record of Decision for Parcel C, Hunters Point Shipyard (August 13, 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)*

*Draft Final Remedial Action Monitoring Plan, Parcels UC-1 and UC-2, Hunters Point Shipyard (August 20, 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.

CE2-Kleinfelder Joint Venture, 2010. Annual Update of Final Sampling and Analysis Plan, Hunters Point Shipyard, San Francisco, California. March 9.

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**Table 1. Exceedances of Remediation Goals or Trigger Levels (3Q2010).**

Well ID	Parcel	3Q2010 Sampling Goal	Target Analyte	Remediation Goal <sup>1</sup> (ug/L)	Trigger Level <sup>1,2</sup> (ug/L)	Result Exceeding RG or TL (ug/L)
IR10MW13A1	B	MN	Trichloroethylene	2.9		3.3
IR10MW59A	B	MN	Vinyl chloride	0.5		3.2
IR10MW61A	B	MN	Vinyl chloride	0.5		16
IR20MW17A	B	MN	Vinyl chloride	0.5		5.4
IR26MW49A	B	MN	Mercury	0.68	0.6	3.1
IR26MW51A	B	MN	Mercury	0.68	0.6	1.6
IR06MW22A	C	MN	Benzene	0.5		1.1
IR06MW22A	C	MN	Tetrachloroethylene	0.54		1.2
IR06MW22A	C	MN	Trichloroethylene	2.9		7.4
IR06MW22A	C	MN	Vinyl chloride	0.5		95
IR06MW32A	C	MN	Vinyl chloride	0.5		0.69
IR06MW40A	C	MN	Vinyl chloride	0.5		21
IR06MW59A1	C	MN	Benzene	0.5		1.9
IR06MW59A1	C	MN	Tetrachloroethylene	0.54		23
IR06MW59A1	C	MN	Trichloroethylene	2.9		71
IR06MW59A1	C	MN	Vinyl chloride	0.5		39
IR25MW16A	C	MN	Benzene	0.5		0.78
IR25MW16A	C	MN	Vinyl chloride	0.5		47
IR28MW125A	C	MN	Chromium (hexavalent)		50	227

**Table 1. Exceedances of Remediation Goals or Trigger Levels (3Q2010).**

Well ID	Parcel	3Q2010 Sampling Goal	Target Analyte	Remediation Goal <sup>1</sup> (ug/L)	Trigger Level <sup>1,2</sup> (ug/L)	Result Exceeding RG or TL (ug/L)
IR28MW151A	C	MN	Benzene	0.63		0.63
IR28MW151A	C	MN	Vinyl chloride	0.5		24
IR28MW188F	C	MN	Carbon tetrachloride	0.5		48
IR28MW188F	C	MN	Chloroform	0.7		3.9
IR28MW188F	C	MN	Trichlorofluoromethane	180		1,300
IR28MW190F	C	MN	Carbon tetrachloride	0.5		30
IR28MW190F	C	MN	Chloroform	0.7		14
IR28MW190F	C	MN	Trichloroethylene	2.9		3.9
IR28MW211F	C	MN	1,2-Dichloroethane	2.3		7.3
IR28MW211F	C	MN	Benzene	0.5		0.65
IR28MW211F	C	MN	Trichloroethylene	2.9		8.3
IR28MW211F	C	MN	Vinyl chloride	0.5		61
IR28MW355F	C	MN	Chloroform	0.7		2.1
IR28MW355F	C	MN	Trichloroethylene	2.9		25
IR28MW407	C	MN	1,4-Dichlorobenzene	2.1		12
IR28MW407	C	MN	Vinyl chloride	0.5		2.2
IR58MW31A	C	MN	1,4-Dichlorobenzene	3.6		200
IR58MW31A	C	MN	Benzene	0.63		19
IR58MW31A	C	MN	Chlorobenzene	390		1,900

**Table 1. Exceedances of Remediation Goals or Trigger Levels (3Q2010).**

Well ID	Parcel	3Q2010 Sampling Goal	Target Analyte	Remediation Goal <sup>1</sup> (ug/L)	Trigger Level <sup>1,2</sup> (ug/L)	Result Exceeding RG or TL (ug/L)
IR58MW31A	C	MN	Vinyl chloride	0.5		1.6
IR02MW373A	E	MN	Copper		28	433
IR02MW373A	E	MN	Lead		14.4	19.8
IR02MW373A	E	MN	Nickel		96.5	327
IR02MW373A	E	MN	Zinc		81	2,160
IR02MWB-2	E	MN	Nickel		96.5	258
IR03MW218A1	E	MN	Aroclor-1254		see note <sup>3</sup>	0.5 U
IR03MW218A1	E	MN	Aroclor-1260		see note <sup>3</sup>	0.75
IR03MW218A1	E	MN	Total Aroclors (PCBs)		0.03 <sup>(3)</sup>	0.75 <sup>(3)</sup>
IR03MW218A1	E	MN	TPH-diesel		see note <sup>4</sup>	9,800
IR03MW218A1	E	MN	TPH-gasoline		see note <sup>4</sup>	34
IR03MW218A1	E	MN	TPH-motor oil		see note <sup>4</sup>	11,000
IR03MW218A1	E	MN	Total TPH		3,216 <sup>(4)</sup>	20,834 <sup>(4)</sup>
IR03MW218A2	E	MN	Naphthalene	22		97 J
IR03MW218A2	E	MN	TPH-diesel		see note <sup>4</sup>	5,100
IR03MW218A2	E	MN	TPH-gasoline		see note <sup>4</sup>	190
IR03MW218A2	E	MN	TPH-motor oil		see note <sup>4</sup>	400 U
IR03MW218A2	E	MN	Total TPH		3,216 <sup>(4)</sup>	5,290
IR03MWO-1	E	MN	Aroclor-1254		see note <sup>3</sup>	0.5 U

