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July 18, 2001

Ms. Laura Young
State of Hawaii Department of Health
Hazard Evaluation and Emergency Response Office
919 Ala Moana Boulevard, Room 206
Honolulu, Hawaii 96814

Subject: Documented Field Sampling and Laboratory Analysis Issues for the Site Characterization Study at the Kaka'ako Brownfield Unit 8 Site

Dear Ms. Young,

AMEC Earth and Environmental (AMEC) is currently supporting the State of Hawaii Department of Health (DOH) in performing a Site Characterization Study at the Kaka'ako Brownfield Unit 8 Site, Honolulu, Hawaii ("the Site") under a non-emergency response contract (ASO Log No. 98-418). Soil and groundwater samples were collected at the site from June 25 to June 28, 2001, as part of the field investigation (Task 3) portion of the study. Documented below are various field sampling and laboratory analysis issues AMEC encountered during field investigation activities.

- Issue 1 - As stated in the Sampling and Analysis Plan, Revision 01 (SAP) prepared by AMEC in August 2000, analysis of semi-volatile organic compounds (SVOCs) by EPA method 8270 SIM was requested for groundwater samples to be collected from three monitoring wells located near the harbor. EPA method 8270 SIM was requested to provide lower laboratory detection limits for use in a preliminary ecological risk evaluation. However, on June 21, 2001, during the week prior to field sampling activities, the EPA Region IX Quality Assurance (QA) Office informed AMEC that the CLP program would not be able to provide EPA method 8270 SIM for the groundwater samples. According to EPA, the request to include EPA method 8270 SIM would require extensive time and effort to prepare a project-specific modified scope of work (SOW) through the EPA analytical system. Therefore, due to field scheduling and time constraints, EPA method 8270 SIM was removed from the requested analytical program and a preliminary ecological risk evaluation will not be included in this Site Characterization Study.

- Issue 2 - The SAP, dated August 2000, had indicated that five existing monitoring wells (MW01, MW02, MW03, MW04, and MW05) were installed at the site during previous

investigations. However, during field sampling activities, AMEC was unable to locate monitoring well MW05. On June 28, 2001, Dayton Fraim of Edward K. Noda and Associates, Inc. visited the Site and confirmed that monitoring well MW05 was installed as a temporary soil boring during the 1999 Phase II Investigation conducted at the Site. As a result, groundwater samples were collected from a total of four existing and three newly installed monitoring wells at the Site.

- Issue 3 - During field sampling activities, AMEC encountered various sampling and laboratory quality control (QC) issues. The EPA Region IX QA Office informed AMEC that one sample cooler shipped via DHL on June 25, 2001, scheduled for two-day delivery to the EPA CLP organic laboratory, did not arrive at the laboratory until June 28, 2001. Upon arrival at the laboratory, the temperature of the cooler was 13°C, which exceeded the required preservation temperature of 4°C. At the request of the EPA Region IX QA Office, the laboratory was instructed to proceed with the analysis of the samples.

- Issue 4 - The CLP organic laboratory also indicated that several soil sample containers listed on the traffic report/chain of custody (TR/COC) were missing from a cooler shipped via DHL on June 25, 2001. In accordance with the SAP, each soil sample included one sample container (4-oz glass jar) collected for CLP SVOC analysis and one sample container (4-oz glass jar) collected for CLP polychlorinated biphenyl (PCB)/pesticide analysis. For samples Y07D2, Y07D5, and Y07D9, the laboratory received only the sample jars labeled for CLP SVOC analysis, and not the sample jars for CLP PCB/pesticide analysis. In the case of sample Y07E0, the laboratory received only the sample jar labeled for CLP PCB/pesticide analysis, and not the sample jar for CLP SVOC analysis. In addition, the laboratory indicated that no sample jars were received for sample Y07D8.

  AMEC's field sampling logs indicate that each of the above sample containers were collected and labeled in accordance with EPA Region IX and CLP guidelines. As was documented on the TR/COC, all of the above sample containers were packed into one sample cooler, and included in a shipment of two coolers to the organic CLP laboratory. However, since the shipment of the sample cooler on June 25, 2001, the missing sample containers have not been accounted for. For samples Y07D2, Y07D5, Y07D9, and Y07E0, AMEC requested that the laboratory perform both CLP SVOC and CLP PCB/pesticide analysis provided sufficient sample volume was available. At the request of the EPA Region IX QA office, sample Y07D8 was canceled from the requested analyses listed on the TR/COC.

With regard to potential adverse impacts on the project, AMEC anticipates the following:

- Resolution 1: The exclusion of a preliminary ecological risk evaluation should have minimal impacts on the Site Characterization Study based on the anticipated future land use for the Site.

- Resolution 2: Monitoring well MW05 was one of five monitoring wells located in vicinity of the underground storage tank (UST) excavation. The groundwater data collected from the remaining four monitoring wells in the UST excavation area should provide adequate data to characterize the Site.

- Resolution 3: With the exception of one field blank sample, the subject cooler did not contain any samples collected for volatile organic compound (VOC) analysis. This should minimize the potential for the data to be rejected during data validation.

- Resolution 4: As of July 17, 2001, EPA had not yet received an update from the CLP laboratory as to whether sufficient sample volume was available for samples Y07D2, Y07D5, Y07D9, and Y07E0. However, if the laboratory is unable to provide CLP PCB/pesticide analytical data for samples Y07D2, Y07D5, and Y07D9, CLP SVOC analytical data for sample Y07E0, and both PCB/pesticide and SVOC analytical data for sample Y07D8, the data set would still be of sufficient size and coverage to support the preliminary human health risk assessment.

Should you have any questions regarding the issues and resolutions documented in this letter, please do not hesitate to call Jan Kotoshirodo or me at 545-2462.

Sincerely,

Eric Wetzstein
Project Manager

AMEC Earth & Environmental, Inc.
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May 18, 2001

Mr. Thomas Mix
United States Environmental Protection Agency
Region IX Superfund - Brownfields (SFD 1-2)
75 Hawthorne Street
San Francisco, CA 94105-3901

Subject: Revised Request for Analytical Services for the Site Characterization Study at the Kaka'ako Brownfield Unit 8 Site

Dear Mr. Mix,

AMEC Earth and Environmental (AMEC) is currently under contract with the State of Hawaii Department of Health (DOH) for planning and performing a Site Characterization Study at the Kakaako Brownfield Unit 8 Site in Honolulu, Hawaii. The Sampling and Analysis Plan (SAP) Revision 01, dated August 2000, was approved by EPA Region IX on September 7, 2000.

Following approval of the SAP, the requested analytical services for the study have been amended based on budget constraints, and the availability of laboratory resources in the EPA analytical program. Specifically, toxic characteristic leachate procedure (TCLP) and dioxin analysis are no longer requested through the EPA analytical program. Analytical services associated with TCLP and dioxin samples will be provided by the client, independent of the EPA analytical program. In addition, the previously requested SW-846 analyses for PCBs and metals in groundwater samples have been changed to CLP methods in order to conform better with the EPA analytical program. The revised Revised Request for Analytical Services for Soil and Groundwater (Tables 4-3 and 4-4 from the SAP) are included as an attachment. As shown in Table 4-3, the total number of soil samples to be collected for TCLP analysis has been reduced from 22 to 11. The total number of samples to be collected for the other requested analyses remains unchanged.

AMEC is anticipating that field work will begin on June 25 2001, and has initiated lab scheduling with Mary Odonnell, the Regional Sample Control Center (RSCC)

coordinator. If you have any questions regarding this issue, please do not hesitate to contact me at (808) 545-2462 Ext. 128.

Sincerely,

Eric Wetzstein
Project Manager

cc: Gail Jones, EPA Region IX
Mary Odonnell, EPA Region IX
Laura Young, DOH Hazard Evaluation and Emergency Response

Table 4-3
REVISED REQUEST FOR ANALYTICAL SERVICES FOR SOIL

	Requested Analyses						
	VOCs[1]	SVOCs	PCBs	Metals	TPH (diesel)	Dioxin/ Furans[23]	TCLP SVOCs, Metals, PCBs/Pest[3]
Sample Location	*CLP*	*CLP*	*CLP*	*CLP*	*EPA 8015*	*EPA 8290*	*EPA 1311*
SS01		X	X	X			
SS02		X	X	X	X		X
SS03		X	X	X			
SS04		X	X	X	X		
SS05		X	X	X			
SS06		X	X	X	X		
SS07		X	X	X			
SS08		X	X	X	X		
SS09		X	X	X			
SS10		X	X	X			
SS11		X	X	X			
SS12		X	X	X	X		
SS13		X	X	X			
SS14		X	X	X	X		
SS15		X	X	X			
SS16		X	X	X	X		
SS17		X	X	X			
SS18		X	X	X	X		
SS19		X	X	X			
SS20		X	X	X	X		X
SS21		X	X	X			
SS22		X	X	X	X		
SS23		X	X	X			
SS24		X	X	X	X		
SS25		X	X	X			
SS26		X	X	X			
SS27		X	X	X	X		
SS28		X	X	X			
SS29		X	X	X	X		X
SS30		X	X	X			
SS31		X	X	X	X		
SS32		X	X	X			
SS33		X	X	X	X		
SS34		X	X	X			
SS35		X	X	X	X		
SS36		X	X	X	X		
SS37		X	X	X	X		
SS38		X	X	X	X		X
SS39		X	X	X			

Table 4-3 (Continued)
REVISED REQUEST FOR ANALYTICAL SERVICES FOR SOIL

	Requested Analyses						
Sample Location	VOCs[1] *CLP*	SVOCs *CLP*	PCBs *CLP*	Metals *CLP*	TPH (diesel) *EPA 8015*	Dioxins/ Furans[2,3] *EPA 8290*	TCLP SVOCs, Metals, PCBs/Pest[3] *EPA 1311*
SS40		X	X	X	X		
SS-Field Dup		X	X	X	X		X
SS-Field Dup		X	X	X	X		
SS-Field Dup		X	X	X			
SS-Field Dup		X	X	X			
SA01	X	X	X	X			
SB01	X	X	X	X			
SA02	X	X	X	X			X
SB02	X	X	X	X			X
SA03	X	X	X	X			
SB03	X	X	X	X			
SA04	X	X	X	X			
SB04	X	X	X	X			
SA05	X	X	X	X			
SB05	X	X	X	X			
SA06	X	X	X	X			
SB06	X	X	X	X			
SA07	X	X	X	X			
SB07	X	X	X	X			
SA08	X	X	X	X			
SB08	X	X	X	X			
SA09	X	X	X	X			
SB09	X	X	X	X			
SA10	X	X	X	X			
SB10	X	X	X	X			
SA11	X	X	X	X			X
SB11	X	X	X	X			X
SA12	X	X	X	X			
SB12	X	X	X	X			
SA13	X	X	X	X			
SB13	X	X	X	X			
SA14	X	X	X	X			
SB14	X	X	X	X			
SA15	X	X	X	X			
SB15	X	X	X	X			
SA16	X	X	X	X			
SB16	X	X	X	X			
SA17	X	X	X	X			
SB17	X	X	X	X	X		
SA18	X	X	X	X			X

Table 4-3 (Continued)
REVISED REQUEST FOR ANALYTICAL SERVICES FOR SOIL

	Requested Analyses						
Sample Location	VOCs[1] *CLP*	SVOCs *CLP*	PCBs *CLP*	Metals *CLP*	TPH (diesel) *EPA 8015*	Dioxins/ Furans[2,3] *EPA 8290*	TCLP SVOCs, Metals, PCBs/Pest[2] *EPA 1311*
SB18	X	X	X	X	X		X
SA19	X	X	X	X			
SB19	X	X	X	X	X		
SA20	X	X	X	X			
SB20	X	X	X	X	X		
A/B Field Dup	X	X	X	X	X	X	
A/B Field Dup	X	X	X	X			
A/B Field Dup	X	X	X	X			
A/B Field Dup	X	X	X	X			
Total	**44**	**88**	**88**	**88**	**27**	**5**	**11**

Notes:
ft bgs = feet below ground surface
CLP = Contract Laboratory Program
VOCs = volatile organic compounds
SVOCs = semi-volatile organic compounds
PCBs = polychlorinated biphenyls
TPH = total petroleum hydrocarbons
TCLP = toxic characteristic leachate procedure

1. It is required that VOC-soil analysis be performed at the Region IX Lab in Richmond, CA due to the 48-hour holding time requirement for non-preserved EnCore samplers.
2. Location of the 4 subsurface dioxin samples to be determined in the field.
3. Analytical Services for Dioxin/Furans and TCLP analyses will not be provided by the EPA analytical program.

Table 4-4
REVISED REQUEST FOR ANALYTICAL SERVICES FOR GROUNDWATER

	Requested Analyses						
Sample Location	VOCs *CLP*	SVOCs *CLP*	Metals *CLP*	SVOCs *EPA 8270 SIM*	PCBs *CLP*	TPH (diesel) *EPA 8015*	Dioxins/ Furans[1,2] *EPA 8290*
MW01	X		X	X	X	X	
MW02	X		X	X	X	X	
MW03	X		X	X	X	X	
MW04	X	X	X		X	X	
MW05	X	X	X		X	X	
MW06	X	X	X		X	X	
MW07	X	X	X		X	X	
MW08	X	X	X		X	X	
MW-Field Dup	X	X	X	X	X	X	X
Field Blank	X	X	X	X	X	X	X
Equip Rinsate	X	X	X	X	X	X	X
Equip Rinsate	X	X	X	X	X	X	X
Equip Rinsate	X	X	X	X	X	X	X
Lab QC	X	X	X	X	X	X	X
Total	**14**	**11**	**14**	**9**	**14**	**14**	**8**

Notes:
ft bgs = feet below ground surface
CLP = Contract Laboratory Program
VOCs = volatile organic compounds
PCBs = polychlorinate SIM = Selective Ion Monitoring
TPH = total petroleum hydrocarbons
SVOCs = semi-volatile organic compounds
1. Location of the 2 samples to be analyzed for dioxins/furans to be determined in field.
2. Dioxin/Furans analysis will not be provided by the EPA analytical program.

amec

RECEIVED
DEPARTMENT OF HEALTH
2001 MAY -9 P 2:45
HEER OFFICE

LETTER OF TRANSMITTAL

To: State of Hawaii DOH - HEER Office
919 Ala Moana Blvd., Room 206
Honolulu, HI 96814

Project No: 3-1962-0005

Date: 05/08/01

Attention: Laura Young

Subject: Kakaako Brownfield- Dioxin/TCLP Proposal

The following items are transmitted: ☑ Herewith ☐ Under Separate Cover Via: US Mail

Number of Copies:	Description:
1	Proposal to provide dioxin/TCLP sampling at Kakaako Brownfield Unit 8 Site

The above items are submitted: ☐ For your review ☐ For your information/files

Copies to:

Transmitted by: Jan Kotoshirodo

C:\AMEC docs\Transmittal Template.USA.doc

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2001-W-0355
May 8, 2001

Ms. Laura Young
State of Hawaii Department of Health
Hazard Evaluation and Emergency Response
919 Ala Moana Blvd, Room 206
Honolulu, Hawaii 96814

Subject: **ASO Log No. 98-418; Proposal to Provide Dioxin and TCLP Sampling at the Kakaako Brownfield Unit 8 Site, Oahu, HI**

Dear Ms. Young:

AMEC Earth and Environmental (AMEC) is pleased to provide this proposal under our contract with the DOH to conduct laboratory analyses for dioxin and TCLP on samples collected at the subject site. The proposal would provide a separate new Delivery Order under our contract to perform this work. The samples would be collected under our existing Delivery Order for the Kakaako site that has already been authorized by the State.

Previously, the U.S. EPA was to provide all analytical services for the project, however, the Agency currently has no contract to provide the dioxin and Toxicity Characteristic Leaching Procedure (TCLP) analysis. Consequently, we have been requested by DOH to prepare a proposal to include the costs for analysis of dioxin and TCLP. The task will include the procurement of laboratory services and the analysis of 12 dioxin samples and 11 TCLP samples. The total cost for this additional task is $31,611.00.

Please contact me or Eric Wetzstein at 545-2462 to discuss this proposal or if you have any further questions.

Sincerely yours,

Douglas L. Hazelwood
Office Manager

Enclosure: Cost Estimate Worksheets

cc: Eric Wetzstein, project manager

ASO Log No. 98-418
May 8, 2001

Table 1
Cost Estimate for Dioxin and TCLP Sampling
Kakaako Brownfield Unit 8 Site

LABOR

Role	PL	Rate	Total Hours	Total Cost
Program Manager	615	$ 156.25	1	$ 156
Project Geologist	608	$ 72.92	2	$ 146
Contract Administrator	606	$ 62.50	1	$ 63
Totals			4	$ 365

OTHER DIRECT COSTS

Description	Unit	Unit Cost	Task 1 Quantity	Task 1 Cost
Telephone/Fax	min	$ 0.25	15	$ 4
Reproduction (B&W)	page	$ 0.08	30	$ 2
Express Mail	pkg	$ 5.00	1	$ 5
Laboratory Analyses	total	$ 29,748	1	$ 29,748
Subtotal ODCs				**$ 29,759**
G&A				$ 5,952
Burdened ODCs				$ 35,711
HI Excise Tax		4.166%		$ 1,488
Total ODCs				**$ 31,247**

COST SUMMARY (ONE UST)

Cost Category	Total
Labor	$ 365
Other Direct Costs	$ 31,247
Total Project Cost	**$ 31,611**

Table 2
Laboratory Analysis Cost Summary for Kakaako Brownfield Unit 8 Site

Laboratory Analysis

Description	EPA Method	Unit	Unit Cost	Quantity	Cost
Dioxin	EPA 8290	sample	$1,500.00	12	$ 18,000
TCLP - extraction	EPA 1311	sample	$132.00	11	$ 1,452
TCLP - SVOCs	EPA 1311	sample	$540.00	11	$ 5,940
TCLP - metals	EPA 1311	sample	$216.00	11	$ 2,376
TCLP - PCBs	EPA 1311	sample	$180.00	11	$ 1,980
Subtotal Lab Costs					**$ 29,748**

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

COPY

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Honolulu, HI 96817
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August 22, 2000

Ms. Dawn Cosgrove
State of Hawaii Department of Health
Hazard Evaluation and Emergency Response Office
919 Ala Moana Boulevard, Room 206
Honolulu, Hawaii 96814

Subject: Sampling and Analysis Plan for a Site Characterization Study at the Kaka'ako Brownfield Unit 8 Site - Revision 01

Dear Ms. Cosgrove,

Enclosed are three (3) copies of Revision 01 the Sampling and Analysis Plan (SAP) for the Kaka'ako Brownfield Unit 8 Site. One (1) copy of Revision 01 of the SAP has been forwarded to Gail Jones of the U.S. Environmental Protection Agency (USEPA) Region IX Quality Assurance Program. Also included are two (2) copies of the site-specific Health and Safety Plan for this study.

Responses to comments from the State of Hawaii Department of Health and USEPA are included in the attached tables.

If you have any questions regarding this Sampling and Analysis Plan, please do not hesitate to contact me at (808) 545-2462 Ext. 128.

Sincerely,

Eric Wetzstein
Project Manager

Enclosure
Cc: Gail Jones, USEPA Region IX

Type of Review:	Kakaako Final Field Sampling Plan (Sampling and Analysis Plan dated May 2000)
Reviewed by:	Dawn Cosgrove, DOH
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
1	Original Comment 2: Original comment and response to comment do not appear to have been fully incorporated into Kakaako Field Sampling Plan Final (final plan). a. The original comment specifically requests that all detected analytes be included as COPCs and that background levels could be considered at a later time. Including all detected analytes in the risk evaluation is necessary to effectively calculate cumulative risk associated with all detected analytes. The response to the original comment indicates that all detected analytes will be included as COPCs for the purposes of a risk evaluation. The text of the final plan, however, indicates that analytes detected above the quantitation	In the draft SAP, COPCs were specified only for those analytes that exceeded Region IX PRGs, Tier 1 Als, or NAWQC screening levels. The final text was then revised to specify that analytes detected above their respective laboratory quantitation limits (QLs) (i.e. those analytes that are detected by the laboratory) would be included as COPCs for soil and groundwater (*Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions*). There are however, method limitations for some analytes (QLs higher than Region IX PRGs, Tier 1 ALs, or NAWQC). *Section 3.4.5 - Data Quality Criteria* describes data decisions/evaluation for analytes with method limitations.	Identifying COPCs for soil and groundwater as analytes detected above their respective laboratory quantitation limits (QLs) (i.e. those analytes that are detected by the laboratory) (*Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions*) is understood and accepted. However, the final text indicates that "if an analyte is detected in soil above its laboratory QL or a relative background concentration based on soil sampling, that analyte is identified as a COPC..." In order to effectively calculate cumulative risk associated with all analytes detected above their respective laboratory QLs, background concentrations should be considered after initial calculation of risk. Please delete the text "or a relative background concentration" from *Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions,* from Appendix D, and from any other	"Background concentrations" will be considered after the initial calculation of risk. For clarification, the text "or a relative background concentration" has been deleted from the text. A reference to Appendix D has been added to the introductory paragraph in Section 3.4.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
	limit or a relative background concentration based on soil sampling will be identified as a COPC. This contradicts the original comment provided on the Field Sampling Plan Draft (draft plan) and the response to that comment.		places that this element is referenced. Also, please reference Appendix D in Section 3.4 of the main text.	
1	b. The text implies that background soil samples will be collected; however, Section 7.3 of the final plan specifies that general literature values for background metal concentrations on island will be used (that is, background samples will not be collected as part of this field effort).	The metals detected above QLs will be compared to literature values for risk screening purposes. The collection of background samples will not be included in this field investigation. It was agreed that all soils in the surrounding areas consist of fill materials. Many of these fill soils could be the same or similar source(s) as the site. Consequently, their usefulness as "background" would be limited. Literature values for metals in native soils would be a better source. Organic compounds will be presumed to have been derived from anthogenic sources.	The use of literature values for background concentrations of metals is understood and accepted Note that the current text states "....or a relative background concentration based on soil sampling...", whereas Section 7.3 indicates that relative background concentrations will be based on literature values, not current soil sampling. Please refer to Comment 1; incorporation of DOH Response to Comment 1 will remedy this concern.	See comment No. 1.
2	Original Comment 3, part b: a. Discussion of ecological risks associated with sediment transport into the harbor appears to have been eliminated in the final plan. Please clarify the rationale for not including these risks in Step 2 of the	The rationale for not collecting harbor sediment samples are (1) the site is largely paved and the potential for a sediment transport pathway is unlikely, (2) it would be difficult to link detected contamination to the site, and (3) the expense of collecting sediment samples was beyond the current DOH budget	Response adequately addresses the comment.	---

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
	"Steps for Groundwater Data Decisions."	constraints.		
2	b. NOAA 1998 (presumably the reference listed in Section 8 as "Buchman, M.F. 1998") is not cited in "Steps for Groundwater Data Decisions," as indicated in the response to the original comment.	Comment noted. The appropriate reference will be added to the text. Please see revision to *Steps for Groundwater Data Decisions - Step 2.*	Response adequately addresses the comment.	---
3	Original Comment 5: See 1. Original Comment 2, parts a and b (discussed previously) apply to the discussion for groundwater data decisions as well.	See response No.1	See DOH Reply to Response Comment for Comment 1.	See comment No. 1.
4	Original Comment 7: a. Part a of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the decision error rate for contaminant concentrations do not appear to have been incorporated into the final plan.	As indicated in the original response to comment, decision errors will be minimized for estimated contaminant concentrations, and not risk levels. It is agreed that contaminant concentrations are not risk levels, however, since standard EPA protocol is to be followed, it is appropriate to use the conservative excess cancer value and hazard index as stated because those are the specific risk levels from which PRGs (i.e. screening levels for contaminant concentrations) are derived/based. (*See Section 3.4.6, 3rd ¶)*	The final text of *Section 3.4.6 Step 6: Specify Limits on Decision Errors* appears to be contradictory. The null hypothsis and decision errors outlined on page 3-14 are in reference to risk parameters (e.g. excess cancer risk >1E-06 or HI >1), while the second sentence of the last paragraph on page 3-14 indicates that the sampling program is intended to minimize decision errors for contaminant concentrations. The third sentence of the last paragraph on page 3-14 then goes back to discussing decision errors with respect to element of risk, and the first full paragraph on page 3-15 then discusses false-positive decision errors with respect to soil [contaminant] concentrations and action levels [PRGs]. These statements are contradictory.	It is agreed that decision errors should apply to contaminant concentrations, not risk parameters. The text in *Section 3.4.6* has been revised to provide more consistency. Specifically, the definition for the null hypothesis, has been revised to state : "...*Contaminant concentrations in soil result in an excess cancer risk greater than 1E-6 and/or hazard index greater than 1 (i.e. Site requires baseline risk assessment and possible removal action), and/or the contaminant concentrations in groundwater result in COPCs that are greater than the (AWQCx10) (i.e. the Site requires a baseline ecological risk assessment)."* The definitions for Type I and Type II decision errors have been revised similarly. The first ¶ on page 3-15 has also been revised: 3rd sentence in ¶ has

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
			Please re-evaluate the null hypothesis and the Type I and Type II decision errors and how they relate to the subsequent text of Section 3.4.6 regarding minimization of decisions errors (on contaminant concentrations or on risk elements?) and the probability of false-positive decision errors (for contaminant concentrations or risk parameters?). As outlined in the email from Charley Langer of DOH to Eric Wetzstein of Ogden dated May 10, 2000, decision errors should apply to contaminant concentrations, not risk parameters (e.g. risk assessment results). Please consider focusing the null hypothesis and decision errors on whether contaminant concentrations in soils at levels that pose a risk to human health.	been deleted, and 4th sentence has been revised to specify that site soil concentrations will be used to determine the ECR and HI.
4	b. Part b of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the use of PARCC parameters in the calculation of decision errors do not appear to have been incorporated into the final plan.	Comment noted. As indicated in the original response to comment, PARCC parameters will not be used directly in the calculation of a 95% UCL. For further clarification the discussion of PARCC parameters will be moved to a new separate subsection (*See Section 3.4.6 - Minimization of Decision Errors*).	It is not clear how the effect of QA/QC procedures and assessment of data quality using PARCC parameters, lab QC, field QC, and data validation "place limits on decision errors," as stated in the third and fourth paragraphs of page 3-15. Limits on decision errors are typically quantifiable parameters that directly specify the tolerable limits on decision errors (e.g. controlling false positives to 5%); PARCC parameters, lab QC, field QC, and data validation do not place limits on decision errors in this respect. It is understood and accepted that these	For further clarification, the last two paragraphs in Section 3.4.6 (*Step 6: Specify Limits on Decision Errors*) have been revised. Specifically, text has been revised to indicate that QA/QC procedures, PARCC parameters, and data validation are used to minimize the likelihood of committing a Type I or Type II error. Text stating that these procedures/criteria "place limits" on decision errors has been deleted.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
			elements will not be included in the calculation of the 95% UCL. Please revise the text in the third and fourth paragraphs of page 3-15 to clarify that QA/QC procedures minimize measurement error, thus reducing the likelihood of committing a Type I or Type II error, and that PARCC parameters and data validation assess data quality, thus reducing the likelihood of committing a Type I or Type II error. Please delete the text indicating that these items "place limits" on decision errors.	
5	Original Comment 9: Please clarify the rationale for placing subsurface soil sampling locations SA16/SB16 through SA20/SB20 at the locations shown on Figure 4-2 of the final plan, noting that some of these locations are not at grid nodes but possibly could be placed on nearby nodes.	The sample locations for subsurface soil samples SA16/SB16 through SA20/SB20 as well as surface soil samples SS35-SS38 and SS40 were selected based on a biased sampling design (*Sections 4.1.1 and 4.2.1*) for areas near the former hydraulic lift area and UST.	Response adequately addresses the comment.	---
6	Original Comment 14: The response to the original comment indicates that a procedure for locating grid points that fall in inaccessible locations will be included in the text. Such a procedure was not found in the final plan.	*Section 5.2.2 - Soil Sampling Locations* in the final SAP was revised to specify sample locations that are determined to be inaccessible may be relocated to the nearest radial location that is accessible.	Please note that the draft plan and final plan include the same text regarding relocating inaccessible sample locations to the nearest radial location that is accessible. Thus, it appears that the original comment requesting "a specified procedure for moving an inaccessible point" (beyond the draft plan text) and the response that "a procedure for locating grid points that fall in	---

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
			inaccessible locations will be included in the text" did not result in a more specific procedure than was already include in the draft plan. The final text, however, is accepted as written.	
7	Additional Comments Relating to Original Comments: a. In Section 3.4.7, paragraph 2, of the final plan, the text indicates that 50-foot node spacing will be used for the site. Section 4.1.1 and Figure 4-1 indicate 50-foot node spacing for surface soils, which is in agreement with Section 3.4.7. For subsurface sampling, however, the text of Section 4.2.1 indicates that 75-foot node spacing will be used, and the scale on Figure 4-2 indicates that 100-foot node spacing will be used for subsurface soil sampling. Please clarify the node spacing for surface and subsurface sampling locations at the site.	The node spacing as shown on Figure 4-2 indicates a node spacing of approximately 75-feet (each sample location is 75-feet from the other).	Grid nodes generally refer to the intersection of grid lines. The node spacing on the grid overlain on Figures 4-1 and 4-2 uses the same 50-foot node spacing. However, sampling locations are placed at each grid node on Figure 4-1 (surface soil sampling locations) and on every other grid node along a grid line on Figure 4-2 (subsurface soil sampling locations). It is acknowledged that this results in a 50-foot surface soil sample spacing measured along the grid and a 75-foot subsurface soil sample spacing when measured along the diagonal of the grid. Please modify the text of *Section 4.2.1 Sampling Locations* (subsurface soil) to indicate these facts, or alter the grid for subsurface sampling design (Figure 4-2) to show visually that the grid nodes are 75 feet apart. Please revise the text in *Section 3.4.7 Step 7: Optimize the Design for Obtaining Data*, paragraph 2, to indicate the actual sample spacing for surface soil samples and subsurface soil samples to clarify this element.	The text in Section 4.2.1 has been revised to more accurately describe the subsurface soil sampling locations. Text has been added to indicate that subsurface soil sampling locations are based on a grid node spacing of 50-feet; 40 subsurface samples will be collected from 20 locations at every other grid node; subsurface sampling locations will be equally spaced, approximately 75 feet apart. The 2nd and 3rd paragraphs in Section 3.4.7 have also been revised for clarification of node spacing and sample locations.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
7	b. One analysis stated throughout the draft plan was for PCBs/pesticides. The corresponding analysis in the final plan is indicated as only PCBs. Are pesticides a contaminant of concern at the site?	Pesticides have not been included in the final SAP as a contaminant of concern at the site. The draft SAP included PCB/pesticides together since at the time we thought we would be limited to using the CLP method that includes both. In discussions with EPA Region IX however, we found that we could use the SW-846 method 8082 (PCBs only), since it is better suited to our needs (lower QLs).	Response adequately addresses the comment.	---

Type of Review:	Kakaako Final Field Sampling Plan (Dated May 2000)
Reviewed by:	Gail Jones, EPA Region IX
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Reviewer's Comments	Response to Comments
1B	This concern (original comment 1B) has not been completely addressed. Low level method detection limits are provided, however, there are a number of concerns identified in Table 7-2. A. Table 7-2 lists preliminary remediation goals (PRGs) for soils as micrograms per kilogram (µg/kg); however, the values listed appear to be milligrams per liter (mg/L). It is uncertain if the conversion or the units are incorrect. For example, the detection limits for the Water Low Level Methods for metals by EPA Methods 6010/7000 are listed as microgram per liter (µg/L). The listed detection limits of 0.005 µg/L for cadmium and 0.003 µg/L for lead are extremely low values which Methods 6010/7000 are unlikely to attain. (Both lead and cadmium were present at elevated concentrations in ash sampled previously.) Note, the PRG tables (Region 9 EPA 1999) list PRGs for soils in milligrams per kilogram (mg/kg). The values and units listed in Table 7-2 should be reviewed and corrected as necessary.	The units listed in Table 7-2 for PRGs, DOH Tier 1 Action Levels, and QLs for soil samples have been revised to specify all these concentrations in milligrams per kilogram (mg/kg). An incorrect factor was applied to low level detection limits for metals (aqueous). For low level aqueous samples the laboratory will report to the laboratory specified MDLs verses the CRDL per strict CLP protocol. Approximate laboratory limits are presented in Table 7.2 and are adequate for the project objectives for determining ecological risk. Following a revision of the units for PRGs and QLs, it has been noted that the QLs for CLP methods for PCB analysis will be adequate for this project. The text has been revised in Sections 3, 4, 5, 6, and 7 and Tables 4-3, 7-1, and 7-2 to indicate that soil samples will be analyzed for PCBs using CLP methods.
1B	B. If arsenic, selenium, thallium and antinomy will be extracted using a special process, as indicated in a footnote to Table 7-2, this process should be described in the SAP.	Arsenic, Selenium, Thallium and Antimony shall be analyzed by graphite furnace atomic absorption (GFAA) in order to achieve required detection limits. The GFAA digestion (a.k.a. special process "extraction") uses nitric acid vs. the ICP digestion, which uses both hydrochloric and nitric acid. Since the nitric acid digestion is per the method specifications, the footnote is removed for clarity.

No.	Reviewer's Comments	Response to Comments
1C	This concern (original comment 1C) has not been adequately addressed. The RTC states that the EPA analytical system will not be utilized for the TCLP analysis for IDW; however, Table 4-3, Request for Analysis Services for Soil, identifies samples to be analyzed for TCLP but does not state that these samples will not be analyzed using the EPA analytical system nor does it identify the laboratory that will provide the analysis.	For this study, TCLP analysis will be used to (1) characterize waste generated during sampling activities, (2) provide recommendations for waste disposal options for future redevelopment at the site, and (3) provide a general assessment of remedial alternatives for the site. A written request has been submitted to Tom Mix for approval to use the EPA analytical system for TCLP analysis. Sections 3.4.3, 3.4.5, 3.4.7, 4.5.1, and 4.5.2 have been revised to specify that TCLP results will be used not only for IDW characterization, but also to characterize the site with regard to future redevelopment and/or remediation.
6	This concern has been partially addressed. Section 5.2.2, Subsurface Soil Sampling Procedures, of the revised SAP states that samples for VOC analysis will be collected in EnCore samplers and transferred to a vial containing preservative. Table 4-1 indicates that samples collected for VOC analysis will be preserved with sodium bisulfate. The SOP for soil sampling in Appendix B does not describe the collection of soil samples using EnCore samplers. The collection procedure for VOC samples should be expanded to discuss the pre-weighing of the vials at the laboratory, or, if the vials will be weighed at the site, the weighing process and equipment should be described. Note that a stir bar should be included in the vial containing the sodium bisulfate preservative.	Upon reevaluation of soil borings previously collected at the site, the coralline soils present at the site are likely to effervesce upon contact with the acid preservative. Per guidance provided in the EPA Region IX *Regional Interim Policy for Determination of Volatile Organic Compound (VOC) Concentrations in Soil and Solid Matrices,* an alternative preservation technique is recommended. However, due to budget constraints and the location of the project, freezing of the soil samples would not be practical. VOC soil samples will be collected and shipped to the laboratory in EnCore® samplers, stored at 4±2°C. Text has been added to Section 4.4 explaining the 48-hr holding time requirement, and requesting analysis through the Region IX laboratory in Richmond CA.
11A	This concern has been partially addressed. The RTC states that the text was intended to reference the general types/categories of SOPs, and not the specific SOPs. However, SOPs on data validation and laboratory analysis are not provided.	SOPs on data validation have been added to the Appendix. However, these are SOPs for Ogden data validation procedures (not specific to Region 9-option 2 protocol). Ogden data validation procedures will be customized to this project. Also, please note that some SOPs reference previous EPA methods, however, the most current/updated EPA methods will be used for all data validation procedures. CLP guidance will be applied to the appropriate SW846 methods.

Additional Concerns:		
(1)	[Title/Signature Page] A cover page containing the title of the project and signature blocks for, at a minimum, the EPA Project Officer and EPA Quality Assurance Manager should be provided. An acceptable format is located in the "Instructions for the One-Time Sampling Event Sampling and Analysis Plan (SAP)" (February 1998).	A title/signature page has been added to the SAP.
(2)	[Table 4-3, Request for Analytical Services for Soil; Table 4-4 Request for Analytical Services for Groundwater] It is recommended that the tables list totals for each type of analysis.	A row listing the totals for each analysis has been added to Tables 4-3 and 4-4.
(3)	[Section 5.2.4, Groundwater Sampling Procedures] Section 5.2.4 states that groundwater samples will be analyzed for dissolved metals after being filtered through a 0.45-micron membrane in-line filter. Regional Superfund Site Assessment guidance recommends the use of a 5-micron filter for groundwater samples targeted for metals analysis. If dissolved metals are needed, the SAP does not need to be modified. However, if the collection of metal samples is required for site assessment purposes only, the SAP should be revised to specify a 5-micron filter.	Groundwater samples will be analyzed for dissolved metals. No changes have been made to the SAP.
(4)	[Table 7-1, Analytical QA Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] The following discrepancies or omissions were noted: A. The blank spike/laboratory control sample (BS/LCS) accuracy criteria for CLP volatitles, semi-volatiles, and metals list one number for percent recovery instead of a range. Table 7-1 should be revised to provide acceptance ranges for BS/LCS. Alternatively, the plan/table can state that the acceptance limits as specified in the appropriate CLP SOW will meet project needs.	Table 7-1 has been updated with the appropriate ranges for percent recovery.

Additional Concerns:		
(4)	B. Table 7-1 lists the QA objectives for doixins/furans and CLP Pest/PCBs as TBD, "to be determined." Precision and accuracy criteria should be developed based on the needs of the project. Client Request Forms (CRFs) or Data Quality Indicator Tables (DQI) tables, available from the Region 9 QA Office, should be included in the plan. Alternatively, if private laboratory services are to be procured for these services, the plan should include appropriate laboratory quality control criteria and corrective action procedures. And the plan should state that the acceptance limits as specified in the laboratory QA Plan or SOPs will meet project needs.	Precision and accuracy tables updated from available information from Severn Trent and Alta Laboratories. The proposed recovery limits are adequate for project QA objectives. Actual recovery limits are performance based per the method and will be provided by the selected laboratory. If actual recovery limits exceed the proposed recovery limits the affected data will be scrutinized for adequacy against overall DQO.
(4)	C. The detection limits for dioxin/furan analysis should be specified. These should be based on the needs of this project, not dependent on the analytical laboratory performance, as indicated in a footnote to Table 7-2. See item B above.	Table 7-2 has been updated with acceptable detection limits.

From: **Dawn Cosgrove - HEER <dcosgrove@eha.health.state.hi.us>**
To: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
Subject: **Re: Kakaako Brownfield Update - Samping Postponed**
Copies to: **"Wetzstein, Eric, E." <eewetzstein@oees.com>,lyoung**
Date sent: **Fri, 29 Dec 2000 08:14:10 -1000**

Thanks for the update, Jan. So until EMax is able to accept samples for EPA (particularly for the TCLP), the schedule won't be able to be revised.

Because of this delay, it seems quite likely that the field work will not occur before I go on maternity leave. Thus, please continue to correspond directly with me until I go out, and copy all messages to Laura Young (lyoung@eha.health.state.hi.us) in the HEER Office (same phone number: 586-4249). Laura will be managing this project while I'm on leave, so if we keep her in the loop on whats going on, the transition will be smoother because it is likely that I will simply not show up at work one day because I've gone into labor, without any warning. If she is kept in the loop, it will also allow her to let you know right away when she will formally take over management of the project and you won't be wondering if I'm still in the office.

Thanks for keeping me posted, Jan.
- Dawn

From: "Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>
To: dcosgrove@eha.health.state.hi.us
Copies to: "Wetzstein, Eric, E." <eewetzstein@oees.com>
Subject: Kakaako Brownfield Update - Samping Postponed
Date sent: Thu, 28 Dec 2000 15:29:29 -1000

Dawn-
I just spoke to Mary Odonnell about lab scheduling issues for the Kakaako Brownfield project. We are going to have to postpone the field sampling effort at this point, for a couple of reasons:

(1) There is still no lab available to perform the TCLP analysis. As Mary mentioned when we last tried to the field effort in November, EMax is the only lab under the new EPA contract, which is capable of performing the TCLP analysis. The problem is, EMax has not yet been approved by EPA. Mary has been contacting the project manager, Marlon Mezquita, on a weekly basis - and so far Marlon is still in the

process of reviewing the Emax lab SOPs. Mary provided me with Marlon's phone # - so I will try contacting him next week to get a better idea of when EMax will be lined up for work (Mary informed me that he will be out of the office until January 4th).

(2) Mary had scheduled the remaining analyses (with the exception of soil VOC samples) through the CLP program and with the Region IX lab. Because we are collecting our soil VOC samples in EnCore samplers, unpreserved (48 hour holding time), we have requested that the soil VOCs analysis be performed by the Region IX lab in CA. However, due to the limited capacity of the Region IX lab, firm sampling dates would be required before the lab will schedule the soil VOC analyses.

To resolve these issues, I will remain in contact with Mary and try to contact Marlon to find out when the EMax lab will be online and available for work. Once we know that EMax is available for the TCLP analyses, we will then coordinate with the Region IX lab (VOC samples) and set a date for sampling. Mary does not think that scheduling the remaining analyses through the CLP program will be a problem.

I'll keep you posted as I learn more about what's going on...
Thanks,
Jan

From:	**"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
To:	**dcosgrove@eha.health.state.hi.us**
Copies to:	**"Wetzstein, Eric, E." <eewetzstein@oees.com>**
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I'll keep you posted as I learn more about what's going on...
Thanks,
Jan

AMEC Earth & Environmental, Inc.
680 Iwilei Road, Suite 660
Honolulu, Hawaii 96817
808-545-2462
Fax 808-528-5379
www.amec.com

December 18, 2000

Ms. Dawn Cosgrove
State Department of Health
919 Ala Moana Blvd.
Honolulu, HI 96814

Dear Ms. Cosgrove:

We are pleased to inform you that Ogden Environmental and Energy Services has joined with AMEC Earth & Environmental, as of November 17, 2000.

Although we will be changing our name, we expect no significant change in operations here in Hawaii, or in the other offices that may have supported you in the past. You will still be able to reach the same staff and benefit from their experience and commitment to client service.

We see this change as a very positive development for our organization. With over 2,200 engineers, scientists and managers in North America, our new company can respond even more effectively to a wider range of client assignments than ever before. In addition to enhanced environmental capabilities, we now offer a full range of materials testing, geotechnical engineering and water resources engineering services.

AMEC Earth & Environmental is a U.S. firm, incorporated in the state of Nevada. We invite you to visit our web site at www.amec.com to learn more about our new organization. AMEC, plc., our new parent company, is an international engineering firm, providing design, construction and operation of capital projects throughout the world. *Engineering News Record* ranked AMEC as the number one international design firm this year.

Please do not hesitate to call me or any of our staff should you have any questions or wish to receive additional information. We have appreciated our past association with your organization and look forward to the prospect of continuing to support you in the future.

Sincerely yours,

Eric Wetzstein
Enviromental Group Manager

From: **Self <EHANVL1/DCOSGROVE>**
To: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
Subject: **Re: Kakaako Unit 8 - update**
Copies to: **"Wetzstein, Eric, E." <eewetzstein@oees.com>**
Date sent: **Wed, 20 Dec 2000 14:21:19 -1000**

Hi, Jan - Thanks for the update. If the CLP lab(s) used are contracted (private) labs and not EPA (government) labs, they may be able to receive samples on Saturdays.

-Dawn

From: "Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>
To: dcosgrove@eha.health.state.hi.us
Copies to: "Wetzstein, Eric, E." <eewetzstein@oees.com>
Subject: Kakaako Unit 8 - update
Date sent: Wed, 20 Dec 2000 14:11:56 -1000

Dawn,

At this time, the Kakaako Unit 8 field sampling effort is still scheduled for the week of January 8, possibly extending into the week of January 15. The last time I spoke with Mary Odonnell of EPA Region IX (December 11), she had not yet finalized the lab scheduling.

- I spoke with Rich Freitas of Region IX on a couple of occasions (November 30 and December 11) to schedule the CLP analyses for the January sampling event. According to Rich, it is not yet known what and how many CLP laboratories we will be using. He did inform me that all their CLP labs are located in the midwest, or the east coast. This may restrict our field schedule to Mon-Wed due to 2-day shipping. Rich advised that I contact him a couple of weeks prior to sampling to confirm, and would prepare the neccessary CLP paper work that is required.

- I left a message with Mary on December 18, to check in on the progress of the lab scheduling. I also requested written confirmation of all the scheduled analyses and the appropriate labs (and regional locations) where they would be shipped. I have not yet heard back from her, and will try to contact her again tomorrow.

-We will be scheduling the dioxin analyses directly through ALTA analytical laboratory for both soil and water samples.

We will update you as soon as these issues are finalized...

Thanks,
Jan

From: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
To: **dcosgrove@eha.health.state.hi.us**
Copies to: **"Wetzstein, Eric, E." <eewetzstein@oees.com>**
Subject: **Kakaako Unit 8 - update**
Date sent: **Wed, 20 Dec 2000 14:11:56 -1000**

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We will update you as soon as these issues are finalized...

Thanks,
Jan

From: Self <EHANVL1/DCOSGROVE>
To: eewetzstein@oees.com
Subject: Kakaako and lab
Date sent: Mon, 11 Dec 2000 13:45:45 -1000

Hi, Eric -

Did you ever get an answer to the question I had asked a while back about the **turnaround time on samples sent to EPA** (both for samples that the Region IX lab analyzes and the ones their contract labs analyze)? I estimated in a schedule I put together that it was 45 days, but that was just a conservative guess. I would appreciate it if you would ask Mary O'Donnell that question the next time you talk to her.

Please make sure to keep in touch regularly with Mary regarding the tentative January 8 start date and lab availability for ALL analyses. Someone else in our office had EPA "cancel" their project (the analytical) at the last minute, possibly because the DOH RPM was on vacation and thus not contacting Mary to make sure everything was on schedule, and somehow there was a misunderstanding, and the whole field effort had to be bumped. **So please keep in touch with Mary at least once a week to see where things are at.**

Thanks, Eric.
- Dawn

From: **Self <EHANVL1/DCOSGROVE>**
To: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
Subject: **Re: Kakaako - lab & field schedule**
Date sent: **Thu, 30 Nov 2000 15:34:30 -1000**

Thanks for the update, Jan. Lets hope that EPA can get Emax on line so there isn't further delay. Keep me posted!
- Dawn

From: "Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>
To: dcosgrove@eha.health.state.hi.us
Copies to: "Wetzstein, Eric, E." <eewetzstein@oees.com>
Subject: Kakaako - lab & field schedule
Date sent: Thu, 30 Nov 2000 15:24:47 -1000

Hi Dawn-

We just spoke to Mary Odonnell at EPA Region IX regarding the status of lab scheduling. At this point we have decided to postpone the field effort to the week of January 8th due to the following:

* Scheduling conflicts with TEG for collection of soil samples and well installation

* TCLP cannot be scheduled at this time because no EPA contract lab is available. According to Mary, under the current contract the only labs available are CLP labs, Region IX Lab, and Emax Inc. However, Emax is not yet ready for work orders, and the Region IX lab is not capable of performing TCLP.

Mary estimates that Emax should be online in about a month - in time for the rescheduled field effort in January. I have also contacted Rich Freitas of Region IX to reschedule the CLP analyses. Mary will work on rescheduling with with the appropriate labs. We are anticipating collection of soil samples the week of January 8th, followed by groundwater sampling the following week. I will update you if the schedule changes...

Thanks,
Jan

Call received X
call initiated ——

TELEPHONE DECISION LOG

Date: 11/30/00	Phone Numbers:
Time: 14:00	Fax Number:

Name of Person Calling: Eric Wetzstein

Affiliation: Ogden

Incident/Site being referenced: Kakaako Unit 8 - Site Characterization Field Work

Brief Discussion of Communication:

Problems with TEG availability:

12/4, 12/6, 12/7	TEG Available, but problem with lab (SVOCs TCCP) and may be difficult to get (EPA) dioxin lab set up.
12/14, 12/15	TEG available, but lab can't except samples on 12/16 (a Saturday)
12/18	TEG may be available
12/26, 12/27, 12/28	TEG available (but concerned about EPA lab being able to do 5 core VOC extraction on the Friday before New Years weekend.
January	TEG available (wide open)

We agreed to try to schedule the work the week of January 2nd, ~~2nd (Monday) is holiday~~. Ogden could prepare (Mark locations, utility clearance) on 2nd (Tues), TEG on 3rd & 4th and if needed, TEG on 8th (Monday). He'll try to work that schedule out w/ TEG, Ogden staff, & labs (EPA & dioxins).

I suggested he line up TEG & Ogden staff & then contact Mary O'Donnel (EPA lab coordinator) to schedule EPA lab.

HEER Staff Signature: Dawn Cosgrove

Date: 11-30-00

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com**
Subject: **Kakaako Unit 8: funding for dioxins confirmed**
Copies to: **jhkotoshirodo@oees.com, bhataoka,cmorita**
Date sent: **Thu, 30 Nov 2000 08:10:22 -1000**

Hi, Eric -

Good news! DOH has received a written commitment from DOT to fund the dioxin analyses for Kakaako Unit 8, as proposed. Thus, please move forward with subcontrating the lab to do the analyses.

When it comes time for Ogden to invoice DOH for the dioxin analyses, please submit separate invoices for the Kakaako Unit 8 site characterization work (which is ultimately funded through DOH by EPA) and the dioxin analyses (which will be directly paid to Ogden through DOH's revolving fund, similar to the non-Kakaako work that Ogden does under its contract to DOH). This will make it cleaner for DOH to pass the dioxin analyses invoice on to DOT for reimbursement to DOH.

Thanks, Eric.
- Dawn

From: **"Wetzstein, Eric, E." <eewetzstein@oees.com>**
To: **'Dawn Cosgrove - HEER' <dcosgrove@eha.health.state.hi.us>**
Copies to: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
Subject: **RE: Mary O'Donnel and DOT update**
Date sent: **Wed, 29 Nov 2000 14:30:58 -1000**

We will schedule for the week of December 11, 2000

-----Original Message-----
From: Dawn Cosgrove - HEER [SMTP:dcosgrove@eha.health.state.hi.us]
Sent: Wednesday, November 29, 2000 2:29 PM
To: eewetzstein@oees.com; jkotoshirodo@oees.com
Subject: Mary O'Donnel and DOT update

Hi, Eric and Jan-
Here is the recent scoop from Mary, in case you hadn't heard. Plus one question for you.

From Mary: She is still trying to line up SVOCs in groundwater - lab still not lined up for this analysis. As an aside: Rich Freitas will need to coordinate list of SVOCs with Jan - there is a difference between the standard list and the list for this project. Rich will also ned to send Ogden the CLP lab COCs and paperwork.

Also, there is a problem with the TCLP analyses. Mary says EPA can't do them (its unclear why not). I briefly xplained to her the discussions that Ogden went through with Gail Jones regarding performance (from a funding perspective) of the TCLP analyses, that those issues were resolved, and that we are expecting EPA to do the TCLP analyses, either through their Region 9 lab or a contracted lab. Apparently the new contracted lab they have lined up isn't actually on line yet - EPA is still doing QA assessment of lab, etc. Mary will talk to Gail Jones about the TCLP issue. I don't

recall the last time Ogden scheduled the lab work that TCLP came up as an issue, did it?

Mary said it would be better, in light of these issues, if we could postpone the field work by one week. So, is this possible from your

perspective? Please let me know ASAP - I need to get back to Mary.

Regarding DOT funding dioxin analyses, it looks like that will be a go, but I may not know for sure until Friday (maybe earlier, maybe not).

So I'm back to my question about postponing the work one week. Will that work for Ogden and TEG and any other subs that you have to line up?
- Dawn

Dawn Cosgrove
Hawaii Department of Health - HEER
Voluntary Response Program
Remedial Project Manager

Call received ——
call initiated ——

TELEPHONE DECISION LOG

Date: 11/28/00	Phone Numbers:
Time:	Fax Number:

Name of Person Calling: Eric Wetzstein

Affiliation: Ogden

Incident/Site being referenced: Kalaeloa Unit 8

Brief Discussion of Communication:

Don't know anything definitive on labs yet.

TEG scheduled.

Ogden folks scheduled.

By Wed, Thurs need to know if setting up lab for dioxins.

By Friday, need to cancel TEG if necessary

HEER Staff Signature: Dawn Cosgrove

Date:

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com,jkotoshirodo@oees.com**
Subject: **Mary O'DOnnel**
Date sent: **Tue, 28 Nov 2000 14:50:33 -1000**

Hi, Eric and Jan - I just heard back from Mary. Looks like she has labs lined up for everything but SVOCs in groundwater and the TCPL analyses. The TCLP analyses are the biggest problem. She says she should know on both the SVOCs/GW and TCLP tomorrow and she will give Jan a call. Hopefully we will be able to stick with our Dec. 4 start. Otherwise, she will have to start this whole lab scheduling routine over again.

Lets keep in touch on this.
- Dawn

From: **Self <EHANVL1/DCOSGROVE>**
To: **ewetzstein@oees.com**
Subject: **misc.**
Date sent: **Tue, 28 Nov 2000 13:40:15 -1000**

Eric -

Follow-up items to our last call:
- Per Bryce Hataoka, we don't need to process any paperwork to have Ogden complete the dioxin analyses under its contract with DOH. We requested a proposal, you gave us one, and Ogden can proceed with a verbal approval by DOH if the time comes. That time would be when DOH receives a commitment from DOT to fund the analyses.

Note that the overall site characterization is funded by EPA and is done under Ogden's contract with DOH. The dioxin analyses would be funded by State money, but it would still be through the same contract with Ogden. So Ogden would bill DOH for the dioxin analyses separate from the EPA-funded site characterization - this would keep the paper trail and payment simpler.

- I left a voice message with Mary O'Donnel, but didn't talk to her yet.

- The earliest that I will have any indication from DOT whether they will fund the dioxin analyses is tomorrow (the guy is out today). I just got the letter with your quote out on Monday, so I gave them until Friday to commit. So, it is quite possible I won't have an answer by Thursday to give you time to set up the dioxin lab.

Lets see what tomorrow brings, and if we have no word from DOT and no word from Mary, then we should postpone the work. If that happens, is the following week (Dec. 11) a possibility, as far as Ogden staff and TEG are concerned? If you need up to 2 weeks to do the field work, then the week of Dec. 11 would be our last opportunity before the holiday season. If the field work gets postponed until January, its quite possible that I won't be around, and its unclear who will be handling my workload while I'm on leave. I'm due on January 15, and depending on when the baby decides to come out and on my health as it gets closer to my due date, I'll be on leave starting sometime between early January and late January. Thats not to say that

the project will stop because I'm on leave, but I don't know who would take over this project for me (staff is limited here).

- Dawn

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

680 Iwilei Road
Suite 660
Honolulu, HI 96817
808 545 2462
Fax 808 528 5379

November 22, 2000

Ms Dawn Cosgrove
State of Hawaii Department of Health
Hazard Evaluation and Emergency Response
919 Ala Moana Blvd, Rm. 206
Honolulu, Hawaii 96814

Subject: **Proposal to Provide Dioxin Sampling at the Kaka' ako Brownfield Unit 8 Site, Oahu, HI**

Dear Ms Cosgrove:

Ogden Environmental and Energy Services (Ogden) is pleased to provide this proposal to address dioxin sampling at the subject site. The proposal would provide a modification to costs previously provided to conduct a site investigation at the subject site under a non-emergency response contract (ASO Log. No. 98-418).