**Table 1. Exceedances of Remediation Goals or Trigger Levels (3Q2010).**

Well ID	Parcel	3Q2010 Sampling Goal	Target Analyte	Remediation Goal <sup>1</sup> (ug/L)	Trigger Level <sup>1,2</sup> (ug/L)	Result Exceeding RG or TL (ug/L)
IR03MWO-1	E	MN	Aroclor-1260		see note <sup>3</sup>	0.56 J
IR03MWO-1	E	MN	Total Aroclors (PCBs)		0.03 <sup>(3)</sup>	0.56 J <sup>(3)</sup>
IR03MWO-1	E	MN	Arsenic		36	171
IR12MW17A	E	MN	Benzene	0.5		2.2
IR12MW19A	E	MN	1,1-Dichloroethane	6.5		19
IR12MW19A	E	MN	Tetrachloroethylene	0.5		1.1
IR12MW19A	E	MN	Trichloroethylene	2.9		4.3
IR01MW366B	E-2	MN	Arsenic	10		19.9
IR01MW38A	E-2	MN	Cyanide		1.0	14.7 J
IR01MW403B	E-2	MN	1,2-Dichloroethane	0.5		1.4
IR01MW48A	E-2	MN	Ammonia (un-ionized)		25	28.4
IR01MW48A	E-2	MN	Cyanide		1.0	8.4 J
IR01MW60A	E-2	MN	Cyanide		1.0	7.5 J
IR01MW62A	E-2	MN	Cyanide		1.0	11.5
IR01MW63A	E-2	MN	Cyanide		1.0	18 J
IR09MW51F	G	MN	Benzene	0.5		0.96
IR33MW64A	G	MN	Chloroform	1.0		2.0
IR71MW03A	G	MN	Tetrachloroethylene	0.54		28
IR71MW03A	G	MN	Trichloroethylene	2.9		8.3

**Table 1. Exceedances of Remediation Goals or Trigger Levels (3Q2010).**

Well ID	Parcel	3Q2010 Sampling Goal	Target Analyte	Remediation Goal <sup>1</sup> (ug/L)	Trigger Level <sup>1,2</sup> (ug/L)	Result Exceeding RG or TL (ug/L)
IR06MW54F	UC-2	MN	Carbon tetrachloride	0.5		5.7
IR06MW54F	UC-2	MN	Chloroform	1.0		2.1

**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 HPS CERCLA documents: "Protection of the Environment," "Migration to Surface Water of the Bay," "Screening Levels," and "Aquatic Evaluation Criteria."

<sup>3</sup> Trigger Level is the sum of all individual Aroclor (PCB) congeners that were analyzed for in the particular sample.

<sup>4</sup> Trigger Level is the sum of gasoline-, diesel-, and motor oil-ranges.

**Abbreviations:**

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

MN: Monitoring Network

PCBs: Polychlorinated biphenyls (Aroclor congeners)

RG: Remediation Goal

TL: Trigger Level

TPH: Total Petroleum Hydrocarbons (includes gasoline-, diesel-, and motor oil-ranges).

U: Not detected above method detection limit

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# TRANSMITTAL FORM

**CE<sup>2</sup> KLEINFELDER**  
*an 8(a) MP joint venture*  
CE2-Kleinfelder Joint Venture  
4457 Willow Road, Suite 210  
Pleasanton, CA 94588  
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Fax: (925) 463-7351

Date: 12 April, 2011

To: Diane Silva, Command Records Manager  
2965 Mole Road, Bldg. 3519  
San Diego, CA 92108

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

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1	December 2010	CD of: <i>Memorandum: Analytical Results Exceeding Remediation Goals or Trigger Levels, Third Quarter (3Q2010), Hunters Point Shipyard, San Francisco, California</i> (December 2010).

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

**Remarks:** Dear Ms. Silva,

As requested by Administrative Records, this corrected transmittal form now includes the CTO number pertaining to the referenced document, and is for your records. A replacement CD is included here with the contract number corrected on the CD label. Please note that the document was neither replaced nor edited, only the contract number on the compact disc label and addition of the CTO number on the transmittal form. A corrected transmittal form and a corrected CD were shipped on 2/28/11 within a ground shipment containing the semiannual report for the same location, but your office does not have a record of this, hence this additional submittal. 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.

Copy to:  
Hamide Kayaci, BRAC PMO West

Signed: *Nicola Cook*  
Nicola Cook  
CE2 Corporation

Date: 4/12/11

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CE2-Kleinfelder Joint Venture  
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Date: 17 January, 2011

To: Hamide Kayaci  
1455 Frazee Road, Suite 900  
San Diego, CA 92108

Re: **Contract No. N62473-07-D-2627**

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

**Remarks:** Dear Ms. Kayaci,

Please find the enclosed document for your information. Please contact Mr. Bruce Rucker of CE2-Kleinfelder Joint Venture at (925) 400-4586 or via e-mail at [rucker@ce2corp.com](mailto:rucker@ce2corp.com) if you have any questions.

Copy to:

Diane Silva, Command Records Manager NAVFAC SW

Signed: \_\_\_\_\_

*Bruce M. Rucker*

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Date: \_\_\_\_\_

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