Previously, the U.S. EPA was to provide all analytical services for the project, however, the Agency currently has no contract to provide the dioxin analysis. Consequently, we have been requested by DOH to prepare a proposal to include the costs for analysis of dioxin. The task will include the procurement of laboratory services and analysis of 12 dioxin samples. The total cost for this additional task is $18,344.00. $18,000 of this cost is directly for laboratory analytical services and markup (see attached cost estimate).

Please contact me or Eric Wetzstein at 545-2462 to discuss this proposal or if you have any further questions.

Sincerely yours,

Doug Hazelwood
Office Manager

Enclosure: cost estimate

cc: Eric Wetzstein, project manager

Table 1
Cost Estimate for Dioxin Samples at the Kaka' ako Brownfield Unit 8 Site

November 22, 2000

LABOR

Role	PL	Rate	Task 1		Task 2		Task 3		Task 4		Task 5		Task 6		Total	
			Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost
Program Manager	18	$ 156.25	1	$ 156	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	1	$ 156
Senior Toxicologist	18	$ 156.25	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Staff Toxicologist	11	$ 88.54	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Senior Eco-Risk Assessor	15	$ 125.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
	4	$ 52.08	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Air Quality Specilist	15	$ 125.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Hydrogeology	11	$ 88.54	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Project Engineer	8	$ 72.92	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Engineering Project Manager	14	$ 114.58	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Computer Modelling	11	$ 88.54	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
CADD/Drafting	-	$ 52.08	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Word Processing	-	$ 46.87	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Contract Administrator	6	$ 62.50	3	$ 188	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	3	$ 188
Totals			4	$ 344	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	4	$ 344

OTHER DIRECT COSTS

Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5		Task 6		Total	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
Local Mileage	mile	$ 0.31	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
LD Telephone/Fax	min	$ 0.10	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Laboratory Analyses	ea	$1,200.00	12	$ 14,400	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	12	$ 14,400
Reproduction (B&W)	page	$ 0.08	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Reproduction (color)	page	$ 0.80	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Express Mail	pkg	$ 5.00	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	-	$ -
Subtotal ODCs				**$ 14,400**		**$ -**		**$ -**		**$ -**		**$ -**		**$ -**		**$ 14,400**
G&A Cost		20%		$ 2,880		$ -		$ -		$ -		$ -		$ -		$ 2,880
HI Excise Tax		4.166%		$ 720		$ -		$ -		$ -		$ -		$ -		$ 720
Total ODCs				**$ 18,000**		**$ -**		**$ -**		**$ -**		**$ -**		**$ -**		**$ 18,000**

COST SUMMARY

Cost Category	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Total
Labor	$ 344	$ -	$ -	$ -	$ -	$ -	$ 344
Other Direct Costs	$ 18,000	$ -	$ -	$ -	$ -	$ -	$ 18,000
Total Project Cost	**$ 18,344**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 18,344**

WORK TASKING					
Task 1	Dioxin Analysis		**Task 4**		
Task 2			**Task 5**		
Task 3			**Task 6**		

From: **"Wetzstein, Eric, E." <eewetzstein@oees.com>**
To: **'Dawn Cosgrove - HEER' <dcosgrove@eha.health.state.hi.us>**
Subject: **FW: Kakaako Lab Scheduling - progress**
Date sent: **Tue, 21 Nov 2000 16:32:33 -1000**

FYI

-----Original Message-----
From: Kotoshirodo, Jan, H.
Sent: Tuesday, November 21, 2000 3:35 PM
To: Wetzstein, Eric, E.
Subject: Kakaako Lab Scheduling - progress

Eric-

Regarding the status of Kakaako...

I left a voice mail message with Mary Odonnell of the EPA Region IX QA Office on Friday (11/17/00) to request re-scheduling laboratory analysis for the Kakaako field effort. I also sent her a fax (11/17/00) including our requested analyses and QA objectives, along with a brief summary of specific requests including the following:

- analysis of soil VOCs be performed at the Region IX Lab in Richmond CA -due to 48 hour holding time for collection and storage in EnCore samplers.

- if possible, scheduling analyses through West Coast labs due to the 2-day shipping limitation to the East Coast (would limit scheduling of field work)

- all analyses must be scheduled through the EPA analytical program (with the exception of dioxins)

- anticipated field sampling to begin December 4th pending laboratory availability

I asked Mary to either call or email me with any advise or updates, but have not yet heard back.

This afternoon I tried contacting Mary again -, according to her voice mail, she will be out of the office this week (11/20 thru 11/24). Mary did indicate that she would check her messages periodically during that time. She also provided an alternate contact for lab coordination - Rich Freitas. I will try to contact him tomorrow morning and see if we can begin scheduling labs before Mary returns.

I'll keep you updated on the progress...

Thanks,
Jan

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com**
Subject: **quote**
Date sent: **Tue, 21 Nov 2000 14:46:12 -1000**

Eric, I need a formal, written proposal from you for the 12 dioxin analyses in order to formally ask DOT for the money. Can you send me a formal quote? If you need me to formally ask for a quote (besides my earlier email) before you can send it, let me know and I can do that.

DOT is showing interest in paying for the dioxin analyses. If you can send me a formal quote ASAP, I would greatly appreciate it so I can get this moving on our end.

How does it look for scheduling the work in December?

Thanks, Eric.
- Dawn

21 Nov 2000 @ 15:00

Eric called to let me know he will send a formal quote. He hasn't heard back from EPA on scheduling lab, or from TEG about scheduling direct-push rig. He'll keep me informed on scheduling progress.

From: "Wetzstein, Eric, E." <eewetzstein@oees.com>
To: 'Dawn Cosgrove - HEER' <dcosgrove@eha.health.state.hi.us>
Copies to: "Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>
Subject: FW: dioxin analyses - URGENT- need answer ASAP, please!
Date sent: Mon, 20 Nov 2000 13:57:47 -1000

Hi Dawn,

As I discussed earlier (see below) we could potentially save some funds by cutting back the QC program based on sample results. Costs for dioxin are $1200.00 per samples (based on a lab quote from Alta-just called). Thus sample costs would vary from 12 samples ($14,400.00 X 20% = $17,280.00) to 7 samples ($8,400.00 X20%= $10,080.00). In addition, the entire sample/lab program could be scaled back (we would not be complying with the work plan however).

Eric

-----Original Message-----
From: Wetzstein, Eric, E.
Sent: Thursday, October 05, 2000 5:21 PM
To: 'Dawn Cosgrove - HEER'
Cc: Kotoshirodo, Jan, H.
Subject: RE: dioxin analyses - URGENT- need answer ASAP, please!

Hi Dawn,

Table 4-3 has only one X because the locations of the 4 primary samples will be selected in the field in borings that have visual evidence of burn ash (as noted in the text and footnote). The X is in the dup area because it is not location specific. Therefore there are 5 soil samples.

Likewise table 4-4 does not list the locations of the 2 groundwater samples as that will be a field decision based on groundwater gradient and proximity to known ash fill. The water samples indicated are 1 GW dup, 1 field blank, 3 ERs, and 1 lab QC sample. So technically this table is in error, and should indicate 8 samples for groundwater. In terms of costs, however, the lab QC sample is an MS/MSD and is often included in the cost of the other samples even though it is collected in the field.

Consequently, the number of samples charged by the lab would be 5 soil samples and 7 groundwater samples for a total of 12 samples. At about $1200.00 each the total cost would be about $14,400.

One great way to potentially save costs is to hold all the QC samples (in our case 1 GW dup + 1 FB + 3 ER's for a total of 5 samples), and only analyze them if there are significant (above levels triggering a DQO decision rule as specified in the plan). Otherwise the samples would not need to be analyzed, potentially saving up to $6,000. Because of the long holding times for dioxin a decision to analyze them and fund their testing could be made after receiving preliminary results. This is a practice often used on cost-conscious commercial projects, and the long holding time allows this latitude.

Hope this helps,
Eric

-----Original Message-----
From: Dawn Cosgrove - HEER [SMTP:dcosgrove@eha.health.state.hi.us] <mailto:[SMTP:dcosgrove@eha.health.state.hi.us]>
Sent: Thursday, October 05, 2000 3:33 PM
To: Wetzstein, Eric, E.
Cc: jhkotoshirodo@oees.com <mailto:jhkotoshirodo@oees.com>
Subject: dioxin analyses - URGENT- need answer ASAP, please!

Sorry - I missed something. Table 4-3 has an "X" in only one cell under the dioxin/furan column (indicating one soil sample analyzed for dioxins/furans), but the total for the column is 5 soil samples.
Table 4-4 shows that a total of 6 water samples (1 GW dup, 1 field blank, 3 ERs, and 1 lab QC sample) will be analyzed for dioxins/furans, plus a footnote that 2 groundwater samples will be analyzed for dioxins/furans.
So is that a total of 5 soil samples and 8 water samples for dioxins/furans?
I need to understand this before 8:30 Friday morning, when I have a meeting with DOT to see if they are willing and able to possibly pay for the dioxin analyses that EPA may not be able to do.
THanks, Eric.
Dawn

From: Self <EHANVL1/DCOSGROVE>
To: eewetzstein@oees.com
Subject: Kakaako Unit 8: Dioxins
Date sent: Fri, 17 Nov 2000 09:56:37 -1000

Hi, Eric -

I just spoke with John Sato at DOT-Harbors regarding the possibility of DOT-Harbors funding the dioxin analyses. DOT- Harbors is considering funding the dioxin analyses; that decision appears to be largely based on whether HCDA is going to push development of this property. DOT-Harbors has a meeting with HCDA next week Wednesday (22nd), and I am hoping you can get me answers to a couple of questions before the meeting on November 22.

John is looking into the possible mechanisms for funding the analyses, if DOT-Harbors decides to do so. The best route may be for DOT-Harbors to contract Ogden directly to do the analyses (that way Ogden can manage its own subcontracted lab). However, it may take up to 2 months for DOT-Harbors to get a contract in place; this is too long to wait to initiate the field work based on funding constraints that DOH has. John would like to know if Ogden would be willing to work at risk if DOT-Harbors committed to providing the funding but didn't have a contract in place. In other words, DOT-Harbors would issue a letter saying they were committed to funding the work but that if the contractor proceeded prior to receiving an notice to proceed (e.g. funding) that the contractor would be working at risk. If it takes 2 months for them to issue an NTP and because we need to proceed on the field work 2 months in order to avoid funding issues next year, would Ogden be willing to work at risk under these circumstances?

One option I posed to John is that if Ogden was not willing to work at risk and DOT-Harbors could not issue an NTP before the field work started, Ogden could collect the dioxin samples and hold them, or submit them to the lab and have the lab hold them, until DOT-Harbors provided the funding. This would miminize Ogden's risk. I indicated to him that the holding time for dioxins is 30 days, so if funding was not available within the holding time, the samples would no longer be good.

The other thing that John would like from you is a written estimate of the cost of doing the dioxin analyses scoped in the sampling plan. This cost should include any mark-up that Ogden applies to the lab subcontract, as well as any subcontracting costs that Ogden would incur. He wants to make sure that the cost he presents at the November 22 meeting with HCDA is accurate (not just an estimate). Can you get a simple, written cost estimate to me in the next couple of days?

DOT-Harbors is also looking into other possible mechanisms for funding the analyses (e.g. contracting lab directly, funneling money to DOH).

Please think about these issues and give me a call to discuss them as soon as possible. I'd like to get your answers before the HCDA meeting on Wednesday.

Please don't let this stop you from proceeding on tentatively scheduling the lab and subs (hopefully, for December). I want to keep this ball moving.

Thanks, Eric.
- Dawn

Call received ___
call initiated X

TELEPHONE DECISION LOG

Date: Nov 15, 2000	**Phone Numbers:** 545-2462, x138
Time: 0845	**Fax Number:**

Name of Person Calling: Eric Wetzstein

Affiliation: Ogden

Incident/Site being referenced: Katalla Unit 8

Brief Discussion of Communication:

I requested that we try to complete field work before Christmas so that the samples can be at the lab before Xmas. He will look into if this is feasible - he has to schedule lab & TEG.

Eric suggested we collect the dioxin samples in case lab gets lined up before holding time is exceeded. I agree.

I told him that we need to complete the project by 9/30/01 because of Federal money issues. Ogden's contract with DOH will expire 6/30/01 & can be extended for a finite period of time.

HEER Staff Signature: Dawn Cosgrove

Date: 11-15-00

From:	**Self <EHANVL1/DCOSGROVE>**
To:	**eewetzstein@oees.com**
Subject:	**Kakaako Unit 8: Dioxin analyses**
Copies to:	**jhkotoshirodo@oees.com**
Date sent:	**Fri, 27 Oct 2000 11:49:21 -1000**

Hi, Eric -
Just an update on what I know about the dioxin analysis issue. EPA does not have the money from last fiscal year funds to fund the analyses (per Tom Mix), and they do not have this fiscal year funds yet (the earliest they will get these is in November). Once EPA gets this years' funds, they would need to procure a lab and set up a contract, which could take a few months, as we had discussed with Mary O'Donnell earlier.

We are reexamining whether DOH has money to fund the analyses, and I have also asked DOT to consider whether they have money to fund the analyses (they are the responsible party). No conclusion yet on either of these avenues. DOH is also considering proceeding with the site characterization and eliminating the dioxin analyses if no funds can be found to perform these analyses. DOH needs to determine the schedule constraints for this project - I hope to iron this out next week when some DOH folks are back in the office. If there are no forces driving rapid completion of the site characterization and no DOH or DOT funds available, it is possible that we will just wait to do the field work until EPA can get a lab on line to do the dioxins.

So those are the options: DOH pays, DOT pays, proceed without doing dioxins, or hold off on sampling until EPA has a lab on line. Please call if you have any questions or would like to discuss this further. Let me know if you find out anything from Mary O'Donnell. Thanks!.....Dawn

From: **"Wetzstein, Eric, E." <eewetzstein@oees.com>**
To: **'Dawn Cosgrove - HEER' <dcosgrove@eha.health.state.hi.us>**
Copies to: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
Subject: **RE: dioxin analyses - URGENT- need answer ASAP, please!**
Date sent: **Thu, 5 Oct 2000 17:21:10 -1000**

Hi Dawn,

Table 4-3 has only one X because the locations of the 4 primary samples will be selected in the field in borings that have visual evidence of burn ash (as noted in the text and footnote). The X is in the dup area because it is not location specific. Therefore there are 5 soil samples.

Likewise table 4-4 does not list the locations of the 2 groundwater samples as that will be a field decision based on groundwater gradient and proximity to known ash fill. The water samples indicated are 1 GW dup, 1 field blank, 3 ERs, and 1 lab QC sample. So technically this table is in error, and should indicate 8 samples for groundwater. In terms of costs, however, the lab QC sample is an MS/MSD and is often included in the cost of the other samples even though it is collected in the field.

Consequently, the number of samples charged by the lab would be 5 soil samples and 7 groundwater samples for a total of 12 samples. At about $1200.00 each the total cost would be about $14,400. If we procured the lab as a sub to us there would be a 1.2% markup on that cost.

One great way to potentially save costs is to hold all the QC samples (in our case 1 GW dup + 1 FB + 3 ER's for a total of 5 samples), and only analyze them if there are significant (above levels triggering a DQO decision rule as specified in the plan). Otherwise the samples would not need to be analyzed, potentially saving up to $6,000. Because of the long holding times for dioxin a decision to analyze them and fund their testing could be made after receiving preliminary results. This is a practice often used on cost-conscious commercial projects, and the long holding time allows this latitude.

Hope this helps,
Eric

-----Original Message-----
From: Dawn Cosgrove - HEER [SMTP:dcosgrove@eha.health.state.hi.us]
Sent: Thursday, October 05, 2000 3:33 PM
To: Wetzstein, Eric, E.
Cc: jhkotoshirodo@oees.com
Subject: dioxin analyses - URGENT- need answer ASAP, please!

Sorry - I missed something. Table 4-3 has an "X" in only one cell under the dioxin/furan column (indicating one soil sample analyzed for dioxins/furans), but the total for the column is 5 soil samples.
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THanks, Eric.
Dawn

From: "Wetzstein, Eric, E." <eewetzstein@oees.com <mailto:eewetzstein@oees.com> >
To: 'Dawn Cosgrove - HEER' <dcosgrove@eha.health.state.hi.us <mailto:dcosgrove@eha.health.state.hi.us> >
Subject: RE: (Fwd) Mary O'Donnel and analyses
Date sent: Thu, 5 Oct 2000 09:42:35 -1000

Hi Dawn,
The analytical cost for dioxin is about $1200 per sample. We have 5 soil and 6 groundwater samples slated in the FSP for a total of 11 samples. Total lab cost without our markup would be about $13,200 and 14,784 after markup. Let me know if you need anything else.
Eric
-----Original Message-----
From: Dawn Cosgrove - HEER [SMTP:dcosgrove@eha.health.state.hi.us] <mailto:[SMTP:dcosgrove@eha.health.state.hi.us]>
Sent: Thursday, October 05, 2000 8:00 AM

To: eewetzstein@oees.com <mailto:eewetzstein@oees.com>
Subject: (Fwd) Mary O'Donnel and analyses

Eric, could you please provide me with an answer to my last question below regarding the cost of dioxin analyses (in bold).
Dawn
------- Forwarded Message Follows -------
From: Self <EHANVL1/DCOSGROVE>
To: eewetzstein@oees.com,jkotoshirodo@oees.com <mailto:eewetzstein@oees.com,jkotoshirodo@oees.com>
Subject: Mary O'Donnel and analyses
Date sent: Mon, 18 Sep 2000 13:51:12 -1000

Hi, Eric and Jan -
I spoke with Mary O'Donnel today to get the story on how the EPA lab works. When I talked to Jan last week, she indicated that TCLP and dioxins were not yet scheduled. Mary indicated that she should be able to find a lab to do the TCLP analyses, as the only problem there was a volume issue for the labs. The dioxin analyses, as you know, are a separate and more difficult problem.
The EPA's standard way of getting specialized analyses like dioxins done is not available now. Mary is working to find some kind of "administrative" way to get a lab lined up to do the dioxin analyses. Mary will contact me in one week and let me know what the current scoop is on the possibility of accomplishing the dioxin analyses (not including the 1-2 month option below).
If Mary doesn't find an "administrative" way to get the dioxin analyses done, here are the options:
* Find the money internally to do the analyses.
>>>> Ogden's budget: Is there any possibility that your contract for

Kakaako Unit 8 has enough money in it to cover the dioxin analyses included in the SAP?
>>>> Direct DOH funding? I'll poke around and see if there is any
"spare change" in the DOH HEER budget that might be available
for such a thing, but I think it is unlikely that there is anywhere
within HEER to get money for this.

* EPA could issue a one-time contract for dioxin analyses. This would take 1-2 months to set up.

Please let me know what a standard rate is for dioxin analyses - I don't have experience with this analysis (e.g. if Ogden went with their contracted lab - I am assuming you have one - - how much is one dioxin analysis, and how much would all planned dioxin analyses for Kakaako Unit 8 cost?).
Thanks!
Dawn

Dawn Cosgrove
Hawaii Department of Health - HEER
Voluntary Response Program
Remedial Project Manager
Dawn Cosgrove
Hawaii Department of Health - HEER
Voluntary Response Program
Remedial Project Manager

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com,jhkotoshirodo@oees.com**
Subject: **Kakaako Unit 8 and dioxin analyses**
Date sent: **Thu, 5 Oct 2000 08:17:42 -1000**

Good Morning, Eric and Jan -

I reached Mary O'Donnel this morning and discussed the status of getting a lab on line to do dioxin analyses. EPA did sign on a regional lab last week for overflow work and analyses that the EPA Richmond lab cannot do; however, the new regional lab cannot do dioxins/furans analyses (or radiocam), so we are in the same position as we were.

Mary will speak with Tom Mix in the EPA Brownfields program to see if that program has the money to set up and execute a contract for dioxin analyses. I asked her to communicate directly with Jan on the status of this issues; she will also update me at critical points.

I will be out of the office from Oct. 9 - 23. I'll talk to you when I return.

Thanks!□
Dawn

Call received X
call initiated ____

TELEPHONE DECISION LOG

Date: 10-3-00	Phone Numbers:
Time: 14:00	Fax Number:

Name of Person Calling: Eric Wetzstein

Affiliation: Ogden

Incident/Site being referenced: Kakaako Unit B

Brief Discussion of Communication:

Eric wanted to tell me, in response to my 30ct2000, 13:53 email to him, that Ogden will continue to pursue EPA/Mary O'Donnel once a week to resolve the lab issues. I reiterated that my conversations with Mary do not replace Ogden's pursuit of answers. Eric thought that that if a "one-time contract" for dioxin analyses was needed, that DOH would need to be involved. I corrected him on this perception: such a contract would be solely the responsibility of EPA, it would be an EPA contract (not a DOH contract), and that it may be for other projects besides ours. I encouraged him to contact Mary repeatedly, & not to wait to hear from her.

HEER Staff Signature: Date: 10-3-00

Dawn Cosgrove

From: **Self <EHANVL1/DCOSGROVE>**
To: **"Wetzstein, Eric, E." <eewetzstein@oees.com>**
Subject: **RE: Kakaako Brownfield Unit 8**
Copies to: **jhkotoshirodo@oees.com**
Date sent: **Tue, 3 Oct 2000 13:53:05 -1000**

Hi, Eric -

The best thing that Ogden can do to facilitate scheduling and performance of the field work is to talk to Mary frequently (at least once a week) to get an update on the status of the issues. She is out of the office at least most of this week, so I am waiting to hear back from her. If I do not hear back from her by Friday, I will leave her a voice message to contact you (that is, Ogden, either you or Jan, whoever Mary has been communicating with directly) to update you on the status of the lab scheduling.

I am assuming that my one communication with Mary is not taking the place of Ogden's communication with her or her communication with Ogden. That was not the intent of my contacting her - I would still like the primary correspondence to be between Ogden and EPA regarding this issue, with Ogden taking the lead on resolving issues. I will make certain that this is clear to Mary either when I speak with her this week or alternatively, through voice mail or email. Please do not think that my contact with Mary replaces Ogden's responsibility to keep the project on track, resolve outstanding issues, and maintain direct contact with EPA regarding the issues.

I'm hoping that these lab issues will be resolved by the time I return on Oct. 24 and that the field work will be scheduled! I'll let you know if I am able to talk to Mary before I leave (I may or may not be in the office on Monday, Oct. 9, so consider Friday Oct. 6 to be my last day in the office). Otherwise, please continue to contact her regarding the outstanding issue.

Thanks, Eric!
Dawn

From: "Wetzstein, Eric, E." <eewetzstein@oees.com>
To: 'Dawn Cosgrove - HEER' <dcosgrove@eha.health.state.hi.us> Copies to: "Kotoshirodo, Jan

H." <jhkotoshirodo@oees.com> Subject: RE: Kakaako Brownfield Unit 8 Date sent: Tue, 3 Oct 2000 11:42:22 -1000

Hi Dawn,

We have not heard anything regarding the EPA lab schedule. We have periodically tried to get in contact with Mary O'Donnel (not always successfully). The last returned communication we are aware of was your September, 18th email.

We are basically in a holding pattern, ready to do field work, but awaiting word from EPA and DOH regarding labs. We will attempt to contact EPA (Mary) in order to check the status at least once a week. Since you are going to be out soon, let us know if we can do anything else to facilitate the schedule.

Regards,
Eric

-----Original Message-----
From: Dawn Cosgrove - HEER [SMTP:dcosgrove@eha.health.state.hi.us]
Sent: Tuesday, October 03, 2000 8:28 AM
To: eewetzstein@oees.com
Cc: jhkotoshirodo@oees.com
Subject: Kakaako Brownfield Unit 8

Hi, Eric -

Any news on the status of ensuring that labs are lined up to receive

all samples from the upcoming field actitivies at Kakaako Unit 8? I did get a message from Mary O'Donnel that she has news about the lab arrangements. Have you or Jan spoken with her lately? I expect to hear back from Mary in the next couple of days, and I'll let you know what I learn, although I expect that Mary is also talking to you or Jan regarding the outstanding issues with lab scheduling.

FYI, I will be out of the office from the afternoon of October 9 through October 23, returning to the office on October 24. I will not

be reachable or checking for messages or email during this period of time.

Dawn

Dawn Cosgrove
Hawaii Department of Health - HEER
Voluntary Response Program
Remedial Project Manager

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com**
Subject: **Kakaako Brownfield Unit 8**
Copies to: **jhkotoshirodo@oees.com**
Date sent: **Tue, 3 Oct 2000 08:28:20 -1000**

Hi, Eric -

Any news on the status of ensuring that labs are lined up to receive all samples from the upcoming field actitivies at Kakaako Unit 8? I did get a message from Mary O'Donnel that she has news about the lab arrangements. Have you or Jan spoken with her lately? I expect to hear back from Mary in the next couple of days, and I'll let you know what I learn, although I expect that Mary is also talking to you or Jan regarding the outstanding issues with lab scheduling.

FYI, I will be out of the office from the afternoon of October 9 through October 23, returning to the office on October 24. I will not be reachable or checking for messages or email during this period of time.

Dawn

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com,jkotoshirodo@oees.com**
Subject: **Mary O'Donnel and analyses**
Date sent: **Mon, 18 Sep 2000 13:51:12 -1000**

Hi, Eric and Jan -

I spoke with Mary O'Donnel today to get the story on how the EPA lab works. When I talked to Jan last week, she indicated that TCLP and dioxins were not yet scheduled. Mary indicated that she should be able to find a lab to do the TCLP analyses, as the only problem there was a volume issue for the labs. The dioxin analyses, as you know, are a separate and more difficult problem. The EPA's standard way of getting specialized analyses like dioxins done is not available now. Mary is working to find some kind of "administrative" way to get a lab lined up to do the dioxin analyses. Mary will contact me in one week and let me know what the current scoop is on the possibility of accomplishing the dioxin analyses (not including the 1-2 month option below).

If Mary doesn't find an "administrative" way to get the dioxin analyses done, here are the options:

- per Eric Wetzstein, No

- Find the money internally to do the analyses.
>>>> Ogden's budget: Is there any possibility that your contract for Kakaako Unit 8 has enough money in it to cover the dioxin analyses included in the SAP?
>>>> Direct DOH funding? I'll poke around and see if there is any "spare change" in the DOH HEER budget that might be available for such a thing, but I think it is unlikely that there is anywhere within HEER to get money for this.

- EPA could issue a one-time contract for dioxin analyses. This would take 1-2 months to set up.

Please let me know what a standard rate is for dioxin analyses - I don't have experience with this analysis (e.g. if Ogden went with their contracted lab - I am assuming you have one - - how much is one dioxin analysis, and how much would all planned dioxin analyses for Kakaako Unit 8 cost?).

Thanks!

Call received X
call initiated ——

TELEPHONE DECISION LOG

Date: Sept 13, 2000	Phone Numbers:
Time:	Fax Number:

Name of Person Calling: Jan Kotoshirodo

Affiliation: Ogden

Incident/Site being referenced: Kakaako Unit 8

Brief Discussion of Communication:

She got message from Mary O'Dowd @ EPA (lab coordinator). Most analyses are scheduled for a lab.

↓

Except –

(1) TCLP (soil)
GW (SW 846 methods

"No lab resources available". Mary says we'll have to schedule "ourselves". Jan doesn't know what yet that means.

(2) Dioxins – still don't know if & when a lab will be available.

Stratoprobe is cancelled for next week.

HEER Staff Signature: Dawn Cosgrove

Date: 9-13-00

Call received X
call initiated ____

TELEPHONE DECISION LOG

Date: Sept. 11, 2000	**Phone Numbers:**
Time: 13:25	**Fax Number:**

Name of Person Calling: Eric Wetzstein, Jan Katoshinsdo

Affiliation: Ogden

Incident/Site being referenced: Kakadko Brownfield Unit 8

Brief Discussion of Communication:

definite - Region ~~IX~~ lab will take the Encore samples (VOCs). (will not accept Saturday samples)

- CLP - goes to (hopefully only) one lab.
- SW-846 to other lab. (not sure what lab)
- TCLP & TPH - not scheduled yet. Trying to send to Region IX lab.
- Dioxins (8290) - EPA doesn't have a lab with $ left on contract, so can't do dioxins at this lab. Not sure if another lab that will do around Oct. 1. Holding time = 30 days. (no lab)
  (Soil & rinsate).
  → I recommend holding off on field work until can confirm that there will be a lab that can take dioxin samples.

Been playing alot of phone tag.

HEER Staff Signature: Dawn Cosgrove

Date: 9-11-00

From:	**Self <EHANVL1/DCOSGROVE>**
To:	**eewetzstein@oees.com**
Subject:	**Kakaako Unit 8: next steps**
Copies to:	**jhkotoshirodo@oees.com,cmorita**
Date sent:	**Mon, 11 Sep 2000 06:46:28 -1000**

Hi, Eric -

Now that EPA has approved the Kakaako SAP Rev 01, please let me know what the status of the lab and field scheduling and other questions/requests that I had in my August 30, 2000 email to you.

Thanks, Eric!
Dawn

From: Self <EHANVL1/DCOSGROVE>
To: eewetzstein@oees.com
Subject: Kakaako Brownfield Unit 8: Sampling and Analysis Plan, Rev 01, Aug 2000
Copies to: cmorita,jhkotoshirodo@oees.com
Date sent: Wed, 30 Aug 2000 08:19:12 -1000

Good morning, Eric:

Just to let you know that I put the DOH/HEER acceptance letter in the mail to you today for the August 2000 SAP (Rev 01). I was going to fax it also, but our fax machine is broken. The document looks good!

Please let me know when you receive acceptance of the SAP Rev 01 and resolution of the two outstanding issues (TCLP and 48-hr turn on Encore samplesby EPA lab) from EPA Region IX. Also, please let me know the **field activities dates and field schedule** as soon as possible. The field schedule should contain mob, the schedule for each of the various sampling activities, and demob.

If you haven't received a response from EPA Region IX regarding the two outstanding issues and acceptance of the SAP Rev 01 by **September 11** (that is, 3 weeks after submittal of the SAP), please let me know and provide me with an update regarding the status of these issues and acceptance of the SAP Rev 01 per your discussions with EPA Region IX (Tom Mix, Gail Jones, and the EPA lab coordinator, Mary O'Donnel).

In your discussions with the EPA lab, **what is the anticipated turnaround of the sample results?** Even if the EPA lab is not guaranteeing a specific turnaround, it should be able to give you a likely turnaround time. For example, if the EPA lab gives you a range of time (for example, 30 to 45 days), then make an assumption as to what the turnaround time will be. Once that information is obtained (even if it is just an "assumption" of the date of receipt of analytical data), please **submit a schedule** to me for completion of the site characterization report (assuming a 30-day turnaround time for DOH/EPA review of the draft). Completion of a schedule, even if it is based on an informed assumption of date of receipt of analytical data, is do-able because the schedule in Ogden's proposal for this project is keyed off of receipt of analytical data. If the EPA lab does not meet the anticipated turnaround time, then please revise the schedule once all of the lab data is received and submit the revised schedule for me.

If you have any questions about the requested schedules, please call me. Otherwise, **I will expect to receive an initial schedule for completion of the site characterization report by the time the field effort is scheduled and a field schedule is submitted**, at the latest, which I hope will be by mid-September. If you want to combine the field schedule with the schedule for completion of the site characterization report, that would be fine.

Thanks, Eric!
Dawn

Rec'd "out of office" reply from Eric, so I forwarded this message to him in Guam. DMC

From: **Self <EHANVL1/DCOSGROVE>**
To: **Ogdencto236@netpci.com**
Subject: **Kakaako Brownfield Unit 8 SAP**
Copies to: **jhkotoshirodo@oees.com**
Date sent: **Wed, 30 Aug 2000 09:01:27 -1000**

Eric - I am forwarding this to you, just FYI.

From: Self <EHANVL1/DCOSGROVE>
To: eewetzstein@oees.com
Subject: Kakaako Brownfield Unit 8: Sampling and Analysis Plan, Rev 01, Aug 2000
Copies to: cmorita,jhkotoshirodo@oees.com
Date sent: Wed, 30 Aug 2000 08:19:12 -1000

Good morning, Eric:

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If you haven't received a response from EPA Region IX regarding the two outstanding issues and acceptance of the SAP Rev 01 by September 11 (that is, 3 weeks after submittal of the SAP), please let me know and provide me with an update regarding the status of these issues and acceptance of the SAP Rev 01 per your discussions with EPA Region IX (Tom Mix, Gail Jones, and the EPA lab coordinator, Mary O'Donnel).

In your discussions with the EPA lab, what is the anticipated turnaround of the sample results? Even if the EPA lab is not guaranteeing a specific turnaround, it should be able to give you a likely turnaround time. For example, if the EPA lab gives you a range of time (for example, 30 to 45 days), then make an assumption as to what the turnaround time will be. Once that information is obtained

(even if it is just an "assumption" of the date of receipt of analytical data), please submit a schedule to me for completion of the site characterization report (assuming a 30-day turnaround time for DOH/EPA review of the draft). Completion of a schedule, even if it is based on an informed assumption of date of receipt of analytical data, is do-able because the schedule in Ogden's proposal for this project is keyed off of receipt of analytical data. If the EPA lab does not meet the anticipated turnaround time, then please revise the schedule once all of the lab data is received and submit the revised schedule for me.

If you have any questions about the requested schedules, please call me. Otherwise, I will expect to receive an initial schedule for completion of the site characterization report by the time the field effort is scheduled and a field schedule is submitted, at the latest, which I hope will be by mid-September. If you want to combine the field schedule with the schedule for completion of the site characterization report, that would be fine.

Thanks, Eric!
Dawn

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

680 Iwilei Road
Suite 660
Honolulu, HI 96817
808 545 2462
Fax 808 528 5379

August 22, 2000

Ms. Dawn Cosgrove
State of Hawaii Department of Health
Hazard Evaluation and Emergency Response Office
919 Ala Moana Boulevard, Room 206
Honolulu, Hawaii 96814

Subject: Sampling and Analysis Plan for a Site Characterization Study at the Kaka'ako Brownfield Unit 8 Site - Revision 01

Dear Ms. Cosgrove,

Enclosed are three (3) copies of Revision 01 the Sampling and Analysis Plan (SAP) for the Kaka'ako Brownfield Unit 8 Site. One (1) copy of Revision 01 of the SAP has been forwarded to Gail Jones of the U.S. Environmental Protection Agency (USEPA) Region IX Quality Assurance Program. Also included are two (2) copies of the site-specific Health and Safety Plan for this study.

Responses to comments from the State of Hawaii Department of Health and USEPA are included in the attached tables.

If you have any questions regarding this Sampling and Analysis Plan, please do not hesitate to contact me at (808) 545-2462 Ext. 128.

Sincerely,

Eric Wetzstein
Project Manager

Enclosure
Cc: Gail Jones, USEPA Region IX

Type of Review:	Kakaako Final Field Sampling Plan (Sampling and Analysis Plan dated May 2000)
Reviewed by:	Dawn Cosgrove, DOH
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
1	Original Comment 2: Original comment and response to comment do not appear to have been fully incorporated into Kakaako Field Sampling Plan Final (final plan). a. The original comment specifically requests that all detected analytes be included as COPCs and that background levels could be considered at a later time. Including all detected analytes in the risk evaluation is necessary to effectively calculate cumulative risk associated with all detected analytes. The response to the original comment indicates that all detected analytes will be included as COPCs for the purposes of a risk evaluation. The text of the final plan, however, indicates that analytes detected above the quantitation	In the draft SAP, COPCs were specified only for those analytes that exceeded Region IX PRGs, Tier 1 Als, or NAWQC screening levels. The final text was then revised to specify that analytes detected above their respective laboratory quantitation limits (QLs) (i.e. those analytes that are detected by the laboratory) would be included as COPCs for soil and groundwater (*Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions*). There are however, method limitations for some analytes (QLs higher than Region IX PRGs, Tier 1 ALs, or NAWQC). *Section 3.4.5 - Data Quality Criteria* describes data decisions/evaluation for analytes with method limitations.	Identifying COPCs for soil and groundwater as analytes detected above their respective laboratory quantitation limits (QLs) (i.e. those analytes that are detected by the laboratory) (*Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions*) is understood and accepted. However, the final text indicates that "if an analyte is detected in soil above its laboratory QL or a relative background concentration based on soil sampling, that analyte is identified as a COPC..." In order to effectively calculate cumulative risk associated with all analytes detected above their respective laboratory QLs, background concentrations should be considered after initial calculation of risk. Please delete the text "or a relative background concentration" from *Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions,* from Appendix D, and from any other	"Background concentrations" will be considered after the initial calculation of risk. For clarification, the text "or a relative background concentration" has been deleted from the text. A reference to Appendix D has been added to the introductory paragraph in Section 3.4.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
	limit or a relative background concentration based on soil sampling will be identified as a COPC. This contradicts the original comment provided on the Field Sampling Plan Draft (draft plan) and the response to that comment.		places that this element is referenced. Also, please reference Appendix D in Section 3.4 of the main text.	
1	b. The text implies that background soil samples will be collected; however, Section 7.3 of the final plan specifies that general literature values for background metal concentrations on island will be used (that is, background samples will not be collected as part of this field effort).	The metals detected above QLs will be compared to literature values for risk screening purposes. The collection of background samples will not be included in this field investigation. It was agreed that all soils in the surrounding areas consist of fill materials. Many of these fill soils could be the same or similar source(s) as the site. Consequently, their usefulness as "background" would be limited. Literature values for metals in native soils would be a better source. Organic compounds will be presumed to have been derived from anthogenic sources.	The use of literature values for background concentrations of metals is understood and accepted Note that the current text states "....or a relative background concentration based on soil sampling...", whereas Section 7.3 indicates that relative background concentrations will be based on literature values, not current soil sampling. Please refer to Comment 1; incorporation of DOH Response to Comment 1 will remedy this concern.	See comment No. 1.
2	Original Comment 3, part b: a. Discussion of ecological risks associated with sediment transport into the harbor appears to have been eliminated in the final plan. Please clarify the rationale for not including these risks in Step 2 of the	The rationale for not collecting harbor sediment samples are (1) the site is largely paved and the potential for a sediment transport pathway is unlikely, (2) it would be difficult to link detected contamination to the site, and (3) the expense of collecting sediment samples was beyond the current DOH budget	Response adequately addresses the comment.	---

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
	"Steps for Groundwater Data Decisions."	constraints.		
2	b. NOAA 1998 (presumably the reference listed in Section 8 as "Buchman, M.F. 1998") is not cited in "Steps for Groundwater Data Decisions," as indicated in the response to the original comment.	Comment noted. The appropriate reference will be added to the text. Please see revision to *Steps for Groundwater Data Decisions - Step 2.*	Response adequately addresses the comment.	---
3	Original Comment 5: See 1. Original Comment 2, parts a and b (discussed previously) apply to the discussion for groundwater data decisions as well.	See response No.1	See DOH Reply to Response Comment for Comment 1.	See comment No. 1.
4	Original Comment 7: a. Part a of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the decision error rate for contaminant concentrations do not appear to have been incorporated into the final plan.	As indicated in the original response to comment, decision errors will be minimized for estimated contaminant concentrations, and not risk levels. It is agreed that contaminant concentrations are not risk levels, however, since standard EPA protocol is to be followed, it is appropriate to use the conservative excess cancer value and hazard index as stated because those are the specific risk levels from which PRGs (i.e. screening levels for contaminant concentrations) are derived/based. (*See Section 3.4.6, 3rd ¶)*	The final text of *Section 3.4.6 Step 6: Specify Limits on Decision Errors* appears to be contradictory. The null hypothsis and decision errors outlined on page 3-14 are in reference to risk parameters (e.g. excess cancer risk >1E-06 or HI >1), while the second sentence of the last paragraph on page 3-14 indicates that the sampling program is intended to minimize decision errors for contaminant concentrations. The third sentence of the last paragraph on page 3-14 then goes back to discussing decision errors with respect to element of risk, and the first full paragraph on page 3-15 then discusses false-positive decision errors with respect to soil [contaminant] concentrations and action levels [PRGs]. These statements are contradictory.	It is agreed that decision errors should apply to contaminant concentrations, not risk parameters. The text in *Section 3.4.6* has been revised to provide more consistency. Specifically, the definition for the null hypothesis, has been revised to state : "*...Contaminant concentrations in soil result in an excess cancer risk greater than 1E-6 and/or hazard index greater than 1 (i.e. Site requires baseline risk assessment and possible removal action), and/or the contaminant concentrations in groundwater result in COPCs that are greater than the (AWQCx10) (i.e. the Site requires a baseline ecological risk assessment)."* The definitions for Type I and Type II decision errors have been revised similarly. The first ¶ on page 3-15 has also been revised: 3rd sentence in ¶ has

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
			Please re-evaluate the null hypothesis and the Type I and Type II decision errors and how they relate to the subsequent text of Section 3.4.6 regarding minimization of decisions errors (on contaminant concentrations or on risk elements?) and the probability of false-positive decision errors (for contaminant concentrations or risk parameters?). As outlined in the email from Charley Langer of DOH to Eric Wetzstein of Ogden dated May 10, 2000, decision errors should apply to contaminant concentrations, not risk parameters (e.g. risk assessment results). Please consider focusing the null hypothesis and decision errors on whether contaminant concentrations in soils at levels that pose a risk to human health.	been deleted, and 4th sentence has been revised to specify that site soil concentrations will be used to determine the ECR and HI.
4	b. Part b of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the use of PARCC parameters in the calculation of decision errors do not appear to have been incorporated into the final plan.	Comment noted. As indicated in the original response to comment, PARCC parameters will not be used directly in the calculation of a 95% UCL. For further clarification the discussion of PARCC parameters will be moved to a new separate subsection (*See Section 3.4.6 - Minimization of Decision Errors*).	It is not clear how the effect of QA/QC procedures and assessment of data quality using PARCC parameters, lab QC, field QC, and data validation "place limits on decision errors," as stated in the third and fourth paragraphs of page 3-15. Limits on decision errors are typically quantifiable parameters that directly specify the tolerable limits on decision errors (e.g. controlling false positives to 5%); PARCC parameters, lab QC, field QC, and data validation do not place limits on decision errors in this respect. It is understood and accepted that these	For further clarification, the last two paragraphs in Section 3.4.6 (*Step 6: Specify Limits on Decision Errors*) have been revised. Specifically, text has been revised to indicate that QA/QC procedures, PARCC parameters, and data validation are used to minimize the likelihood of committing a Type I or Type II error. Text stating that these procedures/criteria "place limits" on decision errors has been deleted.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
			elements will not be included in the calculation of the 95% UCL. Please revise the text in the third and fourth paragraphs of page 3-15 to clarify that QA/QC procedures minimize measurement error, thus reducing the likelihood of committing a Type I or Type II error, and that PARCC parameters and data validation assess data quality, thus reducing the likelihood of committing a Type I or Type II error. Please delete the text indicating that these items "place limits" on decision errors.	
5	Original Comment 9: Please clarify the rationale for placing subsurface soil sampling locations SA16/SB16 through SA20/SB20 at the locations shown on Figure 4-2 of the final plan, noting that some of these locations are not at grid nodes but possibly could be placed on nearby nodes.	The sample locations for subsurface soil samples SA16/SB16 through SA20/SB20 as well as surface soil samples SS35-SS38 and SS40 were selected based on a biased sampling design (*Sections 4.1.1 and 4.2.1*) for areas near the former hydraulic lift area and UST.	Response adequately addresses the comment.	---
6	Original Comment 14: The response to the original comment indicates that a procedure for locating grid points that fall in inaccessible locations will be included in the text. Such a procedure was not found in the final plan.	*Section 5.2.2 - Soil Sampling Locations* in the final SAP was revised to specify sample locations that are determined to be inaccessible may be relocated to the nearest radial location that is accessible.	Please note that the draft plan and final plan include the same text regarding relocating inaccessible sample locations to the nearest radial location that is accessible. Thus, it appears that the original comment requesting "a specified procedure for moving an inaccessible point" (beyond the draft plan text) and the response that "a procedure for locating grid points that fall in	---

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
			inaccessible locations will be included in the text" did not result in a more specific procedure than was already include in the draft plan. The final text, however, is accepted as written.	
7	Additional Comments Relating to Original Comments: a. In Section 3.4.7, paragraph 2, of the final plan, the text indicates that 50-foot node spacing will be used for the site. Section 4.1.1 and Figure 4-1 indicate 50-foot node spacing for surface soils, which is in agreement with Section 3.4.7. For subsurface sampling, however, the text of Section 4.2.1 indicates that 75-foot node spacing will be used, and the scale on Figure 4-2 indicates that 100-foot node spacing will be used for subsurface soil sampling. Please clarify the node spacing for surface and subsurface sampling locations at the site.	The node spacing as shown on Figure 4-2 indicates a node spacing of approximately 75-feet (each sample location is 75-feet from the other).	Grid nodes generally refer to the intersection of grid lines. The node spacing on the grid overlain on Figures 4-1 and 4-2 uses the same 50-foot node spacing. However, sampling locations are placed at each grid node on Figure 4-1 (surface soil sampling locations) and on every other grid node along a grid line on Figure 4-2 (subsurface soil sampling locations). It is acknowledged that this results in a 50-foot surface soil sample spacing measured along the grid and a 75-foot subsurface soil sample spacing when measured along the diagonal of the grid. Please modify the text of *Section 4.2.1 Sampling Locations* (subsurface soil) to indicate these facts, or alter the grid for subsurface sampling design (Figure 4-2) to show visually that the grid nodes are 75 feet apart. Please revise the text in *Section 3.4.7 Step 7: Optimize the Design for Obtaining Data*, paragraph 2, to indicate the actual sample spacing for surface soil samples and subsurface soil samples to clarify this element.	The text in Section 4.2.1 has been revised to more accurately describe the subsurface soil sampling locations. Text has been added to indicate that subsurface soil sampling locations are based on a grid node spacing of 50-feet; 40 subsurface samples will be collected from 20 locations at every other grid node; subsurface sampling locations will be equally spaced, approximately 75 feet apart. The 2nd and 3rd paragraphs in Section 3.4.7 have also been revised for clarification of node spacing and sample locations.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
7	b. One analysis stated throughout the draft plan was for PCBs/pesticides. The corresponding analysis in the final plan is indicated as only PCBs. Are pesticides a contaminant of concern at the site?	Pesticides have not been included in the final SAP as a contaminant of concern at the site. The draft SAP included PCB/pesticides together since at the time we thought we would be limited to using the CLP method that includes both. In discussions with EPA Region IX however, we found that we could use the SW-846 method 8082 (PCBs only), since it is better suited to our needs (lower QLs).	Response adequately addresses the comment.	---

Type of Review:	Kakaako Final Field Sampling Plan (Dated May 2000)
Reviewed by:	Gail Jones, EPA Region IX
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Reviewer's Comments	Response to Comments
1B	This concern (original comment 1B) has not been completely addressed. Low level method detection limits are provided, however, there are a number of concerns identified in Table 7-2. A. Table 7-2 lists preliminary remediation goals (PRGs) for soils as micrograms per kilogram (µg/kg); however, the values listed appear to be milligrams per liter (mg/L). It is uncertain if the conversion or the units are incorrect. For example, the detection limits for the Water Low Level Methods for metals by EPA Methods 6010/7000 are listed as microgram per liter (µg/L). The listed detection limits of 0.005 µg/L for cadmium and 0.003 µg/L for lead are extremely low values which Methods 6010/7000 are unlikely to attain. (Both lead and cadmium were present at elevated concentrations in ash sampled previously.) Note, the PRG tables (Region 9 EPA 1999) list PRGs for soils in milligrams per kilogram (mg/kg). The values and units listed in Table 7-2 should be reviewed and corrected as necessary.	The units listed in Table 7-2 for PRGs, DOH Tier 1 Action Levels, and QLs for soil samples have been revised to specify all these concentrations in milligrams per kilogram (mg/kg). An incorrect factor was applied to low level detection limits for metals (aqueous). For low level aqueous samples the laboratory will report to the laboratory specified MDLs verses the CRDL per strict CLP protocol. Approximate laboratory limits are presented in Table 7.2 and are adequate for the project objectives for determining ecological risk. Following a revision of the units for PRGs and QLs, it has been noted that the QLs for CLP methods for PCB analysis will be adequate for this project. The text has been revised in Sections 3, 4, 5, 6, and 7 and Tables 4-3, 7-1, and 7-2 to indicate that soil samples will be analyzed for PCBs using CLP methods.
1B	B. If arsenic, selenium, thallium and antinomy will be extracted using a special process, as indicated in a footnote to Table 7-2, this process should be described in the SAP.	Arsenic, Selenium, Thallium and Antimony shall be analyzed by graphite furnace atomic absorption (GFAA) in order to achieve required detection limits. The GFAA digestion (a.k.a. special process "extraction") uses nitric acid vs. the ICP digestion, which uses both hydrochloric and nitric acid. Since the nitric acid digestion is per the method specifications, the footnote is removed for clarity.

No.	Reviewer's Comments	Response to Comments
1C	This concern (original comment 1C) has not been adequately addressed. The RTC states that the EPA analytical system will not be utilized for the TCLP analysis for IDW; however, Table 4-3, Request for Analysis Services for Soil, identifies samples to be analyzed for TCLP but does not state that these samples will not be analyzed using the EPA analytical system nor does it identify the laboratory that will provide the analysis.	For this study, TCLP analysis will be used to (1) characterize waste generated during sampling activities, (2) provide recommendations for waste disposal options for future redevelopment at the site, and (3) provide a general assessment of remedial alternatives for the site. A written request has been submitted to Tom Mix for approval to use the EPA analytical system for TCLP analysis. Sections 3.4.3, 3.4.5, 3.4.7, 4.5.1, and 4.5.2 have been revised to specify that TCLP results will be used not only for IDW characterization, but also to characterize the site with regard to future redevelopment and/or remediation.
6	This concern has been partially addressed. Section 5.2.2, Subsurface Soil Sampling Procedures, of the revised SAP states that samples for VOC analysis will be collected in EnCore samplers and transferred to a vial containing preservative. Table 4-1 indicates that samples collected for VOC analysis will be preserved with sodium bisulfate. The SOP for soil sampling in Appendix B does not describe the collection of soil samples using EnCore samplers. The collection procedure for VOC samples should be expanded to discuss the pre-weighing of the vials at the laboratory, or, if the vials will be weighed at the site, the weighing process and equipment should be described. Note that a stir bar should be included in the vial containing the sodium bisulfate preservative.	Upon reevaluation of soil borings previously collected at the site, the coralline soils present at the site are likely to effervesce upon contact with the acid preservative. Per guidance provided in the EPA Region IX *Regional Interim Policy for Determination of Volatile Organic Compound (VOC) Concentrations in Soil and Solid Matrices,* an alternative preservation technique is recommended. However, due to budget constraints and the location of the project, freezing of the soil samples would not be practical. VOC soil samples will be collected and shipped to the laboratory in EnCore® samplers, stored at 4±2°C. Text has been added to Section 4.4 explaining the 48-hr holding time requirement, and requesting analysis through the Region IX laboratory in Richmond CA.
11A	This concern has been partially addressed. The RTC states that the text was intended to reference the general types/categories of SOPs, and not the specific SOPs. However, SOPs on data validation and laboratory analysis are not provided.	SOPs on data validation have been added to the Appendix. However, these are SOPs for Ogden data validation procedures (not specific to Region 9-option 2 protocol). Ogden data validation procedures will be customized to this project. Also, please note that some SOPs reference previous EPA methods, however, the most current/updated EPA methods will be used for all data validation procedures. CLP guidance will be applied to the appropriate SW846 methods.

Additional Concerns:		
(1)	[Title/Signature Page] A cover page containing the title of the project and signature blocks for, at a minimum, the EPA Project Officer and EPA Quality Assurance Manager should be provided. An acceptable format is located in the "Instructions for the One-Time Sampling Event Sampling and Analysis Plan (SAP)" (February 1998).	A title/signature page has been added to the SAP.
(2)	[Table 4-3, Request for Analytical Services for Soil; Table 4-4 Request for Analytical Services for Groundwater] It is recommended that the tables list totals for each type of analysis.	A row listing the totals for each analysis has been added to Tables 4-3 and 4-4.
(3)	[Section 5.2.4, Groundwater Sampling Procedures] Section 5.2.4 states that groundwater samples will be analyzed for dissolved metals after being filtered through a 0.45-micron membrane in-line filter. Regional Superfund Site Assessment guidance recommends the use of a 5-micron filter for groundwater samples targeted for metals analysis. If dissolved metals are needed, the SAP does not need to be modified. However, if the collection of metal samples is required for site assessment purposes only, the SAP should be revised to specify a 5-micron filter.	Groundwater samples will be analyzed for dissolved metals. No changes have been made to the SAP.
(4)	[Table 7-1, Analytical QA Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] The following discrepancies or omissions were noted: A. The blank spike/laboratory control sample (BS/LCS) accuracy criteria for CLP volatitles, semi-volatiles, and metals list one number for percent recovery instead of a range. Table 7-1 should be revised to provide acceptance ranges for BS/LCS. Alternatively, the plan/table can state that the acceptance limits as specified in the appropriate CLP SOW will meet project needs.	Table 7-1 has been updated with the appropriate ranges for percent recovery.

Additional Concerns:		
(4)	B. Table 7-1 lists the QA objectives for doixins/furans and CLP Pest/PCBs as TBD, "to be determined." Precision and accuracy criteria should be developed based on the needs of the project. Client Request Forms (CRFs) or Data Quality Indicator Tables (DQI) tables, available from the Region 9 QA Office, should be included in the plan. Alternatively, if private laboratory services are to be procured for these services, the plan should include appropriate laboratory quality control criteria and corrective action procedures. And the plan should state that the acceptance limits as specified in the laboratory QA Plan or SOPs will meet project needs.	Precision and accuracy tables updated from available information from Severn Trent and Alta Laboratories. The proposed recovery limits are adequate for project QA objectives. Actual recovery limits are performance based per the method and will be provided by the selected laboratory. If actual recovery limits exceed the proposed recovery limits the affected data will be scrutinized for adequacy against overall DQO.
(4)	C. The detection limits for dioxin/furan analysis should be specified. These should be based on the needs of this project, not dependent on the analytical laboratory performance, as indicated in a footnote to Table 7-2. See item B above.	Table 7-2 has been updated with acceptable detection limits.

From: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
To: **Jones.Gail@epamail.epa.gov**
Copies to: **"Wetzstein, Eric, E." <eewetzstein@oees.com>, dcosgrove@eha.health.state.hi.us**
Subject: **Kakaako Brownfield SAP - Clarification on TCLP Analysis issue**
Date sent: **Wed, 16 Aug 2000 10:41:50 -1000**

Gail,

In regard to the email below, I would like to clarify that we are not requesting "approval" to include TCLP analysis prior to submittal of Revision 01 of the SAP. We understand that approval will only be given upon review of the final document, and we are only requesting advice as to whether or not TCLP analysis is likely to be approved if the rationale below is included in the SAP.

-Jan Kotoshirodo
Ogden Environmental and Energy Services
PH: (808) 545-2462

> -----Original Message-----
> From: Kotoshirodo, Jan, H.
> Sent: Wednesday, August 16, 2000 9:36 AM
> To: 'Jones.Gail@epamail.epa.gov'
> Cc: Wetzstein, Eric, E.; 'dcosgrove@eha.health.state.hi.us'
> Subject: Kakaako Brownfield SAP - TCLP Analysis
>
> Gail,
>
> Ogden Environmental and Energy Services (Ogden) is currently
> supporting the State of Hawaii Department of Health (DOH) in
> planning and performing a Site Characterization Study at the Kakaako
> Brownfield Unit 8 Site in Honolulu, Hawaii. Ogden has been informed
> by EPA Region IX that TCLP analysis (typically used for waste
> characterization for disposal purposes) is not provided by the EPA
> analytical system. However, TCLP analysis was included in the SAP
> for the purposes of characterizing the nature of contamination at
> the site. TCLP analysis would (1) provide recommendations for waste
> disposal options during future work at the site (i.e. redevelopment
> of the site), and (2) provide a general assessment of remedial

> alternatives for the site. It is anticipated that waste generation
> at the site will be minimal (direct push soil borings) and the 22
> TCLP samples included in the SAP will be used primarily for site
> characterization purposes. In addition, according to the State
> DOH, due to budget constraints, TCLP analysis will likely be
> eliminated from the SAP if the analytical services are not provided
> by the EPA analytical program.
>
> A draft Sampling and Analysis Plan (SAP) dated February 2000 and a
> final SAP dated May 2000 were submitted to EPA Region IX for review.
> Comments for the two reports were issued from EPA on April 20, 2000
> and June 29, 2000. Following the EPA review dated June 29, 2000,
> the SAP was "conditionally approved", pending a few outstanding
> issues and additional concerns. We are currently revising the SAP a
> second time (Revision 01), and would like approval to use the EPA
> analytical system for TCLP analysis at the Kakaako Unit 8 Site. We
> would like to begin field work in mid September, and are requesting
> approval for the inclusion of TCLP analysis prior to submittal of
> Revision 01 of the SAP. Please call me at ext. 155 if you have any
> questions.
>
> Thank-you,
> Jan Kotoshirodo
> Ogden Environmental and Energy Services
> PH: (808) 545-2462
>

From: Self <EHANVL1/DCOSGROVE>
To: jhkotoshirodo@oees.com
Subject: Kakaako Brownfield Unit 8: Resolution of TCLP and Encore issues
Copies to: eewetzstein@oees.com
Date sent: Wed, 16 Aug 2000 10:44:47 -1000

Hi, Jan -

Just to confirm what we talked about earlier regarding Gail Jones' recommendations for moving forward on the TCLP and Encore issues remaining with the SAP:

TCLP

- - Send advance email to Gail Jones outlining why doing TCLP analyses. Gail will discuss it with Vance Fong and get a sense of whether the agency will agree with the rationale and doing the TCLP analses at the EPA lab. (This is the email you sent to Gail earlier today; please see my response back to you for further clarification to Gail).

- - Send letter to Tom Mix with request to use EPA lab for TCLP analyses (including rationale), and he will direct the request to Vance Fong, who must ultimately approve of using the EPA lab for TCLP analyses.

- - Include TCLP analyes in the SAP (Rev 01) (as you did in last version), as well as the rationale for conducting the analyses. (The final SAP only discussed TCLP for waste characterization, I recall, but not other reasons such as initial assessment of remedial alternatives).

EPA will not officially approve the rationale for doing the TCLP analyses without seeing the Rev 01 SAP. In the same light, EPA will not approve of using the EPA lab for TCLP analyses without going through a written request to Tom Mix, who in turn will get Vance Fong's approval.

The last two items can definitely be done simultaneously. It seems better to get the unofficial word from Gail (after she discusses it with Vance in response to your advance email) first before doing the second two items; this is something you should confirm with Gail (415-744-1498).

Encore sample analyses

- - Coordinate scheduling of analyses with Mary O'Donnel (415-744-1533) directly. Gail Jones does not coordinate with the EPA Lab on such issues; you need to do that directly with Mary. Discuss use of the Regional Lab with Mary (in the context of Encore samples and holding times) and make sure she knows the limitations you are up against with shipping and extracting the samples within the holding times.

- - Include in SAP Rev 01 that you are requesting Regional Lab so that samples will be delivered in 24 hours (e.g. delivery to other locations may require 48-hour delivery time; make sure in advance that you know the guaranteed delivery time from the shipper), making 48 hour turnaround on the extraction possible.

It would probably be best if you communicated directly with Gail on any clarification you might need on these issues. You can try me first, if you'd like; however, I think its important that you talk to Gail directly on appropriate issues.

Dawn

From: **Self <EHANVL1/DCOSGROVE>**
To: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
Subject: **Re: Kakaako Brownfield SAP - TCLP Analysis**
Date sent: **Wed, 16 Aug 2000 09:55:09 -1000**

Jan, Gail Jones/EPA will not "approve" of including TCLP analyses in the SAP until you actually submit the SAP. Gail is willing to discuss the issue with Vance Fong in advance to get a sense of whether or not EPA will allow use of the EPA lab to do TCLP analyses for this project; however, EPA will not actually "approve" the SAP (and the inherent conclusion that TCLP analyses will be done as part of the site characterization) until it is submitted to Gail Jones. That is the reason that Gail suggested submitting an "advance" request to her in an email regarding this issue so that she could get an unofficial opinion from Vance Fong, and also why a letter to Tom Mix and submittal of the SAP (Rev 01) were recommended to be done simultaneously (that is, actual approval of using the EPA lab for TCLP analyses will not be given until the SAP is submitted).

I suggest you email her and clarify this, or she will probably just come back saying she won't officially "approve" of doing TCLP until she sees the reasoning in an official submittal of the Rev 01 SAP, and clarify that you are just looking for an opinion as to whether or not this approach will be approved (which will be done only after you submit the SAP Rev 01). She needs to see the approach IN THE SAP before she will approve the document and the included approach for doing TCLP. She will not base agency approval on an email or on conversations she has with you or I.

Please call if you have questions.

Dawn

From: "Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>
To: Jones.Gail@epamail.epa.gov
Copies to: "Wetzstein, Eric, E." <eewetzstein@oees.com>, dcosgrove@eha.health.state.hi.us
Subject: Kakaako Brownfield SAP - TCLP Analysis
Date sent: Wed, 16 Aug 2000 09:36:13 -1000

Gail,

Ogden Environmental and Energy Services (Ogden) is currently supporting the State of Hawaii Department of Health (DOH) in planning and performing a Site Characterization Study at the Kakaako Brownfield Unit 8 Site in Honolulu, Hawaii. Ogden has been informed by EPA Region IX that TCLP analysis (typically used for waste characterization for disposal purposes) is not provided by the EPA analytical system. However, TCLP analysis was included in the SAP for the purposes of characterizing the nature of contamination at the site. TCLP analysis would (1) provide recommendations for waste disposal options during future work at the site (i.e. redevelopment of the site), and (2) provide a general assessment of remedial alternatives for the site. It is anticipated that waste generation at the site will be minimal (direct push soil borings) and the 22 TCLP samples included in the SAP will be used primarily for site characterization purposes. In addition, according to the State DOH, due to budget constraints, TCLP analysis will likely be eliminated from the SAP if the analytical services are not provided by the EPA analytical program.

A draft Sampling and Analysis Plan (SAP) dated February 2000 and a final SAP dated May 2000 were submitted to EPA Region IX for review. Comments for the two reports were issued from EPA on April 20, 2000 and June 29, 2000. Following the EPA review dated June 29, 2000, the SAP was "conditionally approved", pending a few outstanding issues and additional concerns. We are currently revising the SAP a second time (Revision 01), and would like approval to use the EPA analytical system for TCLP analysis at the Kakaako Unit 8 Site. We would like to begin field work in mid September, and are requesting approval for the inclusion of TCLP analysis prior to submittal of Revision 01 of the SAP. Please call me at ext. 155 if you have any questions.

Thank-you,
Jan Kotoshirodo
Ogden Environmental and Energy Services
PH: (808) 545-2462

From:	**"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
To:	**Jones.Gail@epamail.epa.gov**
Copies to:	**"Wetzstein, Eric, E." <eewetzstein@oees.com>, dcosgrove@eha.health.state.hi.us**
Subject:	**Kakaako Brownfield SAP - TCLP Analysis**
Date sent:	**Wed, 16 Aug 2000 09:36:13 -1000**

Gail,

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A draft Sampling and Analysis Plan (SAP) dated February 2000 and a final SAP dated May 2000 were submitted to EPA Region IX for review. Comments for the two reports were issued from EPA on April 20, 2000 and June 29, 2000. Following the EPA review dated June 29, 2000, the SAP was "conditionally approved", pending a few outstanding issues and additional concerns. We are currently revising the SAP a second time (Revision 01), and would like approval to use the EPA analytical system for TCLP analysis at the Kakaako Unit 8 Site. We would like to begin field work in mid September, and are requesting approval for the inclusion of TCLP analysis prior to submittal of Revision 01 of the SAP. Please call me at ext. 155 if you have any questions.

Thank-you,

Jan Kotoshirodo
Ogden Environmental and Energy Services
PH: (808) 545-2462

Call received ____
call initiated X

TELEPHONE DECISION LOG

Date: August 16, 2000	**Phone Numbers:** 545-2462
Time: 0740	**Fax Number:**

Name of Person Calling: Jan Kotoshirodo

Affiliation: Ogden

Incident/Site being referenced: Kakaako Brownfield Unit B

Brief Discussion of Communication:

I relayed to her all of the items in my Aug 14, 2000 phone conversation with Gail Jones, EPA Region IX, regarding the suggested steps to take to get resolution of the two outstanding SAP issues. In summary (see Telephone Decision Log, Aug 14, 2000, between Dawn Cosgrove & Gail Jones, EPA):

TCLP (These can be done simultaneously, although may want to get an answer on 1. before doing 2. & 3.)

1. Advance email to Gail with reasons need to do TCLP
2. letter to Tom Mix
3. Put in SAP & submit for approval.

ENCORE ISSUE

1. Put that requesting Regional Lab in Richmond, CA into SAP (in order to meet TAT)
2. Schedule with Mary O'Donnell (discuss using Regional Lab with her).

HEER Staff Signature:	**Date:**

Dawn Cosgrove

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com,jhkotoshirodo@oess.com**
Subject: **(Fwd) Re: Outstanding Kakaako Brownfield Unit 8 SAP issues**
Date sent: **Mon, 14 Aug 2000 13:40:08 -1000**

Eric and Jan -

This is the message I got back from Gail Jones in response to a voice message I left her last week. I just got off of the phone with her about these topics, and with the following information and what she and I discussed today, I now understand what you guys need to do to get the ball rolling. Please call me and I will relay to you the steps that you need to do to get this moving again.

- - Dawn
------- Forwarded Message Follows -------
Date sent: Mon, 14 Aug 2000 13:00:23 -0700
From: Jones.Gail@epamail.epa.gov
Subject: Re: Outstanding Kakaako Brownfield Unit 8 SAP issues
To: dcosgrove@eha.health.state.hi.us Copies to: Mix.Thomas@epamail.epa.gov, ODonnell.Mary@epamail.epa.gov

Here is what I told Ogden awhile ago.

1. It is my understanding that the TCLP analyses is for waste characterization for disposal purposes. Since the proper disposal of investigation derived waste is the responsibility of the sampling contractors, we do not feel that our analytical system should be used for that purpose. If there is another reason for requesting TCLP, this should be explained in the plan. If there is a compelling reason to use our system for this analyses, then Tom should send a written request to Vance Fong.

2. Ensuring that the EnCores are analyzed within the holding time is going to tricky no matter what we do. However, this is an issue to be worked out with the RSCC (Mary O'Donnell, 415-744-1533). I suggested that the Regional lab be requested, since it is potentially the only lab that we can get the samples to in time. This request and rationale should be included in the plan, as well as discussed with

Mary.

Hopefully this clarifies the issues.

|--------+------------------------------>
	dcosgrove@eha.health.s
	tate.hi.us
	08/11/00 03:06 PM
--------+------------------------------>
>--|
To: Gail Jones/R9/USEPA/US
cc:
Subject: Outstanding Kakaako Brownfield Unit
8 SAP issues
>--|

Good Morning, Gail -

Tom Mix sent me your way regarding two outstanding issues that need to be resolved before Ogden finalizes the SAP for sampling at Kakaako Brownfield Unit 8. The two items are (1) the availability of the EPA lab to do TCLP analyses for this project and (2) the feasibility of the EPA lab to perform an immediate turnaround on extraction of the soil samples for volatiles based on a 48-hour turnaround (and being shipped from Hawaii).

Please give me a call to discuss these things. I am in the office today and I'll be in next week as well. 808-586-4249.

Thanks, Gail!
Dawn

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

680 Iwilei Road, Suite 660
Honolulu, HI 96817

August 3, 2000

Ms. Dawn Cosgrove
State of Hawaii Department of Health
Hazard Evaluation and Emergency Response Office
919 Ala Moana Boulevard, Room 206
Honolulu, Hawaii 96814

Subject: Documented Out-of-Scope Costs for the Site Characterization Study at the Kaka'ako Brownfield Unit 8 Site

Dear Ms. Cosgrove,

Ogden Environmental Services Company, Inc. (Ogden) is currently supporting the State of Hawaii Department of Health (DOH) in planning and performing a Site Characterization Study at the Kaka'ako Brownfield Unit 8 Site, Honolulu, Hawaii under a non-emergency response contract (ASO Log No. 98-418). Additional project costs, not included in the proposed scope of work dated December 23, 1999, have been identified during the preparation of project planning documents. It is anticipated that the additional costs will significantly effect Task 2 (Planning Documents) and Task 3 (Field Investigation) identified in the proposed scope of work.

Upon completion of a Draft Sampling and Analysis Plan (SAP) dated February 2000, Ogden was informed by the Environmental Protection Agency (EPA) Region IX in a memorandum dated April 20, 2000, that in accordance with regional policy (1) soil samples to be analyzed for VOCs should be collected following EPA method 5035 and (2) there are no provisions under the EPA Contract Laboratory Program (CLP) for laboratories to provide sample containers or supplies. To comply with the requirements of EPA method 5035, soil samples to be analyzed for VOCs will be collected in EnCore® samplers. The additional cost of purchasing EnCore® samplers, sample containers, and supplies for shipment of soil and groundwater samples to the EPA CLP laboratories is estimated to be approximately $3,900 (Table 1).

Following a review of the Draft SAP (February 2000) by DOH and EPA, Ogden addressed comments and submitted a Final SAP dated May 2000 to EPA and DOH for approval. In response to comments and additional concerns from DOH and EPA, a revision (Revision 01)

to the Final SAP will be submitted to EPA and DOH in August 2000. The proposed scope of work indicates that five (5) copies each of the Draft and Final SAP would be prepared and submitted. Four copies each of the Draft (February 2000) and Final (May 2000) SAP were submitted to DOH, and one (1) copy each of the Draft (February 2000) and Final (May 2000) SAP were submitted to EPA. It is estimated that a minimum of four (4) copies of the SAP Revision 01 (August 2000) will be submitted to DOH and EPA for review and final approval. The costs associated with the preparation of Revision 01 of the SAP are estimated to total approximately $1,800 (Table 2). As of this date, the total out-of-scope costs associated with Tasks 1 and 2 are estimated at approximately $5,700.

Ogden will attempt to reduce expenses associated with performance of the remaining work on this project, to avoid a cost overrun. Specifically, we hope to be able to shorten the field time to balance the out-of-scope costs. However, we will not be certain as to the net cost impacts until we have completed the field work. We will keep you informed on our progress in reducing costs as we proceed.

Should you have any questions, please do not hesitate to call me or Doug Hazelwood at 545-2462.

Sincerely,

for Eric Wetzstein
Project Manager

Enclosure

Site Characterization Study for the Kakaako Brownfield Unit 8 Site
Estimated Out-of-Scope Costs

Table 1
Additional Costs for Field Investigation (Task 3)

Description	Rate/Unit		No. of Units	Cost
Encore VOC sampler*	$375.00	/case	3	$1,125
Encore T-handle	$125.00	/ea	4	$500
Overnight Shipping for VOCs*	$125.00	/cooler	5	$625
coolers	$25.00	/ea	20	$500
4 oz soil jars	$2.00	/ea	350	$700
40 ml VOAs with HCl	$1.75	/ea	50	$88
1L ambers	$2.25	/ea	75	$169
1L ambers with HCl	$2.25	/ea	30	$68
1L HDPE bottles with HNO3	$3.75	/ea	30	$113
labels	$35.00	/roll	1	$35
			Total Additional Field Costs	**$3,921**

Note: * Three EnCore Samplers collected per sample (50 EnCore samplers = 1 case)
** Estimation of 40 lb cooler shipment via DHL
VOCs assumed to be sent to a California Laboratory

Table 2
Additional Costs for SAP Preparation (Task 2)

Description	Rate/Unit		No. of Units	Cost
Photocopies (B/W)	$0.10	/ea	2440	$244
Express Mail	$6.00	/pkg	1	$6
Labor - SAP Revision 01 (PL 6)	$65.00	/hr	24	$1,560
			Total Additional SAP Costs	**$1,810**

Total Additional Project Costs	**$5,731**

Call received X
call initiated ____

TELEPHONE DECISION LOG

Date: August 3, 2000	**Phone Numbers:**
Time: 08:00	**Fax Number:**

Name of Person Calling: Jan Kotoshirodo

Affiliation: Ogden

Incident/Site being referenced: Kakaako Unit 8: Holdups on Final SAP

Brief Discussion of Communication:

See her Aug 2, 2000 email.

She is still tryng to contact Tom Mix, per Gail Jones' request. I suggested she email him. I also suggested she talk to her data validators to assess the repurcussions of possibly missing holding times (either because frozen Encore samples arrive at lab thawed, or if lab doesn't extract 4° samples within 48 hrs).

She will keep me posted. Looks, though, like final SAP will not be submitted by our agreed-upon date of Aug. 4.

HEER Staff Signature: Dawn Cosgrove

Date: 8/3/00

From: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
To: **dcosgrove@eha.health.state.hi.us**
Subject: **Kakaako Brownfield SAP progress**
Date sent: **Wed, 2 Aug 2000 14:42:14 -1000**

Hi Dawn-

I left a telephone message this afternoon for you, but in case I don't get in touch with you today I wanted to update you on the progress of finalizing the Kakaako SAP.-- I have not yet been able to contact EPA Region IX regarding the major outstanding issues: (1) approval for TCLP analysis using the EPA CLP laboratories and (2) approval for the shipment of soil samples to be analyzed for VOCs in EnCore samplers based on a 48-hour holding time. During the last conversation that I had with Gail Jones of the EPA RegIX QA Office (07/21/00), she indicated that final approval would require discussion with Tom Mix and possibly a formal written request regarding the TCLP and VOCs issues. I left a couple of voice mail messages for Tom Mix (07/28 and 08/01) and have not yet heard back from him. I also called Gail Jones this morning and left a voice mail message with her requesting some guidance. At this stage it's not clear what type of written request/approval is required, and these issues must be resolved before we produce another set of SAPs. -This may further delay final revision of the SAP.

I will provide you with an update when I hear from EPA. Please call me at ext. 155 to discuss.

Thank-you,
Jan

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com**
Subject: **In-progress response to comments, revised final SAP, Kakaako Un**
Copies to: **jhkotoshirodo@oees.com**
Date sent: **Thu, 27 Jul 2000 09:25:06 -1000**

Hi, Eric -

I reviewed the in-progress response to comments that Jan emailed me yesterday. The responses to DOH comments look fine.

I looked over the response to EPA comments. A couple of quick questions:

- Is the reason that soil samples for VOC analysis (Encore) cannot be frozen because the soil will be put into VOAs and so the glass would crack if frozen? If guidance recommends freezing, how does it propose that you freeze it? I suspect 48-hr turn could easily become a problem. For example, is there any indication that the lab used for all samples will be within one day of Honolulu (e.g. West Coast)? How likely is it that the EPA lab will extract it the same day they get it? Considering our discussion yesterday regarding the difficulty in leveraging the EPA lab, this seems like it could be a problem. I suggest you get confirmation from the EPA lab that they can meet this requirement before finalizing the SAP.

- I suggest talking to Gail about your response to comment 11A to make sure this fulfills what she is looking for. She may want you to need to spell out how the Ogden SOP for data val will be "customized" to this project.

I suggest that you forward your response to comments to Gail as soon as you are done with it, and talk to her about the potentially contentious ones. It might speed up her last review and approval if she knows what to expect in the revised final SAP and when it will land on her desk.

Thanks, Eric.
Dawn

From: "Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>
To: dcosgrove@eha.health.state.hi.us
Subject: Kakaako Response to Comments -in progress
Date sent: Wed, 26 Jul 2000 14:03:54 -1000

Hi Dawn-

Attached are the in-progess response to comments for your review--

Jan

<<DOH review2-comments on Responses.doc>> <<EPA review2.doc>>

Type of Review:	Kakaako Final Field Sampling Plan (Sampling and Analysis Plan dated May 2000)
Reviewed by:	Dawn Cosgrove, DOH
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
1	Original Comment 2: Original comment and response to comment do not appear to have been fully incorporated into Kakaako Field Sampling Plan Final (final plan). a. The original comment specifically requests that all detected analytes be included as COPCs and that background levels could be considered at a later time. Including all detected analytes in the risk evaluation is necessary to effectively calculate cumulative risk associated with all detected analytes. The response to the original comment indicates that all detected analytes will be included as COPCs for the purposes of a risk evaluation. The text of the final plan, however, indicates that analytes	In the draft SAP, COPCs were specified only for those analytes that exceeded Region IX PRGs, Tier 1 Als, or NAWQC screening levels. The final text was then revised to specify that analytes detected above their respective laboratory quantitation limits (QLs) (i.e. those analytes that are detected by the laboratory) would be included as COPCs for soil and groundwater (*Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions*). There are however, method limitations for some analytes (QLs higher than Region IX PRGs, Tier 1 ALs, or NAWQC). *Section 3.4.5 - Data Quality Criteria* describes data decisions/evaluation for analytes with method limitations.	Identifying COPCs for soil and groundwater as analytes detected above their respective laboratory quantitation limits (QLs) (i.e. those analytes that are detected by the laboratory) (*Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions*) is understood and accepted. However, the final text indicates that "if an analyte is detected in soil above its laboratory QL or a relative background concentration based on soil sampling, that analyte is identified as a COPC..." In order to effectively calculate cumulative risk associated with all analytes detected above their respective laboratory QLs, background concentrations should be considered after initial calculation of risk. Please delete the text "or a relative background concentration" from *Section 3.4.5 - Steps for Soil Data Decisions, Steps for*	"Background concentrations" will be considered after the initial calculation of risk. For clarification, the text "or a relative background concentration" has been deleted from the text. A reference to Appendix D has been added to the introductory paragraph in Section 3.4.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
	detected above the quantitation limit or a relative background concentration based on soil sampling will be identified as a COPC. This contradicts the original comment provided on the Field Sampling Plan Draft (draft plan) and the response to that comment.		*Groundwater Data Decisions,* from Appendix D, and from any other places that this element is referenced. Also, please reference Appendix D in Section 3.4 of the main text.	
1	b. The text implies that background soil samples will be collected; however, Section 7.3 of the final plan specifies that general literature values for background metal concentrations on island will be used (that is, background samples will not be collected as part of this field effort).	The metals detected above QLs will be compared to literature values for risk screening purposes. The collection of background samples will not be included in this field investigation. It was agreed that all soils in the surrounding areas consist of fill materials. Many of these fill soils could be the same or similar source(s) as the site. Consequently, their usefulness as "background" would be limited. Literature values for metals in native soils would be a better source. Organic compounds will be presumed to have been derived from anthogenic sources.	The use of literature values for background concentrations of metals is understood and accepted Note that the current text states "....or a relative background concentration based on soil sampling...", whereas Section 7.3 indicates that relative background concentrations will be based on literature values, not current soil sampling. Please refer to Comment 1; incorporation of DOH Response to Comment 1 will remedy this concern.	See comment No. 1.
2	Original Comment 3, part b: a. Discussion of ecological risks associated with sediment transport into the harbor appears to have been eliminated in the final plan.	The rationale for not collecting harbor sediment samples are (1) the site is largely paved and the potential for a sediment transport pathway is unlikely, (2) it would be difficult to link detected contamination to the site, and (3) the	Response adequately addresses the comment.	---

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
	Please clarify the rationale for not including these risks in Step 2 of the "Steps for Groundwater Data Decisions."	expense of collecting sediment samples was beyond the current DOH budget constraints.		
2	b. NOAA 1998 (presumably the reference listed in Section 8 as "Buchman, M.F. 1998") is not cited in "Steps for Groundwater Data Decisions," as indicated in the response to the original comment.	Comment noted. The appropriate reference will be added to the text. Please see revision to *Steps for Groundwater Data Decisions - Step 2.*	Response adequately addresses the comment.	---
3	Original Comment 5: See 1. Original Comment 2, parts a and b (discussed previously) apply to the discussion for groundwater data decisions as well.	See response No.1	See DOH Reply to Response Comment for Comment 1.	See comment No. 1.
4	Original Comment 7: a. Part a of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the decision error rate for contaminant concentrations do not appear to have been incorporated into the final plan.	As indicated in the original response to comment, decision errors will be minimized for estimated contaminant concentrations, and not risk levels. It is agreed that contaminant concentrations are not risk levels, however, since standard EPA protocol is to be followed, it is appropriate to use the conservative excess cancer value and hazard index as stated because those are the specific risk levels from which PRGs (i.e. screening levels for contaminant concentrations) are derived/based. (*See Section 3.4.6, 3rd ¶*)	The final text of *Section 3.4.6 Step 6: Specify Limits on Decision Errors* appears to be contradictory. The null hypothsis and decision errors outlined on page 3-14 are in reference to risk parameters (e.g. excess cancer risk >1E-06 or HI >1), while the second sentence of the last paragraph on page 3-14 indicates that the sampling program is intended to minimize decision errors for contaminant concentrations. The third sentence of the last paragraph on page 3-14 then goes back to discussing decision errors with respect to element of risk, and the first full paragraph on page 3-15 then discusses false-positive decision errors with respect to soil	It is agreed that decision errors should apply to contaminant concentrations, not risk parameters. The text in *Section 3.4.6* has been revised to provide more consistency. Specifically, the definition for the null hypothesis, has been revised to state : "*...Contaminant concentrations in soil result in an excess cancer risk greater than 1E-6 and/or hazard index greater than 1 (i.e. Site requires baseline risk assessment and possible removal action), and/or the contaminant concentrations in groundwater result in COPCs that are greater than the (AWQCx10) (i.e. the Site requires a baseline ecological risk assessment).*" The definitions for Type I

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
			[contaminant] concentrations and action levels [PRGs]. These statements are contradictory. Please re-evaluate the null hypothesis and the Type I and Type II decision errors and how they relate to the subsequent text of Section 3.4.6 regarding minimization of decisions errors (on contaminant concentrations or on risk elements?) and the probability of false-positive decision errors (for contaminant concentrations or risk parameters?). As outlined in the email from Charley Langer of DOH to Eric Wetzstein of Ogden dated May 10, 2000, decision errors should apply to contaminant concentrations, not risk parameters (e.g. risk assessment results). Please consider focusing the null hypothesis and decision errors on whether contaminant concentrations in soils at levels that pose a risk to human health.	and Type II decision errors have been revised similarly. The first ¶ on page 3-15 has also been revised: 3rd sentence in ¶ has been deleted, and 4th sentence has been revised to specify that site soil concentrations will be used to determine the ECR and HI.
4	b. Part b of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the use of PARCC parameters in the	Comment noted. As indicated in the original response to comment, PARCC parameters will not be used directly in the calculation of a 95% UCL. For further clarification the discussion of PARCC parameters will be moved to a new separate subsection (*See Section 3.4.6 - Minimization of Decision Errors*).	It is not clear how the effect of QA/QC procedures and assessment of data quality using PARCC parameters, lab QC, field QC, and data validation "place limits on decision errors," as stated in the third and fourth paragraphs of page 3-15. Limits on decision errors are typically quantifiable parameters that directly specify the tolerable limits on	For further clarification, the last two paragraphs in Section 3.4.6 (*Step 6: Specify Limits on Decision Errors*) have been revised. Specifically, text has been revised to indicate that QA/QC procedures, PARCC parameters, and data validation are used to minimize the likelihood of committing a Type I or Type II error. Text stating that these

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
	calculation of decision errors do not appear to have been incorporated into the final plan.		decision errors (e.g. controlling false positives to 5%); PARCC parameters, lab QC, field QC, and data validation do not place limits on decision errors in this respect. It is understood and accepted that these elements will not be included in the calculation of the 95% UCL. Please revise the text in the third and fourth paragraphs of page 3-15 to clarify that QA/QC procedures minimize measurement error, thus reducing the likelihood of committing a Type I or Type II error, and that PARCC parameters and data validation assess data quality, thus reducing the likelihood of committing a Type I or Type II error. Please delete the text indicating that these items "place limits" on decision errors.	procedures/criteria "place limits" on decision errors has been deleted.
5	Original Comment 9: Please clarify the rationale for placing subsurface soil sampling locations SA16/SB16 through SA20/SB20 at the locations shown on Figure 4-2 of the final plan, noting that some of these locations are not at grid nodes but possibly could be placed on nearby nodes.	The sample locations for subsurface soil samples SA16/SB16 through SA20/SB20 as well as surface soil samples SS35-SS38 and SS40 were selected based on a biased sampling design (*Sections 4.1.1 and 4.2.1*) for areas near the former hydraulic lift area and UST.	Response adequately addresses the comment.	---
6	Original Comment 14: The response to the original comment indicates that a procedure for locating grid points that	*Section 5.2.2 - Soil Sampling Locations* in the final SAP was revised to specify sample locations that are determined to	Please note that the draft plan and final plan include the same text regarding relocating inaccessible sample locations	---

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
	fall in inaccessible locations will be included in the text. Such a procedure was not found in the final plan.	be inaccessible may be relocated to the nearest radial location that is accessible.	to the nearest radial location that is accessible. Thus, it appears that the original comment requesting "a specified procedure for moving an inaccessible point" (beyond the draft plan text) and the response that "a procedure for locating grid points that fall in inaccessible locations will be included in the text" did not result in a more specific procedure than was already include in the draft plan. The final text, however, is accepted as written.	
7	Additional Comments Relating to Original Comments: a. In Section 3.4.7, paragraph 2, of the final plan, the text indicates that 50-foot node spacing will be used for the site. Section 4.1.1 and Figure 4-1 indicate 50-foot node spacing for surface soils, which is in agreement with Section 3.4.7. For subsurface sampling, however, the text of Section 4.2.1 indicates that 75-foot node spacing will be used, and the scale on Figure 4-2 indicates that 100-foot node spacing will be used for subsurface soil sampling. Please clarify the node spacing for surface and subsurface sampling locations at the site.	The node spacing as shown on Figure 4-2 indicates a node spacing of approximately 75-feet (each sample location is 75-feet from the other).	Grid nodes generally refer to the intersection of grid lines. The node spacing on the grid overlain on Figures 4-1 and 4-2 uses the same 50-foot node spacing. However, sampling locations are placed at each grid node on Figure 4-1 (surface soil sampling locations) and on every other grid node along a grid line on Figure 4-2 (subsurface soil sampling locations). It is acknowledged that this results in a 50-foot surface soil sample spacing measured along the grid and a 75-foot subsurface soil sample spacing when measured along the diagonal of the grid. Please modify the text of *Section 4.2.1 Sampling Locations* (subsurface soil) to indicate these facts, or alter the grid for subsurface sampling design (Figure 4-2) to show visually that the grid nodes are 75 feet apart.	The text in Section 4.2.1 has been revised to more accurately describe the subsurface soil sampling locations. Text has been added to indicate that subsurface soil sampling locations are based on a grid node spacing of 50-feet; 40 subsurface samples will be collected from 20 locations at every other grid node; subsurface sampling locations will be equally spaced, approximately 75 feet apart. The 2nd and 3rd paragraphs in Section 3.4.7 have also been revised for clarification of node spacing and sample locations.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments	Ogden Final Response to Comments
			Please revise the text in *Section 3.4.7 Step 7: Optimize the Design for Obtaining Data*, paragraph 2, to indicate the actual sample spacing for surface soil samples and subsurface soil samples to clarify this element.	
7	b. One analysis stated throughout the draft plan was for PCBs/pesticides. The corresponding analysis in the final plan is indicated as only PCBs. Are pesticides a contaminant of concern at the site?	Pesticides have not been included in the final SAP as a contaminant of concern at the site. The draft SAP included PCB/pesticides together since at the time we thought we would be limited to using the CLP method that includes both. In discussions with EPA Region IX however, we found that we could use the SW-846 method 8082 (PCBs only), since it is better suited to our needs (lower QLs).	Response adequately addresses the comment.	---

Type of Review:	Kakaako Final Field Sampling Plan (Dated May 2000)
Reviewed by:	Gail Jones, EPA Region IX
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Reviewer's Comments	Response to Comments
1B	This concern (original comment 1B) has not been completely addressed. Low level method detection limits are provided, however, there are a number of concerns identified in Table 7-2. A. Table 7-2 lists preliminary remediation goals (PRGs) for soils as micrograms per kilogram (µg/kg); however, the values listed appear to be milligrams per liter (mg/L). It is uncertain if the conversion or the units are incorrect. For example, the detection limits for the Water Low Level Methods for metals by EPA Methods 6010/7000 are listed as microgram per liter (µg/L). The listed detection limits of 0.005 µg/L for cadmium and 0.003 µg/L for lead are extremely low values which Methods 6010/7000 are unlikely to attain. (Both lead and cadmium were present at elevated concentrations in ash sampled previously.) Note, the PRG tables (Region 9 EPA 1999) list PRGs for soils in milligrams per kilogram (mg/kg). The values and units listed in Table 7-2 should be reviewed and corrected as necessary.	The units listed in Table 7-2 for PRGs, DOH Tier 1 Action Levels, and QLs for soil samples have been revised to specify all these concentrations in milligrams per kilogram (mg/kg). The Water Low Level Method detection limits of 0.005 µg/L for cadmium and 0.003 µg/L for lead were Following a revision of the units for PRGs and QLs, it has been noted that the QLs for CLP methods for PCB analysis will be adequate for this project. The text has been revised in Sections 3, 4, 5, 6, and 7 and Tables 4-3, 7-1, and 7-2 to indicate that soil samples will be analyzed for PCBs using CLP methods.
1B	B. If arsenic, selenium, thallium and antinomy will be extracted using a special process, as indicated in a footnote to Table 7-2, this process should be described in the SAP.	

1C	This concern (original comment 1C) has not been adequately addressed. The RTC states that the EPA analytical system will not be utilized for the TCLP analysis for IDW; however, Table 4-3, Request for Analysis Services for Soil, identifies samples to be analyzed for TCLP but does not state that these samples will not be analyzed using the EPA analytical system nor does it identify the laboratory that will provide the analysis.	
6	This concern has been partially addressed. Section 5.2.2, Subsurface Soil Sampling Procedures, of the revised SAP states that samples for VOC analysis will be collected in EnCore samplers and transferred to a vial containing preservative. Table 4-1 indicates that samples collected for VOC analysis will be preserved with sodium bisulfate. The SOP for soil sampling in Appendix B does not describe the collection of soil samples using EnCore samplers. The collection procedure for VOC samples should be expanded to discuss the pre-weighing of the vials at the laboratory, or, if the vials will be weighed at the site, the weighing process and equipment should be described. Note that a stir bar should be included in the vial containing the sodium bisulfate preservative.	Upon reevaluation of soil borings previously collected at the site, the coraline soils present at the site are likely to effervesce upon contact with the acid preservative. Per guidance provided in the EPA Region IX *Regional Interim Policy for Determination of Volatile Organic Compound (VOC) Concentrations in Soil and Solid Matrices,* an alternative preservation technique is recommended. However, due to budget constraints and the location of the project, freezing of the soil samples would not be practical. VOC soil samples will be collected and shipped to the laboratory in EnCore® samplers, stored at 4±2°C. This will require prior approval and lab scheduling due to the 48-hour holding time.
11A	This concern has been partially addressed. The RTC states that the text was intended to reference the general types/categories of SOPs, and not the specific SOPs. However, SOPs on data validation and laboratory analysis are not provided.	SOPs on data validation has been added to the Appendix. However, these are SOPs for Ogden data validation procedures (not specific to Region 9-option 2 protocol). Ogden data validation procedures will be customized to this project. Also, please note that some SOPs reference previous EPA methods, however, the most current/updated EPA methods will be used for all data validation procedures. CLP guidance will be applied to the appropriate SW846 methods.

Additional Concerns:		
(1)	[Title/Signature Page] A cover page containing the title of the project and signature blocks for, at a minimum, the EPA Project Officer and EPA Quality Assurance Manager should be provided. An acceptable format is located in the "Instructions for the One-Time Sampling Event Sampling and Analysis Plan (SAP)" (February 1998).	A title/signature page has been added to the SAP.
(2)	[Table 4-3, Request for Analytical Services for Soil; Table 4-4 Request for Analytical Services for Groundwater] It is recommended that the tables list totals for each type of analysis.	A row listing the totals for each analysis has been added to Tables 4-3 and 4-4.
(3)	[Section 5.2.4, Groundwater Sampling Procedures] Section 5.2.4 states that groundwater samples will be analyzed for dissolved metals after being filtered through a 0.45-micron membrane in-line filter. Regional Superfund Site Assessment guidance recommends the use of a 5-micron filter for groundwater samples targeted for metals analysis. If dissolved metals are needed, the SAP does not need to be modified. However, if the collection of metal samples is required for site assessment purposes only, the SAP should be revised to specify a 5-micron filter.	
(4)	[Table 7-1, Analytical QA Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] The following discrepancies or omissions were noted: A. The blank spike/laboratory control sample (BS/LCS) accuracy criteria for CLP volatitles, semi-volatiles, and metals list one number for percent recovery instead of a range. Table 7-1 should be revised to provide acceptance ranges for BS/LCS. Alternatively, the plan/table can state that the acceptance limits as specified in the appropriate CLP SOW will meet project needs.	

Additional Concerns:		
(4)	B. Table 7-1 lists the QA objectives for doixins/furans and CLP Pest/PCBs as TBD, "to be determined." Precision and accuracy criteria should be developed based on the needs of the project. Client Request Forms (CRFs) or Data Quality Indicator Tables (DQI) tables, available from the Region 9 QA Office, should be included in the plan. Alternatively, if private laboratory services are to be procured for these services, the plan should include appropriate laboratory quality control criteria and corrective action procedures. And the plan should state that the acceptance limits as specified in the laboratory QA Plan or SOPs will meet project needs.	
(4)	C. The detection limits for dioxin/furan analysis should be specified. These should be based on the needs of this project, not dependent on the analytical laboratory performance, as indicated in a footnote to Table 7-2. See item B above.	

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com,jhkotoshirodo@oess.com**
Subject: **EPA approval of revised final SAP**
Date sent: **Wed, 26 Jul 2000 15:28:00 -1000**

Hi, Eric and Jan -

I just got an answer on whether the revised final SAP needs to be approved before field work begins, and the answer is YES. I suggest that you proceed with scheduling the lab as we discussed today, and keep the start of field work pencilled in as September 18. Then include a letter with the revised final SAP to Gail Jones that specifies that all of her comments on the final SAP have been incorporated, explain that the field work is scheduled and needs to be conducted as scheduled, and request a quick turnaround. I would follow up with a phone call to her. I will also plan to give her a call after you submit the revised final SAP and reiterate the need to proceed with the field work.

Please give me a call if you have any concerns or other ideas. I'll be in only in the morning on Thursday.

Thanks.
Dawn

TELEPHONE DECISION LOG

call initiated X (see emails)
call received ___

Date: July 26, 2000	Phone Numbers: 545-2462, x128
Time: 14:00	Fax Number:

Name of Person Calling: Eric Wetzstein, Jan Kotushiredo

Affiliation: Ogden

Incident/Site being referenced: Kakaako Brownfield Unit 8

Brief Discussion of Communication:

Topics to discuss:

1) EPA lab - scheduling - describe how they understand procedure for scheduling lab. Conference call - include me.

2) Field schedule - determine a date that this will be set by. Provide me with a schedule of events by <set a date>. How many days?

3) Overall project schedule through completion (assume a 30-day TA on Draft Report & acceptance of final report). Provide ~~as soon~~ as soon as field work is scheduled.

4) EPA Comments on Final SAP - Most of them seem to be relatively straightforward. Which ones are presenting problems, and why?

5) Submittal date for Revised SAP? (27th based on proposal)

~~Decision Documented:~~

6) Do they have questions or disagreements regarding my comments on ~~Final~~ SAP?

SEE EMAILS BETWEEN DAWN & ERIC dated July 26 ~~2000~~, 2000.

(5) Revise 26 July email date for SAP to Aug. 4 → OK with me.

(4) EPA Comments on Final SAP -

Primary problem comment is TCLP - EPA not doing analyses for waste disposal purposes. Ogden still needs to discuss "nature" issue (see July 26 email). Originally, Ogden proposed to do "LAA" as part of project, but axed because of cost. He's not sure if EPA lab does do TCLP or if they contract it out. If they get stonewalled, asked Ogden to contact me & I'll see what DOH can do.

HEER Staff Signature:	Date:

Dawn Cosgrove

TELEPHONE DECISION LOG

call initiated ✓
call received ___

Date: July 26 2000 (cont.)	Phone Numbers:
Time:	Fax Number:

Name of Person Calling: Eric, Jan

Affiliation: Ogden

Incident/Site being referenced: Kakaako Unit 8

Brief Discussion of Communication:

Change in filter size - Ogden doesn't quite know what Gail wants. They need to research & talk to Gail.

(6) No real problems with DOH comments on Final SAP

(2) Field Schedule: Field work: 1-1½ weeks ~~Sept. 18, 2000~~ tentative
3-4 wk leads up for EPA lab

(X) Consider putting onto streamlined track; include feasibility study & RAA in site char. rpt. - do at same time, if have more $.

(3) Will do hard schedule (plug in 9/18/2000 as field start)
Jan will schedule lab.

Decision Documented:

(*) I'll check with us to see if ~~DOH~~ EPA needs to approve revised final SAP.

1 copy of revised SAP to EPA
3 copies to DOH
} due August 4

HEER Staff Signature: Dawn Cosgrove

Date: 7-26-00

From: **"Wetzstein, Eric, E." <eewetzstein@oees.com>**
To: **'Dawn Cosgrove - HEER' <dcosgrove@eha.health.state.hi.us>**
Copies to: **"Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>**
Subject: **RE: call today**
Date sent: **Wed, 26 Jul 2000 09:46:59 -1000**

Hi Dawn,

Jan and I have already discussed most of the issues you have noted and are already to propose a tentative field date and FSP completion. Here is summary of our proposed schedule and an update on some of the issues.

August 4

* We would like to finalize the FSP by Wednesday of next week. August 2 DOH comments appear to be no problem and we would like to run our changes by you today to see if you concur with the way we are incorporating them. EPA comments concerning laboratory methods and procedures are more difficult to address, but can be worked through. * The issue of the TCLP analysis needs to be addressed. EPA has said that they do not pay for "hazardous waste disposal characterization". We are currently making the argument that waste disposal is only a small part of the objective for TCLPs. They will principally be used to assess the "nature" part of "nature and extent". It is important to know how mobile contamination might be to assess migration potential, risk, etc. Also working with the EPA lab doesn't allow for "if you get detections than analyze for TCLP"-you have to ask for all analysis up front-I don't think this a problem since we will most assuredly get metal detections. We may have to drop the TCLP, although I think it would be important to have. * We would like to propose a field date of September 11, 2000. This would allow for FSP finalization and give the 2 to 3 week advance notice the EPA needs for lab coordination.
* Finally, we will get you a letter documenting the cost issues (VOC coring, containers, etc)

We will call you at 2 pm today since I am tied up on a conference call
this AM. Is this OK?

Regards
Eric

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com**
Subject: **call today**
Date sent: **Wed, 26 Jul 2000 07:35:01 -1000**

Hi, Eric-

My conference call today was changed to 8:00, and I would like to make sure we talk today, particularly since you will be out of town for the next two weeks (July 31 - August 11, I assume). So lets set up a time that you and Jan will call me so I can plan to be at my phone and not on it. What would be better, actually, is if you two could come over for a meeting so that we could all meet each other and we could discuss some of the outstanding issues.

I will be available today from about 9:30 (when my call is over) until noon, and then from 1:00 to 3:00. If we could either meet or plan a call during these times, I would appreciate it. If your schedule doesn't allow for a meeting today, perhaps tomorrow would work. I would like to talk by Thursday to allow you and Jan to discuss the goals while you are on vacation.

If we can not meet today or tomorrow, I would like to plan a meeting in the near future. If Friday is your last day before vacation, lets schedule a meeting for the week after you return from vacation.

Please let me know what will work for you regarding a call and/or meeting.

Here are some items I would like to discuss (as well as whatever you and Jan would like to discuss):

- - EPA Comments on Final SAP (where do difficulties lie in addressing them?)

- - Any questions on DOH comments on Final SAP?

- - Confirm submittal date for Revised Final SAP (July 27 per proposal)

- - Scheduling of EPA lab (procedure, problems you have had thus far, potential future problems)

- - Field Schedule: lets determine a goal for when this schedule will be set and submitted

- - Overall Project Schedule: lets determine a goal for when this schedule will be set and submitted

Thanks, Eric.
Dawn

TELEPHONE DECISION LOG

Call initiated ___ call received X

Date: July 25, 2000	Phone Numbers:
Time: 15:20	Fax Number:

Name of Person Calling: Eric Wetzstein

Affiliation: Ogden

Incident/Site being referenced: Kakaako Brownfield Unit 8

Brief Discussion of Communication:

SAP: Outstanding issues that will result in add'l costs:

1) Containers - ~$5000 ← (includes Encore Samplers - $800 each)

Check this

EPA had new comments on Final SAP (90% or so of comments on Final SAP from EPA are new).

Original budget $200K +.

Can Make some costs up in 2nd phase, but may not be able to make up all these changes. Planning docs are taking alot more time & money than budgetted for. (Additional costs for containers is an example of costs not anticipated in original proposal.)

(He's on vacation 1st 2 weeks of August - Jan will be in office).

Decision Documented:

Ogden will do.

- letter with out-of-scope charges they have had (potential overruns).
- Set up lab

He questioned whether SAP would need to be revised, or just do a response to comments. I told him SAP would need to be revised.

~~Dawn - call EPA to find out if EPA lab needs any acceptance of SAP before will schedule fieldwork.~~ (asked Eric to do this).

We'll talk tomorrow more.
(schedule, field schedule # of days, lab)

HEER Staff Signature: Dawn Cosgrove

Date: 7/25/00

From:	**Self <EHANVL1/DCOSGROVE>**
To:	**eewetzstein@oees.com**
Subject:	**last comments on final sap, Kakaako**
Copies to:	**jhkotoshirodo@oees.com**
Date sent:	**Wed, 19 Jul 2000 15:12:43 -1000**

Eric, I spoke with Jan today, and she indicated that Ogden understands my last set of comments on the Final SAP and I believe is on board with them. I encouraged her to contact me if she had any questions. If Ogden disagrees with my comments, please CALL me to discuss them so that we can make sure that we understand each other. I would be disappointed if I received the next version of the Final SAP and still had concerns about the way the comments were or were not incorporated into the document. I would rather clarify any issues and resolve misunderstandings and come to an agreement earlier than later.

Thanks, Eric.
--- Dawn

From:	**Self <EHANVL1/DCOSGROVE>**
To:	**eewetzstein@oees.com**
Subject:	**Final SAP and overall project schedule**
Copies to:	**jhkotoshirodo@oees.com**
Date sent:	**Wed, 19 Jul 2000 14:59:25 -1000**

Hi, Eric -

I was reviewing Ogden's proposal/contract for the Kakaako Brownfield Unit 8 Site with respect to schedule. The schedule indicates that the Final SAP (and presumably, the Final Final SAP) is due 15 days after receipt of comments (which would be July 27) and that the Field Investigation (Task 3) would begin 5 days after submittal of the final planning documents and was expected to last about 20 days. Based on the current SAP, is the field effort still anticipated to take 20 days (or longer or shorter)? I understand from my conversation with Jan today that Ogden is anticipating begining the field work in September. When we talk next week, lets discuss what the scheduling bottlenecks are once the SAP is totally finalized and where the schedule is at that point. I understand that you need to schedule the EPA lab; please let me know what their required lead time and turnaround time is for scheduling and analyzing the samples. I assumed in my March 22 draft report estimate that all samples would be submitted by Sept. 31 and that lab TA is 30 days. Please update me when we talk next week on what the current lab scheduling is.

Assuming that field work takes place in September 2000 and is completed by the end of September 2000, the draft characterization report would be due around March 22, 2001. I'm trying to get a big picture of the overall schedule for this project and when it is anticipated to be completed based on what is currently known, as there could be farther-reaching implications that DOH needs to anticipate and address.

Once you have finalized the SAP and scheduled the lab and field crew/subcontractors, you should be able to put hard dates to the schedule in Ogden's proposal/contract for this job. I would appreciate if you would then submit a copy of that schedule to me.

Thanks, Eric.
---Dawn

TELEPHONE DECISION LOG

Call initiated —
call received X

Date: July 19, 2000	Phone Numbers: 545-2462
Time: 08:55	Fax Number:

Name of Person Calling: Jan Kotoshirodo (for Eric Wetzstein)

Affiliation: Ogden

Incident/Site being referenced: Kakaako Brownfield Unit 8

Brief Discussion of Communication:

Still working on add'l comments from EPA & me. She is working on incorporating comments. She will contact ~~comments~~ Gail Jones about her comments.

Sampling likely in September 2000.

One problem with Encore sampling: Holding time = 48 hrs unless freeze or preserve. Hard to guarantee ~~to~~ keeping frozen, & Ogden thinks preservative might be a problem.

EPA lab: Mary O'Donnell at EPA schedules lab.

Jan indicated that Ogden understands my last set of comments on the final SAP. I asked her to call me if she had any further questions on my comments.

~~Decision Documented~~:

HEER Staff Signature: Dawn Cosgrove

Date: 7-19-2000

From: **Self <EHANVL1/DCOSGROVE>**
To: **eewetzstein@oees.com**
Subject: **Kakaako Brownfield Unit 8, Response to Comments on Final SAP**
Date sent: **Wed, 12 Jul 2000 10:22:07 -1000**

Good Morning, Eric -

I looked over your responses to my comments on incorporation of DOH's comments on the Draft SAP, and I still have some concerns. I added my comments to the electronic Word table of Ogden's response to comments on the Final SAP that you sent to me on July 10. Please review my outstanding concerns as well as corresponding portions of the Final SAP and give me a call to discuss these issues (586-4249).

Please note that I am restricting my comments to the incorporation of DOH's comments on the Draft SAP into the Final SAP. Please inform me whether or not any other significant changes have been made to the document since submittal of the Draft SAP to DOH.

Thanks, Eric.
Dawn

Attachments:
C:\Dawn (formerly Charley)\SITES\Kakaako Unit 8 Brownfield\DOH review2-comments on Responses.doc

Type of Review:	Kakaako Final Field Sampling Plan (Sampling and Analysis Plan dated May 2000)
Reviewed by:	Dawn Cosgrove, DOH
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments
1	Original Comment 2: Original comment and response to comment do not appear to have been fully incorporated into Kakaako Field Sampling Plan Final (final plan). a. The original comment specifically requests that all detected analytes be included as COPCs and that background levels could be considered at a later time. Including all detected analytes in the risk evaluation is necessary to effectively calculate cumulative risk associated with all detected analytes. The response to the original comment indicates that all detected analytes will be included as COPCs for the purposes of a risk evaluation. The text of the final plan, however, indicates that analytes detected above the quantitation limit or a relative background concentration based on soil sampling will be identified as a COPC.	In the draft SAP, COPCs were specified only for those analytes that exceeded Region IX PRGs, Tier 1 Als, or NAWQC screening levels. The final text was then revised to specify that analytes detected above their respective laboratory quantitation limits (QLs) (i.e. those analytes that are detected by the laboratory) would be included as COPCs for soil and groundwater (*Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions*). There are however, method limitations for some analytes (QLs higher than Region IX PRGs, Tier 1 ALs, or NAWQC). *Section 3.4.5 - Data Quality Criteria* describes data decisions/evaluation for analytes with method limitations.	Identifying COPCs for soil and groundwater as analytes detected above their respective laboratory quantitation limits (QLs) (i.e. those analytes that are detected by the laboratory) (*Section 3.4.5 - Steps for Soil Data Decisions, Steps for Groundwater Data Decisions*) is understood and accepted. However, the final text indicates that "if an analyte is detected in soil above its laboratory QL or a relative background concentration based on soil sampling, that analyte is identified as a COPC..." In order to effectively calculate cumulative risk associated with all analytes detected above their respective laboratory QLs, background concentrations should be considered after initial calculation of risk. Please delete the text "or a relative background concentration" from *Section 3.4.5 - Steps*

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments
	This contradicts the original comment provided on the Field Sampling Plan Draft (draft plan) and the response to that comment.		*for Soil Data Decisions, Steps for Groundwater Data Decisions,* from Appendix D, and from any other places that this element is referenced. Also, please reference Appendix D in Section 3.4 of the main text.
1	b. The text implies that background soil samples will be collected; however, Section 7.3 of the final plan specifies that general literature values for background metal concentrations on island will be used (that is, background samples will not be collected as part of this field effort).	The metals detected above QLs will be compared to literature values for risk screening purposes. The collection of background samples will not be included in this field investigation. It was agreed that all soils in the surrounding areas consist of fill materials. Many of these fill soils could be the same or similar source(s) as the site. Consequently, their usefulness as "background" would be limited. Literature values for metals in native soils would be a better source. Organic compounds will be presumed to have been derived from anthogenic sources.	The use of literature values for background concentrations of metals is understood and accepted Note that the current text states "....or a relative background concentration based on soil sampling...", whereas Section 7.3 indicates that relative background concentrations will be based on literature values, not current soil sampling. Please refer to Comment 1; incorporation of DOH Response to Comment 1 will remedy this concern.
2	Original Comment 3, part b: a. Discussion of ecological risks associated with sediment transport into the harbor appears to have been eliminated in the final plan. Please clarify the rationale for not including these risks in Step 2 of the "Steps for Groundwater Data Decisions."	The rationale for not collecting harbor sediment samples are (1) the site is largely paved and the potential for a sediment transport pathway is unlikely, (2) it would be difficult to link detected contamination to the site, and (3) the expense of collecting sediment samples was beyond the current DOH budget constraints.	Response adequately addresses the comment.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments
2	b. NOAA 1998 (presumably the reference listed in Section 8 as "Buchman, M.F. 1998") is not cited in "Steps for Groundwater Data Decisions," as indicated in the response to the original comment.	Comment noted. The appropriate reference will be added to the text. Please see revision to *Steps for Groundwater Data Decisions - Step 2.*	Response adequately addresses the comment.
3	Original Comment 5: See 1. Original Comment 2, parts a and b (discussed previously) apply to the discussion for groundwater data decisions as well.	See response No.1	See DOH Reply to Response Comment for Comment 1.
4	Original Comment 7: a. Part a of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the decision error rate for contaminant concentrations do not appear to have been incorporated into the final plan.	As indicated in the original response to comment, decision errors will be minimized for estimated contaminant concentrations, and not risk levels. It is agreed that contaminant concentrations are not risk levels, however, since standard EPA protocol is to be followed, it is appropriate to use the conservative excess cancer value and hazard index as stated because those are the specific risk levels from which PRGs (i.e. screening levels for contaminant concentrations) are derived/based. (*See Section 3.4.6, 3rd ¶)*	The final text of S*ection 3.4.6 Step 6: Specify Limits on Decision Errors* appears to be contradictory. The null hypothsis and decision errors outlined on page 3-14 are in reference to risk parameters (e.g. excess cancer risk >1E-06 or HI >1), while the second sentence of the last paragraph on page 3-14 indicates that the sampling program is intended to minimize decision errors for contaminant concentrations. The third sentence of the last paragraph on page 3-14 then goes back to discussing decision errors with respect to element of risk, and the first full paragraph on page 3-15 then discusses false-positive decision errors with respect to soil [contaminant] concentrations and action levels [PRGs]. These statements are contradictory.

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments
			Please re-evaluate the null hypothesis and the Type I and Type II decision errors and how they relate to the subsequent text of Section 3.4.6 regarding minimization of decisions errors (on contaminant concentrations or on risk elements?) and the probability of false-positive decision errors (for contaminant concentrations or risk parameters?). As outlined in the email from Charley Langer of DOH to Eric Wetzstein of Ogden dated May 10, 2000; decision errors should apply to contaminant concentrations, not risk parameters (e.g. risk assessment results). Please consider focusing the null hypothesis and decision errors on whether contaminant concentrations in soils at levels that pose a risk to human health.
4	b. Part b of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the use of PARCC parameters in the calculation of decision errors do not appear to have been incorporated into the final plan.	Comment noted. As indicated in the original response to comment, PARCC parameters will not be used directly in the calculation of a 95% UCL. For further clarification the discussion of PARCC parameters will be moved to a new separate subsection (*See Section 3.4.6 - Minimization of Decision Errors*).	It is not clear how the effect of QA/QC procedures and assessment of data quality using PARCC parameters, lab QC, field QC, and data validation "place limits on decision errors," as stated in the third and fourth paragraphs of page 3-15. Limits on decision errors are typically quantifiable parameters that directly specify the tolerable limits on decision errors (e.g. controlling false positives to 5%); PARCC parameters, lab QC, field QC, and data

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments
			validation do not place limits on decision errors in this respect. It is understood and accepted that these elements will not be included in the calculation of the 95% UCL. Please revise the text in the third and fourth paragraphs of page 3-15 to clarify that QA/QC procedures minimize measurement error, thus reducing the likelihood of committing a Type I or Type II error, and that PARCC parameters and data validation assess data quality, thus reducing the likelihood of committing a Type I or Type II error. Please delete the text indicating that these items "place limits" on decision errors.
5	Original Comment 9: Please clarify the rationale for placing subsurface soil sampling locations SA16/SB16 through SA20/SB20 at the locations shown on Figure 4-2 of the final plan, noting that some of these locations are not at grid nodes but possibly could be placed on nearby nodes.	The sample locations for subsurface soil samples SA16/SB16 through SA20/SB20 as well as surface soil samples SS35-SS38 and SS40 were selected based on a biased sampling design (*Sections 4.1.1 and 4.2.1*) for areas near the former hydraulic lift area and UST.	Response adequately addresses the comment.
6	Original Comment 14: The response to the original comment indicates that a procedure for locating grid points that fall in inaccessible locations will be included in the text. Such a procedure was not found in the final plan.	*Section 5.2.2 - Soil Sampling Locations* in the final SAP was revised to specify sample locations that are determined to be inaccessible may be relocated to the nearest radial location that is accessible.	Please note that the draft plan and final plan include the same text regarding relocating inaccessible sample locations to the nearest radial location that is accessible. Thus, it appears that the original comment requesting "a specified

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments
			procedure for moving an inaccessible point" (beyond the draft plan text) and the response that "a procedure for locating grid points that fall in inaccessible locations will be included in the text" did not result in a more specific procedure than was already include in the draft plan. The final text, however, is accepted as written.
7	Additional Comments Relating to Original Comments: a. In Section 3.4.7, paragraph 2, of the final plan, the text indicates that 50-foot node spacing will be used for the site. Section 4.1.1 and Figure 4-1 indicate 50-foot node spacing for surface soils, which is in agreement with Section 3.4.7. For subsurface sampling, however, the text of Section 4.2.1 indicates that 75-foot node spacing will be used, and the scale on Figure 4-2 indicates that 100-foot node spacing will be used for subsurface soil sampling. Please clarify the node spacing for surface and subsurface sampling locations at the site.	The node spacing as shown on Figure 4-2 indicates a node spacing of approximately 75-feet (each sample location is 75-feet from the other).	Grid nodes generally refer to the intersection of grid lines. The node spacing on the grid overlain on Figures 4-1 and 4-2 uses the same 50-foot node spacing. However, sampling locations are placed at each grid node on Figure 4-1 (surface soil sampling locations) and on every other grid node along a grid line on Figure 4-2 (subsurface soil sampling locations). It is acknowledged that this results in a 50-foot surface soil sample spacing measured along the grid and a 75-foot subsurface soil sample spacing when measured along the diagonal of the grid. Please modify the text of *Section 4.2.1 Sampling Locations* (subsurface soil) to indicate these facts, or alter the grid for subsurface sampling design (Figure 4-2) to show visually that the grid nodes are 75 feet apart. Please revise the text in *Section 3.4.7 Step 7: Optimize the Design for Obtaining*

No.	Reviewer's Comments	Response to Comments	DOH Reply to Response to Comments
			Data, paragraph 2, to indicate the actual sample spacing for surface soil samples and subsurface soil samples to clarify this element.
7	b. One analysis stated throughout the draft plan was for PCBs/pesticides. The corresponding analysis in the final plan is indicated as only PCBs. Are pesticides a contaminant of concern at the site?	Pesticides have not been included in the final SAP as a contaminant of concern at the site. The draft SAP included PCB/pesticides together since at the time we thought we would be limited to using the CLP method that includes both. In discussions with EPA Region IX however, we found that we could use the SW-846 method 8082 (PCBs only), since it is better suited to our needs (lower QLs).	Response adequately addresses the comment.

From: "Wetzstein, Eric, E." <eewetzstein@oees.com>
To: 'Dawn Cosgrove - HEER' <dcosgrove@eha.health.state.hi.us>
Copies to: "Kotoshirodo, Jan, H." <jhkotoshirodo@oees.com>
Subject: FW: Kakaako comments
Date sent: Mon, 10 Jul 2000 12:36:37 -1000

Hi Dawn,
I wanted to get some responses back to you that were included in your email. Responses to your questions concerning the SAP are included on the attached file. Also below are answers to some of your other questions. Please provide an update on the status of EPA approval of the final plan. The EPA has provided a set of comments that we have responded to already. They are currently looking over those responses and looking into scheduling the field work for the lab as well. The primary EPA project Manger at EPA is Thomas Mix (415) 744-2378, but the person doing most of the work, review, and lab coordination is Gail Jones (415) 744-1498. We not heard from EPA yet on final approval. Please provide a schedule for the upcoming field work as well as for Ogden's overall project as currently scoped. The overall schedule is included in the proposal and we don't have hardwired dates for reports after field work since we had no idea when we might be getting data back (EPA lab is doing the work and you don't dictate schedule to them). Consequently it is based number of days after "when data is received" and "comments received". Field work schedule is a bit of a moving target as well. IN the proposal we said to start July 10, 2000, but comment response delays from EPA, changes in DOH PM, and scheduling with EPA for lab services has proven to take more time than was anticipated. The date when EPA will give us the OK on the final SAP and inform us that they are ready for our samples is unknown. I would estimate 1 to 5 weeks. We are ready to start field work as soon as we get the approval and sample lab contacts and addresses. We call EPA weekly. Please provide me with a copy of the Health and Safety Plan for the field work prior to initiation of field activities. We will send you a copy. The second response to comments is attached. Note that responses 2b and 4b require page replacements in the final SAP (one page each).

<<DOH review2.doc>>

Thanks
Eric

Received as attachment to July 10, 2000 email from E. Wetzstein

Type of Review:	Kakaako Final Field Sampling Plan
Reviewed by:	Dawn Cosgrove, DOH
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Reviewer's Comments	Response to Comments
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1	b. The text implies that background soil samples will be collected; however, Section 7.3 of the final plan specifies that general literature values for background metal concentrations on island will be used (that is, background samples will not be collected as part of this field effort).	The metals detected above QLs will be compared to literature values for risk screening purposes. The collection of background samples will not be included in this field investigation. It was agreed that all soils in the surrounding areas consist of fill materials. Many of these fill soils could be the same or similar source(s) as the site. Consequently, their usefulness as "background" would be limited. Literature values for metals in native soils would be a better source. Organic compounds will be presumed to have been derived from anthogenic sources.
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2	b. NOAA 1998 (presumably the reference listed in Section 8 as "Buchman, M.F. 1998") is not cited in "Steps for Groundwater Data Decisions," as indicated in the response to the original comment.	Comment noted. The appropriate reference will be added to the text. Please see revision to *Steps for Groundwater Data Decisions - Step 2.*
3	Original Comment 5: See 1. Original Comment 2, parts a and b (discussed previously) apply to the discussion for groundwater data decisions as well.	See response No.1

4	Original Comment 7: a. Part a of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the decision error rate for contaminant concentrations do not appear to have been incorporated into the final plan.	As indicated in the original response to comment, decision errors will be minimized for estimated contaminant concentrations, and not risk levels. It is agreed that contaminant concentrations are not risk levels, however, since standard EPA protocol is to be followed, it is appropriate to use the conservative excess cancer value and hazard index as stated because those are the specific risk levels from which PRGs (i.e. screening levels for contaminant concentrations) are derived/based. (*See Section 3.4.6, 3rd ¶*)
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6	Original Comment 14: The response to the original comment indicates that a procedure for locating grid points that fall in inaccessible locations will be included in the text. Such a procedure was not found in the final plan.	*Section 5.2.2 - Soil Sampling Locations* in the final SAP was revised to specify sample locations that are determined to be inaccessible may be relocated to the nearest radial location that is accessible.

7	Additional Comments Relating to Original Comments: a. In Section 3.4.7, paragraph 2, of the final plan, the text indicates that 50-foot node spacing will be used for the site. Section 4.1.1 and Figure 4-1 indicate 50-foot node spacing for surface soils, which is in agreement with Section 3.4.7. For subsurface sampling, however, the text of Section 4.2.1 indicates that 75-foot node spacing will be used, and the scale on Figure 4-2 indicates that 100-foot node spacing will be used for subsurface soil sampling. Please clarify the node spacing for surface and subsurface sampling locations at the site.	The node spacing as shown on Figure 4-2 indicates a node spacing of approximately 75-feet (each sample location is 75-feet from the other).
7	b. One analysis stated throughout the draft plan was for PCBs/pesticides. The corresponding analysis in the final plan is indicated as only PCBs. Are pesticides a contaminant of concern at the site?	Pesticides have not been included in the final SAP as a contaminant of concern at the site. The draft SAP included PCB/pesticides together since at the time we thought we would be limited to using the CLP method that includes both. In discussions with EPA Region IX however, we found that we could use the SW-846 method 8082 (PCBs only), since it is better suited to our needs (lower QLs).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 29, 2000

MEMORANDUM

SUBJECT: Kaka'ako Brownfield Unit 8 Site Characterization Study Sampling and Analysis Plan, Oahu, HI (EPA QA Program Document Control Number [DCN] BNFD031S00VSF2)

FROM: Gail Jones, Environmental Scientist
Quality Assurance Office, PMD-3

THROUGH: Vance S. Fong, P.E., Manager
Quality Assurance Office, PMD-3

TO: Thomas Mix, Project Manager
Brownfields Team, SFD-1-1

The subject Sampling and Analysis Plan (SAP) for the Kaka'ako Brownfield Unit 8 Site Characterization Study, prepared by Ogden Environment and Energy Services (Ogden) and dated May 2000, was reviewed. The review was based on guidance provided in the "Instructions for the One-Time Sampling Event Sampling and Analysis Plan (SAP)," February 1998; "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," (EPA QA/R-5, Draft Final, November, 1999); "Preliminary Remediation Goals (PRGs)," November 1999; "Documentation of Data Validation Requirements in Quality Assurance Project Plans (QAPPs), Field Sampling Plans (FSPs) and Sampling and Analysis Plans (SAPs)," January 14, 2000; "Regional Interim Policy for Determination of Volatile Organic Compound (VOC) Concentrations in Soil and Solid Matrices," June 23, 1999; an EPA memorandum dated April, 20, 2000; and a Response to Comments memorandum from Ogden.

The subject plan addresses most of the concerns identified in the April 20, 2000 memorandum and is conditionally approved. However, the document should be revised in accordance with outstanding concerns regarding the use of incorrect concentration units for risk evaluation, the lack of quality assurance (QA) objectives and detection limits for some analytes, and the lack of sufficient detail in describing the collection and preservation of soil samples for volatile organic compound (VOC) analysis.

The EPA comments provided in the memorandum dated April 20, 2000 appear in bold type while the evaluations of the responses to comments appear in normal type. The original numbering has been retained. A few additional concerns identified during this review are presented following the evaluation of the responses to comments.

Concerns:

1A. [Section 3.4.5, Step 5: Develop a Decision Rule; Section 7.6, Data Quality Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] References are made in this section, that in order to meet project data quality objectives, the quantitation limits (QLs) will have to meet or exceed the residential preliminary remediation goals (PRGs) for soil samples, or the federal and state ambient water quality criteria (AWQC) for groundwater samples, where practical. Many of the QLs listed on Table 7-2 appear to be higher than the PRGs or AWQC. The plan should discuss in greater detail how these discrepancies will be reconciled.

This concern has been adequately addressed. The response to this comment (RTC) and Table 7-2 of the revised plan indicate that the provided sample quantitation limits (QLs) have been revised. In cases where the QLs are higher than the PRGs or AWQC, if the analyte is detected at the QL, all non-detected samples will be evaluated as ½ the QL for risk evaluation. A footnote to Table 7-2 also indicates that for instances where the QL is greater than the PRGs or AWQCs, the laboratory will be requested to report values down to the instrument detection limit (IDL). (Note: Section 7.6 has been deleted.)

1B. Under Step 1 for groundwater data decisions, the plan states that analyses for three of the eight groundwater samples will be performed at the lowest detection limits possible by the laboratory. Since it is uncertain at this point which laboratory will be performing the analyses, it is impossible to determine if the lowest detection limits possible will meet project needs. It is recommended that the required detection limits be specified in the plan. In addition, Table 7-2 states that low level methods will be used for some of the water methods. The methods that will be used to achieve these low detection limits should be specified.

This concern has not been completely addressed. Low level method detection limits are provided; however, there are a number of concerns identified in Table 7-2.

A. Table 7-2 lists the preliminary remediation goals (PRGs) for soils as micrograms per kilogram (µg/kg); however, the values listed appear to be milligrams per liter (mg/L). It is uncertain if the conversion or the units are incorrect. For example, the detection limits for the Water Low Level Methods for metals by EPA Methods 6010/7000 are listed as microgram per liter (µg/L). The listed detection limits of 0.005 µg/L for cadmium and 0.003 µg/L for lead are extremely low values which Methods 6010/7000 are unlikely to attain. (Both lead and cadmium were present at elevated concentrations in ash sampled previously.) Note, the PRG tables (Region 9 EPA 1999) list PRGs for soils in milligrams per kilogram (mg/kg). The values and units listed in Table 7-2 should be reviewed and corrected, as necessary.

B. If arsenic, selenium, thallium, and antimony will be extracted using a special process, as indicated in a footnote to Table 7-2, this process should be described in the SAP.

1C. The analyses of the investigation derived waste (IDW) is discussed under the heading "Evaluate Disposal Criteria." Please note that it is the sampling agency's responsibility to arrange for the analyses and proper disposal of IDW. The EPA analytical system should not be utilized for this purpose.

This concern has not been adequately addressed. The RTC states that the EPA analytical system will not be utilized for the TCLP analysis for IDW; however, Table 4-3, Request for Analysis Services for Soil, identifies samples to be analyzed for TCLP but does not state that these samples will not be analyzed using the EPA analytical system nor does it identify the laboratory that will provide the analysis.

2A. [Section 3.4.7, Step 7: Optimize the Design for Obtaining Data; Section 4.5.2, Subsurface Soil Analysis; Table 4-3, Request for Analytical Services for Soil; Table 4-4, Request for Analytical Services for Groundwater] Section 3.4.7 states that 40 surface soil and 40 subsurface soil samples will be analyzed for total petroleum hydrocarbons (TPH)-diesel.

However, Table 4-3 shows only 27 samples for TPH-diesel analyses. This discrepancy should be clarified.

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2B. **In addition, the text states that 4 subsurface soil and 2 groundwater samples will be analyzed for dioxin. Section 4.5.2 states that the soil samples will be collected from the "ash layer." However, Section 1.1 states that incinerator ash may have been used as fill at the site. It is unclear how the "ash layer" will be identified or how the sampling locations for these samples will be selected. If the locations are to be determined in the field (as indicated on Table 4-3 and 4-4), the criteria that will be used to select these locations should be included in the plan.**

This concern has been adequately addressed. Section 4.2.2, Target Analytes of Concern, and the RTC state that soil borings will be evaluated to identify the ash layer based on texture and fragments (i.e., metal, glass, etc.) present in the fill.

3. **[Section 4.1.1, Sampling Locations (Surface Soil); Section 4.2.1, Sampling Locations (Subsurface Soil)] Section 4.1.1 states that sampling locations for surface soils will be 30 to 50 feet apart. Section 4.2.2 states that sampling locations for subsurface soils will be 50 feet apart and that samples will be collected at two depths at each location. A rationale should be provided explaining why the sampling grid sizes were selected and why subsurface samples will be collected at two depths.**

This concern has been adequately addressed. Section 4.1.1 of the revised SAP states that surface soil sampling locations will be 50 feet apart for both the paved and unpaved areas and Section 4.2.1 states that the subsurface soil sampling locations will be 75 feet apart. The RTC and revised SAP state that the grid size was selected based on scheduling and budgetary constraints. The RTC and revised plan state that two depths will be sampled to evaluate contaminants in the vadose zone and at the capillary fringe.

4. **[Section 4.1.2, Target Chemical of Potential Concern (Surface Soil); Section 4.2.2, Target Analytes of Concern (Subsurface Soil); Figure 4-1, Surface Soil Sampling Locations; Figure 4-2, Subsurface Soil Sampling Locations; Table 4-3, Request for Analytical Services for Soil; Table 4-3, Request for Analytical Services for Groundwater] These sections state that some of the samples for TPH analyses will be collected in the vicinity of the underground storage tanks (USTs). However, only samples KBS11, KBA11 and KBB11, as shown on the figures, appear to be in the general vicinity of the former USTs. This discrepancy should be clarified.**

   This concern has been adequately addressed. The RTC states that four biased surface soil and four biased subsurface samples will be collected from the area of the USTs. Figures 4-1 and 4-2 depict four sampling locations for surface soil (SS36, SS37, SS38, and SS40) and subsurface soil (SA17/SB17, SA18/SB18, SA19/SB19, and SA20/SB20) sample collection.

5. **[Section 4.3.1, Sampling Locations (Groundwater); Section 4.3.2, Target Analytes of Concern; Figure 4-3, Monitoring Well Locations] These sections state that three [new] groundwater monitoring wells will be installed at specific locations...in close proximity to the harbor. The locations for the proposed monitoring wells, as shown on Figure 4-3, do not appear to be very close to the harbor, presuming that the harbor is located somewhere along the Kewalo Basin side of the site. A rationale for the locations of the proposed monitoring wells should be provided.**

   This concern has been adequately addressed. The RTC and Section 4.3.1 state that the three proposed wells, MW6, MW7, and MW8, will be installed to establish the general hydraulic gradient across the site. The text in Section 4.3.2 has been modified to indicate that monitoring wells MW-1, MW-2, and MW-3 are the three wells located in close proximity to the harbor.

6. **[Section 5.2.2, Soil Sampling Procedures; Table 4-1, Preservation Methods and Holding Time for Soil Samples] The plan states that volatile samples will be collected in 4-oz wide-mouth glass jars, brass tubes, or stainless steel tubes. It is Regional policy to collect samples for volatile analyses following EPA Method 5035, primarily using EnCore samplers. A rationale should be provided if Method 5035 is not to be**

followed. A copy of the "Regional Interim Policy for Determination of Volatile Organic Compound (VOC) Concentrations in Soil and Solid Matrices" is attached to this memorandum for reference.

This concern has been partially addressed. Section 5.2.2, Subsurface Soil Sampling Procedures, of the revised SAP states that samples for VOC analysis will be collected in EnCore samplers and transferred to a vial containing preservative. Table 4-1 indicates that samples collected for VOC analysis will be preserved with sodium bisulfate. The SOP for soil sampling in Appendix B does not describe the collection of soil samples using EnCore samplers. The collection procedure for VOC samples should be expanded to discuss the pre-weighing of the vials at the laboratory, or, if the vials will be weighed at the site, the weighing process and equipment should be described. Note that a stir bar should be included in the vial containing the sodium bisulfate preservative.

7. **[Section 6.2.1, Chain of Custody] Samples sent through the Contract Laboratory Program (CLP) for analyses will be required to be documented on CLP chain of custody forms. A description and an example of these forms, and the appropriate distribution should be included in the plan. A copy of the "Instructions for Sample Shipping and Documentation," dated November 1997, is attached to this memorandum for reference.**

This concern has been adequately addressed. The SOP titled "Record Keeping, Sample Labeling, and Chain-of-Custody Procedures" includes examples of CLP chain-of-custody forms and provides directions for their use. The RTC states that the document "Instructions for Sample Shipping and Documentation" will be used for detailed reference; however, it is not attached to the SAP.

8. **[Section 6.3.1, Sample Labeling/Identification] The bullet point labeled "Sample identification number (EPA ID# described below) and the accompanying example are not applicable for CLP samples. CLP sample numbers will be assigned to samples analyzed through the CLP system. Refer to "Instructions for Sample Shipping and Documentation" for a description of CLP sample numbers.**

This concern has been adequately addressed. Section 6.3.1 has been expanded to include a section describing "Identification Numbers for Samples to be Analyzed Using CLP Methods."

9. **[Section 7.1.3, Trip Blanks] The text states that trip blanks will be prepared by the laboratory and analyzed only for CLP VOCs. There are no provisions under the CLP contract for laboratories to provide trip blanks or other sampling supplies. Also note that under Regional policy, trip blanks are the least preferred type of blanks. Only one blank per day should be submitted for analyses. The preferred order of collection is equipment blanks, field blanks, and finally, trip blanks (if no other blanks are to be collected).**

This concern has been adequately addressed. Section 7.1.3, Trip Blanks, has been deleted. (Note: Subsequent sections should be renumbered as appropriate.)

10A. **[Section 7.2, Laboratory Quality Control Samples] This section states that a laboratory quality control (QC) sample will be collected at a frequency of one per 20 samples. Note also that a laboratory QC sample is required each 14 calendar days, whichever is more frequent.**

This concern has been adequately addressed. The RTC indicates the comment is "noted," but it is anticipated that the sampling event will be no longer than 5 calendar days.

10B. **The text also states that the sample to be used as the laboratory QC sample will be designated with an "X" at the end of the sample ID. This will not be an acceptable procedure for CLP samples, as the assigned sample numbers are of fixed length. It is recommended that the text be amended to indicate that "laboratory QC" will be written on the chain-of-custody forms and sample container labels.**

This concern has been adequately addressed. Use of an "X" to modify the sample number has been deleted. Section 7.2 has been revised to indicate that "Laboratory QC" will be written on the COC record and the sample label.

11A. **[Section 7.5, Analytical Data Quality Parameters] This section references specific SOPs; however, several of them, such as laboratory analysis and validation, could not be located in the appendix to the plan.**

This concern has been partially addressed. The RTC states that the text was intended to reference the general types/categories of SOPs, and not the specific SOPs. However,

SOPs on data validation and laboratory analysis are not provided.

11B. It appears that there is text missing between the bottom of page 7-5 and the top of page 7-12.

This concern has been adequately addressed. There does not appear to be any missing text in the revised document.

12. [Section 7.7, Data Package Requirements and Data Validation] The text states that the data will be validated using Region 9 Option 2 protocol by the Ogden data validators. Rationale needs to be provided as to why Option 2 was chosen. In addition, Option 2 implies a focused validation. The plan should discuss what areas will be focused on, whether it will be specific analytes, methods, sampling locations, or some combination and how these decisions will be made. (Note: This section has been renumbered as Section 7.6.)

This concern has been adequately addressed. The RTC and Section 7.6 indicate that Option 2 was selected to evaluate all data at a summary level with a focused evaluation the metals and semi-volatile organic compounds, based on site history and past practices. It is recommended that the text specify whether Method 8270 or 8082, or both, will be focused on.

Additional Concerns

1. [Title/Signature Page] A cover page containing the title of the project and signature blocks for, at a minimum, the EPA Project Officer and the EPA Quality Assurance Manager should be provided. An acceptable format is located in the "Instructions for the One-Time Sampling Event Sampling and Analysis Plan (SAP)" (February 1998).

2. [Table 4-3, Request for Analytical Services for Soil; Table 4-4, Request for Analytical Services for Groundwater] It is recommended that the tables list totals for each type of analysis.

3. [Section 5.2.4, Groundwater Sampling Procedures] Section 5.2.4 states that groundwater samples will be analyzed for dissolved metals after being filtered through a 0.45-micron membrane in-line filter. Regional Superfund Site Assessment guidance recommends the use of a 5-micron filter for groundwater

samples targeted for metals analysis. If dissolved metals are needed, the SAP does not need to be modified. However, if the collection of metal samples is required for site assessment purposes only, the SAP should be revised to specify a 5-micron filter.

4. [Table 7-1, Analytical QA Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] The following discrepancies or omissions were noted:

   A. The blank spike/ laboratory control sample (BS/LCS) accuracy criteria for CLP volatiles, semi-volatiles, and metals list one number for percent recovery instead of a range. Table 7-1 should be revised to provide acceptance ranges for BS/LCS. Alternatively, the plan/table can state that the acceptance limits as specified in the appropriate CLP SOW will meet project needs.

   B. Table 7-1 lists the QA objectives for dioxins/furans and CLP Pest/PCB as TBD, "to be determined." Precision and accuracy criteria should be developed based on the needs of the project. Client Request Forms (CRFs)or Data Quality Indicator (DQI) tables, available from the Region 9 QA Office, should be included in the plan. Alternatively, if private laboratory services are to be procured for these services, the plan should include appropriate laboratory quality control criteria and corrective action procedures. And the plan should state that the acceptance limits as specified in the laboratory QA Plan or SOPs will meet project needs.

   D. The detection limits for dioxin/furan analysis should be specified. These should be based on the needs of this project, not dependent on the analytical laboratory performance, as indicated in a footnote to Table 7-2. See item B above.

Questions or comments regarding this review should be referred to Gail Jones of the EPA QA Office, at (415) 744-1498.

This report was prepared under the Environmental Services Assistance Team (EAST) Contract No. 68D60005, Work Assignment (WA) No. 09-00-4-5, Technical Direction Form (TDF) No. 0045015

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STATE OF HAWAII
DEPARTMENT OF HEALTH

HAZARD EVALUATION AND EMERGENCY RESPONSE OFFICE

Phone: (808) 586-4249
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DATE: July 10, 2000 NO. OF PAGES: 11

TO: Eric Wetzstein

COMPANY: Ogden Environmental Energy Services, Inc.

TELEPHONE: 808-545-2462, ext. 128 FAX: 808-528-5379

FROM: Dawn Cosgrove, Remedial Project Manager

PROJECT: Kakaako Brownfield Unit 8 Site Characterization Study

SUBJECT: Comments on the Field Sampling Plan

COMMENTS:

Attached please find EPA Region IX's comments (dated June 29, 2000; received by DOH on July 7, 2000) on the final Field Sampling Plan for the Kakaako Brownfield Unit 8 site. Gail Jones sent them directly to me so that I could forward them to you.

Please contact me regarding preliminary DOH comments on the final plan that I emailed you on Friday, July 7. I will be in meetings most of tomorrow (Tuesday), so you'll have better luck reaching me today or Wednesday.

Dawn Cosgrove
Remedial Project Manager

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901
415-744- (Phone)
415-744-1476 (Facsimile)

FACSIMILE COVER SHEET

FROM:

TO: Dawn Cosgrove

ORGANIZATION:

PHONE NUMBER:

FACSIMILE NUMBER: 808- 586- 7537

DATE: 7/7/00

NUMBER OF PAGES: 10 (incl. cover)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 29, 2000

MEMORANDUM

SUBJECT: Kaka'ako Brownfield Unit 8 Site Characterization Study Sampling and Analysis Plan, Oahu, HI (EPA QA Program Document Control Number [DCN] BNFD031S00VSF2)

FROM: Gail Jones, Environmental Scientist
Quality Assurance Office, PMD-3

THROUGH: Vance S. Fong, P.E., Manager
Quality Assurance Office, PMD-3

TO: Thomas Mix, Project Manager
Brownfields Team, SFD-1-1

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10A. **[Section 7.2, Laboratory Quality Control Samples] This section states that a laboratory quality control (QC) sample will be collected at a frequency of one per 20 samples. Note also that a laboratory QC sample is required each 14 calendar days, whichever is more frequent.**

This concern has been adequately addressed. The RTC indicates the comment is "noted," but it is anticipated that the sampling event will be no longer than 5 calendar days.

10B. **The text also states that the sample to be used as the laboratory QC sample will be designated with an "X" at the end of the sample ID. This will not be an acceptable procedure for CLP samples, as the assigned sample numbers are of fixed length. It is recommended that the text be amended to indicate that "laboratory QC" will be written on the chain-of-custody forms and sample container labels.**

This concern has been adequately addressed. Use of an "X" to modify the sample number has been deleted. Section 7.2 has been revised to indicate that "Laboratory QC" will be written on the COC record and the sample label.

11A. **[Section 7.5, Analytical Data Quality Parameters] This section references specific SOPs; however, several of them, such as laboratory analysis and validation, could not be located in the appendix to the plan.**

This concern has been partially addressed. The RTC states that the text was intended to reference the general types/categories of SOPs, and not the specific SOPs. However,

SOPs on data validation and laboratory analysis are not provided.

11B. **It appears that there is text missing between the bottom of page 7-5 and the top of page 7-12.**

This concern has been adequately addressed. There does not appear to be any missing text in the revised document.

12. **[Section 7.7, Data Package Requirements and Data Validation] The text states that the data will be validated using Region 9 Option 2 protocol by the Ogden data validators. Rationale needs to be provided as to why Option 2 was chosen. In addition, Option 2 implies a focused validation. The plan should discuss what areas will be focused on, whether it will be specific analytes, methods, sampling locations, or some combination and how these decisions will be made.** (Note: This section has been renumbered as Section 7.6.)

This concern has been adequately addressed. The RTC and Section 7.6 indicate that Option 2 was selected to evaluate all data at a summary level with a focused evaluation the metals and semi-volatile organic compounds, based on site history and past practices. It is recommended that the text specify whether Method 8270 or 8082, or both, will be focused on.

Additional Concerns

1. [Title/Signature Page] A cover page containing the title of the project and signature blocks for, at a minimum, the EPA Project Officer and the EPA Quality Assurance Manager should be provided. An acceptable format is located in the "Instructions for the One-Time Sampling Event Sampling and Analysis Plan (SAP)" (February 1998).

2. [Table 4-3, Request for Analytical Services for Soil; Table 4-4, Request for Analytical Services for Groundwater] It is recommended that the tables list totals for each type of analysis.

3. [Section 5.2.4, Groundwater Sampling Procedures] Section 5.2.4 states that groundwater samples will be analyzed for dissolved metals after being filtered through a 0.45-micron membrane in-line filter. Regional Superfund Site Assessment guidance recommends the use of a 5-micron filter for groundwater

samples targeted for metals analysis. If dissolved metals are needed, the SAP does not need to be modified. However, if the collection of metal samples is required for site assessment purposes only, the SAP should be revised to specify a 5-micron filter.

4. [Table 7-1, Analytical QA Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] The following discrepancies or omissions were noted:

   A. The blank spike/ laboratory control sample (BS/LCS) accuracy criteria for CLP volatiles, semi-volatiles, and metals list one number for percent recovery instead of a range. Table 7-1 should be revised to provide acceptance ranges for BS/LCS. Alternatively, the plan/table can state that the acceptance limits as specified in the appropriate CLP SOW will meet project needs.

   B. Table 7-1 lists the QA objectives for dioxins/furans and CLP Pest/PCB as TBD, "to be determined." Precision and accuracy criteria should be developed based on the needs of the project. Client Request Forms (CRFs)or Data Quality Indicator (DQI) tables, available from the Region 9 QA Office, should be included in the plan. Alternatively, if private laboratory services are to be procured for these services, the plan should include appropriate laboratory quality control criteria and corrective action procedures. And the plan should state that the acceptance limits as specified in the laboratory QA Plan or SOPs will meet project needs.

   D. The detection limits for dioxin/furan analysis should be specified. These should be based on the needs of this project, not dependent on the analytical laboratory performance, as indicated in a footnote to Table 7-2. See item B above.

Questions or comments regarding this review should be referred to Gail Jones of the EPA QA Office, at (415) 744-1498.

This report was prepared under the Environmental Services Assistance Team (EAST) Contract No. 68D60005, Work Assignment (WA) No. 09-00-4-5, Technical Direction Form (TDF) No. 0045015

TELEPHONE DECISION LOG

call initiated ___
call received X

Date: July 7, 2000	Phone Numbers: 415-744-1498
Time: 11:00	Fax Number:

Name of Person Calling: Gail Jones (jones.gail@epamail.gov)

Affiliation: US EPA, Region IX, Quality Assurance Office

Incident/Site being referenced: Kakaako Brownfields Unit 8

Brief Discussion of Communication:

She will fax (& follow up with hard copy) EPA's comments on the final Field Sampling Plan for Kakaako Brownfield Unit 8. She requested that I forward them to Ogden.

↳ Rec'd ~4pm July 7 (Fri.)
Faxed to Ogden ~11a.m. July 10 (Mon.)

~~Decision Documented:~~

HEER Staff Signature: Dawn Cosgrove

Date: July 7, 2000

From: Self <EHANVL1/DCOSGROVE>
To: eewetzstein@oees.com
Subject: Final SAP, Kakaako Brownfield Unit 8
Date sent: Fri, 7 Jul 2000 07:14:22 -1000

Hi, Eric:

I reviewed the incorporation of Charley Langer's comments and Ogden's responses for the draft field sampling plan, as part of the process of providing Ogden with DOH approval of the final plan so that Ogden can proceed with the field work (pending approval by EPA). I want to provide these comments to you informally before submitting them in a formal letter so that you can review them and provide any clarifications, such as if the comment was incorporated in another part of the document than where it was discussed in the draft plan or if I am not aware of specific information.

It would be helpful if Ogden would revise the responses to comments on the draft plan so that the written responses to comments reflect the actual revisions to the draft document. I assume that no other significant changes were made to the draft document that were not addressed in the original comments and responses. Please confirm that this is the case.

Please provide an update on the status of EPA approval of the final plan.

Please provide a schedule for the upcoming field work as well as for Ogden's overall project as currently scoped.

Please provide me with a copy of the Health and Safety Plan for the field work prior to initiation of field activities.

Please feel free to contact me at 586-4249 to discuss these items.
Dawn

Comments on Incorporation of Comments and Responses to Comments on Kakaako Field Sampling Plan (Draft) into Field Sampling Plan (Final)

1. **Original Comment 2**: Original comment and response to comment do not appear to have been fully incorporated into Kakaako Field Sampling Plan Final (final plan).

a. The original comment specifically requests that all detected analytes be included as COPCs and that background levels could be considered at a later time. Including all detected analytes in the risk evaluation is necessary to effectively calculate cumulative risk associated with all detected analytes. The response to the original comment indicates that all detected analytes will be included as COPCs for the purposes of a risk evaluation. The text of the final plan, however, indicates that analytes detected above the quantitation limit or a relative background concentration based on soil sampling will be identified as a COPC. This contradicts the original comment provided on the Field Sampling Plan Draft (draft plan) and the response to that comment.

b. The text implies that background soil samples will be collected; however, Section 7.3 of the final plan specifies that general literature values for background metal

concentrations on island will be used (that is, background samples will not be collected as part of this field effort).

2. **Original Comment 3, part b:**

a. Discussion of ecological risks associated with sediment transport into the harbor appears to have been eliminated in the final plan. Please clarify the rationale for not including these risks in Step 2 of the "Steps for Groundwater Data Decisions."

b. NOAA 1998 (presumably the reference listed in Section 8 as "Buchman, M.F. 1998") is not cited in "Steps for Groundwater Data Decisions," as indicated in the response to the original comment.

3. **Original Comment 5:** See 1. Original Comment 2, parts a and b (discussed previously) apply to the discussion for groundwater data decisions as well.

4. **Original Comment 7:**

a. Part a of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the decision error rate for contaminant concentrations do not appear to have been incorporated into the final plan.

b. Part b of Original Comment 7: The Department of Health's comments on the Response to Comments on the draft plan (see email from Charley Langer, DOH, to Eric Wetzstein, Ogden dated May 10, 2000) regarding the use of PARCC parameters in the calculation of decision errors do not appear to have been incorporated into the final plan.

5. **Original Comment 9:** Please clarify the rationale for placing subsurface soil sampling locations SA16/SB16 through SA20/SB20 at the locations shown on Figure 4- 2 of the final plan, noting that some of these locations are not at grid nodes but possibly could be placed on nearby nodes.

6. **Original Comment 14:** The response to the original comment indicates that a procedure for locating grid points that fall in inaccessible locations will be included in the text. Such a procedure was not found in the final plan.

7. **Additional Comments Relating to Original Comments:**

a. In Section 3.4.7, paragraph 2, of the final plan, the text indicates that 50-foot node spacing will be used for the site. Section 4.1.1 and Figure 4- 1 indicate 50-foot node spacing for surface soils, which is in agreement with Section 3.4.7. For subsurface sampling, however, the text of Section 4.2.1 indicates that 75-foot node spacing will be used, and the scale on Figure 4- 2 indicates that 100-foot node spacing will be used for subsurface soil sampling. Please clarify the node spacing for surface and subsurface sampling locations at the site.

b. One analysis stated throughout the draft plan was for PCBs/pesticides. The corresponding analysis in the final plan is indicated as only PCBs. Are pesticides a contaminant of concern at the site?

From: **Self <EHANVL1/DCOSGROVE>**
To: **mix.thomas@epamail.epa.gov**
Subject: **Kakaako Brownfields Unit 8 Site, Honolulu, Hawaii, SAP**
Date sent: **Mon, 26 Jun 2000 14:51:42 -1000**

Hi, Tom -

I am the new Hawaii Department of Health, HEER project manager for the Brownfields project at Kakaako Unit 8 Site in Honolulu. I would like to introduce myself and inquire about where EPA is at with the Final SAP for the site characterization work at the site.

Ogden submitted the Final SAP for site characterization at the Kakaako Unit 8 site in late May. Charley Langer left this position in early June and did not review the final SAP before his departure. I came aboard last week, so I am coming up to speed on my new projects. I understand that the Final SAP for Kakaako Unit 8 needs to be approved by EPA and DOH prior to initiation of field work at the site. My understanding is that Ogden plans to begin field work shorty. Thus, I am inquiring as to where EPA is at in its review/approval of the final SAP.

I understand that Gail Jones reviewed the Draft SAP. Please respond to me directly, or please ask Gail to give me a call. My phone number is 808-586-4249.

Thanks, Tom.
Dawn

TELEPHONE DECISION LOG

Date: 6/21/00	Phone Numbers: 545-2462, x128
Time: 12:00	Fax Number:

Name of Person Calling: Eric Wetzstein

Affiliation: Ogden

Incident/Site being referenced: Kakaako Brownfield Unit 8

Brief Discussion of Communication:

Update since Charley left:

Incinerator ash (underlying). Tested. Addressed.

Time to schedule field effort, hopefully this month.

EPA is lab (he needs to schedule with Dawn@EPA Region IX).

→ (415-744-2378) (nix.thomas@epamail.epa.gov)

EPA RPM = Tom MIX. He doesn't know much about project. He does all Brownfields. (may not be true) Another person (Gail – he'll get me her name – she does lab/field coordination & did commenting on docs).

Gail Jones

Cost issues have arisen. Comments: now doing Encore Sampling for volatiles. EPA labs, so need to buy there own.

He thinks its time & materials contract. (It is)

EPA grant is $100K. So Ogden designed program around $100K budget.

In draft form, were going to do Strataprobe wherever. EPA & Charley told them have to work on grid. So now will be sampling in bldgs, not with Strataprobe (but by other means – hand).

Planning & Harbors folks may call about schedule.

COST ISSUES

HEER Staff Signature: DAWN COSGROVE	Date: 6/21/00

OVER

Tom lost final SAP. So Ogden sent another copy to Gail. Took awhile for EPA to review draft SAP.

I told him EPA & DOH need to approve final SAP before field work. He didn't seem to know about this.

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

680 Iwilei Road
Suite 660
Honolulu, HI 96817
808 545 2462
Fax 808 528 5379

May 26, 2000

Mr. Charlie Langer
State of Hawaii Department of Health
Hazard Evaluation and Emergency Response Office
919 Ala Moana Boulevard, Room 206
Honolulu, Hawaii 96814

Subject: Sampling and Analysis Plan for a Site Characterization Study at the Kaka'ako Brownfield Unit 8 Site

Dear Mr. Langer,

Enclosed are four (4) copies of the Sampling and Analysis Plan for the Kaka'ako Brownfield Unit 8 Site. One (1) copy has been forwarded to Mr. Thomas Mix of the U.S. Environmental Protection Agency Superfund Division, Region IX.

If you have any questions regarding this Sampling and Analysis Plan, please do not hesitate to contact me at (808) 545-2462 Ext. 128.

Sincerely,

Eric Wetzstein
Project Manager

Enclosure

cc: Thomas Mix, EPA Region IX

Type of Review:	Kakaako Field Sampling Plan Draft
Reviewed by:	Charlie Langer, DOH
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Page	Reviewer's Comments	Response to Comments
1	Section 3.4.5	1. first paragraph. EPA recommends a statistical parameter be selected during this step of the DQO process (see EPA, *Guidance for the Data Quality Objectives Process*, September 1994). A "reasonable maximum exposure (RME)" is used during risk assessment to represent the highest exposure that is reasonably expected to occur at a site. While the RME is often an upper confidence limit on a mean, "RME" and "statistical parameter" are not synonymous.	The RME is chosen as a central component of the decision rule since it bears directly on the primarily goal of the study: to conduct a screening level risk assessment. The RME is defined as the upper 95% confidence limit based on current EPA guidance for conducting screening level risk assessments (see EPA 1991, *Risk Assessment Guidance for Superfund: Volume I- Human Health Evaluation Manual (Part B)).* This qualifies as statistical parameter and conforms to the intent of the DQO guidance. The text will be clarified to state that the RME is defined as the 95% confidence interval on the mean. This should address DOH's concern.
2	Sec 3.4.5	2. *Steps for Soil Data Decisions, Step 2: Identify chemicals of concern for soil.* Please include all detected analytes as COPCs, as it is possible for all contaminants to be below Region IX PRGs and still have a cumulative site risk greater than 10^{-6} and/or a hazard index greater than 1. This does not mean that cleanup levels are likely to be below PRGs, or that background levels etc. cannot be considered at a later time – only that DOH wants the "complete picture" to make an informed risk management	Comment noted. All detected analytes will be included as COPCs for the purposes of a risk evaluation. The text had been revised accordingly.

		decision.	
3	Section 3.4.5	3. *Steps for Soil Data Decisions, Step 3: Conduct preliminary human risk evaluation for soil exposures.* A couple of minor inconsistencies are noted: a. Ecological risks are discussed in a paragraph focused on human health. Please separate this out. *b.* The methodology for human health risk evaluation is cited, while no citation is provided for ecological risk evaluation.	a. The reference to ecological risk will be removed from the paragraph. b. The methodology for ecological risk evaluation is a more simplistic process and did not warrant a separate appendix. The ecological risk evaluation is described fully under step 2 of "Steps for Groundwater Data Decisions" along with a NOAA, 1998 citation.
4	Sec. 3.4.5	4. *Steps for Soil Data Decisions, Data Quality Objectives.* Data Quality Objectives (DQOs) are all the qualitative and quantitative statements derived from the DQO Process that clarify study objectives, define appropriate types of data, specify tolerable levels of decision errors, etc. Thus, SRQLs, as well as PARCC parameter indicators, are some of the DQOs. However, DQOs and SRQLs are not synonymous, as the referenced text and tables imply.	Comment noted. The text and section heading has been modified to clarify that SQLs are included as DQOs, but that SQLs and DQOs are not synonymous.
5	Section 3.4.5	5. *Steps for Groundwater Data Decisions, Step 2: Identify chemicals of concern for groundwater.* Please include all detected analytes as COPCs, as discussed above.	Comment noted. See response to comment 2.

6	Section 3.4.5	6. *Steps for Groundwater Data Decisions, Data Quality Objectives.* See comment 5 above.	See the response to comment 5.
7	Section 3.4.6	7. *Specify Limits on Decision Errors.* a. Setting the null hypothesis and error limits for a specific risk level implies that a probabilistic risk assessment will be conducted (e.g., Monte Carlo Analysis). Is this what is envisioned, or are you only wanting to control errors for estimated contaminant concentrations? b. Also, the text says (page 3-15) that the indicators assessing the PARCC parameters will be used to place limits on decision errors. Again, this implies a Monte Carlo Analysis, which is probably not appropriate at this stage. What may be appropriate is to set confidence limits on a mean (or whatever parameter is chosen) of the validated data set, and discuss the PARCC parameters in a separate section addressing uncertainty. c. Finally, the last paragraph of this section says that false positives will be controlled to 10%. Please control false positives to 5%.	a. Comment noted. Decision errors will be minimized for estimated contaminant concentrations. Since we are employing the standard EPA protocol for conducting a screening level human health risk assessment it is appropriate to use the conservative excess cancer value and hazard index as stated (comparison to Region IX PRGSs). The section has been revised for clarification. b. EPA guidance (September 1994) states that there are two types of error: design error (i.e. not enough samples or coverage) and measurement error (errors caused by analytical methods). Although PARCC parameters are used as a program to assess measurement error they will not be included in the determination of a 95% UCL. They are appropriate in this section and do not imply the use of Monte Carlo statistics. The text has been revised for clarification. c. The section will be changed to 5%, however, 10% is fairly standard for this application.
8	Section 3.4.7	8. Regarding sampling design: a. DOH agrees with the proposed purposive "source-area sampling" of the UST, hydraulic lifts, transformer pads, etc. as a means of identifying possible contaminants which may be	Care will be taken when evaluating these samples. If they become the singular or primary source for driving risk at the site, specific recommendations can be made for remedial options or further assessment.

		present. However, care should be taken as to how the data are used and/or presented, as the measurements will not be a representative sample (see EPA, *Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies*, 1992).	
9	Section 3.4.7	b. Contamination from incinerator ash is of particular concern due to potential constituents, concentrations, and volumes of materials. In this case, it is desirable to have accurate estimates of potential exposure concentrations; areas and volumes of materials that may have to be managed, removed, or treated; and other characteristics which may be important to remedy selection. While unavoidable to some extent due to site constraints, bias should reduced to the extent practical. i. The current sampling design is biased toward easily accessible areas, and appears to be representative of less than half the property area. This is understandable. It is likely, though, that contamination exists under the warehouses which will be exposed when they are removed in the near future. Conversations with DOT-Harbors indicate that, with some coordination, it is administratively possible to sample through the warehouse floors. ii. EPA guidance suggests that a grid design may be most appropriate when investigative results are to be mapped, and should be less subject to biases than the current design.	Since access to building interiors may be more practical then we were anticipating, it may be prudent to employ a more grid-like system vice a transect system between structures. Please recognize sample locations inside buildings would likely be limited to hand auger locations vice strataprobe, and a significant portion of them may need to be moved in the field given actual conditions. Also the same number of samples would be maintained to keep within scheduling and DOH budget constraints.

		Unless there is a suspected concentration gradient, both the point of origin and the orientation of one axis should be randomly selected (see EPA, *Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies*, 1992). Inaccessible points will either need to be moved to a nearby accessible location, or deleted.	
10	Section 4.1.1.	10 HEER agrees that the incinerator ash is likely to be somewhat evenly distributed across the site. However, when basing a sampling design on such assumptions, the investigator's own bias is built into the sampling effort and the data becomes suspect.	See comment response 9
11	Section 4.1.2.	11. The number of TPH and VOC samples in the text do not appear to match the numbers in Section 4.5.1, and Tables 4-1 through 4-3. Also, the only reason to analyze surface soil for volatiles – since, barring a recent surface spill, they probably won't be in surface soil – would be to meet an AR or TBC. Are 40 analyses necessary for this?	Agreed, VOC samples will only be collected from subsurface soils. The number discrepancies for TPH-diesel samples have been clarified in the text.

12	Section 4.2.1.	12. Assuming changes are made in the sampling design, this section may need some revision.	Comment noted
13	Section 4.4 and Table 4-1.	13. A policy memo from EPA (date?) stated that Method 5035 must be used to prepare soil for volatile analysis on all EPA-funded projects. This imposes certain requirements for containers and preservatives where volatile are concerned. The table on EPA's Web page is out of date.	The new method 5035 will be employed for soil VOC samples.
14	Section 5.2.2	14. *Soil Sampling Locations*. Locations of points in the field are approximate due to measurement error, rounding, judgment on the part of the field staff, etc. EPA recommends there be a specific unbiased procedure to locate exact collection points. The purpose of adding this extra step is to reduce the influence of subtle factors (sampling difficulty, soil color, vegetation, etc.) which can affect where soil is collected, and thus bias the results (see EPA, *Methods for Evaluating the Attainment of Cleanup Standards*, 1989). Similarly, there should be a specified procedure for moving an inaccessible point.	The level of location precision should be set to meet the intended use of the data. For example wells need to be surveyed within a vertical tolerance of a hundredth of an inch because the survey marker will become a reference for water levels that require that precision. In the case of soil samples, locations could have a tolerance of one meter without impacting the intended data use in a human health screening risk assessment. Based on this comment we will survey approximately 20% of the points with a surveyed location at the same time the wells are surveyed to assess the accuracy of the GPS and tape located points to ensure they are meeting the data objectives. All locations can not be surveyed due to budget constraints nor does the intended use of the data warrant their being surveyed. A procedure for locating grid points that fall in inaccessible locations will be included in the text.

15	Section 5.2.2,	15. *Surface Soil Sampling Procedures.* a. Sections 3.4.4 and 3.4.7 appear to say that surface soil would be collected from 0 to 2 feet bgs. However, Section 5.2.2 suggests that the interval sampled may be variable. For the sake of comparability, the size and shape of soil cores collected at each point should be the same, or similar to the degree practical. Please more specifically define the sampling intervals and limit sampling tools to coring devices. Trowels and shovels may be appropriate for some sampling purposes, but are not technically "correct" sampling devices, and generally produce biased and incomparable samples (see EPA, *Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies*, 1992).	The section 5.2.2 will define the surface soil interval as 0 to 2 feet. A hand-held hammer driven coring device will be employed to collect surface soil samples in most locations when practical. Trowels when decontaminated properly (or dedicated) can also be used and are a technically acceptable method for sampling non-volatiles and may be used at some locations. Trowels and bowls will need to be employed for homogenization as requested in comment 15.
15	Section 5.2.2,	*b.* Samples to be analyzed for non-volatiles should be homogenized in the field or prior to analysis.	Non-volatile samples (including SVOCs will be homogenized using properly decontaminated trowels and bowls

16	Section 5.2.4,	16. *Groundwater Sampling Procedures.* There has been considerable discussion/debate on filtering of groundwater samples to be analyzed for non-volatiles. Studies indicate that colloidal transport can be significant under certain conditions. However, commonly used sampling protocols and well installation practices in certain soils produce groundwater samples in which particles have been artificially entrained. Traditionally, suspended particles have been removed from samples by filtering in the field, despite known biases introduced by this procedure. HEER has not taken a strong stand on filtered vs. unfiltered samples, but only raises the concern because it became a difficult issue at a very similar site. Therefore, please elaborate a little more on whether the samples will be filtered or unfiltered, and how this issue will be addressed.	Text changed to include filtering water samples for metal analyses.
17	Section 7.1,	17. *Field Quality Control Samples.* a. Please include some collocated samples to help assess potential short-term spatial variability.	Text changed to include collocated samples and replicate samples.
18	Section 7.1	b. When collecting field duplicates to assess laboratory performance, please take splits from the same homogenized (non-volatiles only) core sample.	Agreed, this is our standard procedure. Text has been revised accordingly.
19	Section 7.3	18. *Background Samples.* Has it been confirmed that sufficient background information exists? .	The general literature values for metals can be found chromium, arsenic, and other trace metals. Organic compounds detected at the site will be presumed to have originated from site activities.

Type of Review:	Kakaako Field Sampling Plan Draft
Reviewed by:	Gail Jones, EPA Region IX
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Page	Reviewer's Comments	Response to Comments
1A	Sec 3.4.5, Sec 7.2, Table 7-2	[Section 3.4.5, Step 5: Develop a Decision Rule; Section 7.2, Data Quality Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] References are made in this section, that in order to meet project data quality objectives, the quantitation limits (QLs) will have to meet or exceed the residential preliminary remediation goals (PRGs) for soil samples, or the federal and state ambient water quality criteria (AWQC) for groundwater samples, where practical. Many of the QLs listed on Table 7-2 appear to be higher than the PRGs or AWQC. The plan should discuss in greater detail how these discrepancies will be reconciled.	The QLs provided in Table 7-2 have been revised. As shown in Table 7-2, some analytes have method limitations (i.e. the CRDL/SQL exceeds the screening level PRGs or AWQC). If an analyte with method limitations is detected in at least one sample, the concentrations for non-detected values will be estimated at 1/2 the respective QL. If an analyte with method limitations is detected at the site, evidence of historical use will be considered. If there is evidence of historical use for that analyte, it will be included in the risk evaluation. The text has been revised accordingly.
1B		Under Step 1 for groundwater data decisions, the plan states that analyses for three of the eight groundwater samples will be performed at the lowest detection limits possible by the laboratory. Since it is uncertain at this point which laboratory will be performing the analyses, it is impossible to determine if the lowest detection limits possible will meet project needs. It is recommended that the required detection limits be specified in the plan. In addition, Table 7-2 states that low level methods will be used for some of the water	Comment noted. Table 7-2 has been revised to include laboratory reporting limits for the low level method analyses. The low level methods required for the low detection limits are specified in Table 7-2 (and also Table 4-4) in the same row as the CLP method numbers.

		methods. The methods that will be used to achieve these low detection limits should be specified.	
1C		The analyses of the investigation derived waste (IDW) is discussed under the heading "Evaluate Disposal Criteria." Please note that it is the sampling agency's responsibility to arrange for the analyses and proper disposal of IDW. The EPA analytical system should not be utilized for this purpose.	Comment noted. The EPA analytical system will not be utilized for the TCLP analyses to be performed for IDW disposal purposes.
2A	Sec. 3.4.7, Sec. 4.5.2, Table 4-3, Table 4-4	[Section 3.4.7, Step 7: Optimize the Design for Obtaining Data; Section 4.5.2, Subsurface Soil Analysis; Table 4-3, Request for Analytical Services for Soil; Table 4-4, Request for Analytical Services for Groundwater] Section 3.4.7 states that 40 surface soil and 40 subsurface soil samples will be analyzed for total petroleum hydrocarbons (TPH)-diesel. However, Table 4-3 shows only 27 samples for TPH-diesel analyses. This discrepancy should be clarified.	Section 3.4.7 has been revised to clarify the discrepancy between the number of soil samples to be collected for TPH-diesel analysis. A total of 27 soil samples will be collected for TPH analysis (20 surface soil samples + 2 surface soil field duplicates, 4 subsurface soil samples + 1 field duplicate).
2B		In addition, the text states that 4 subsurface soil and 2 groundwater samples will be analyzed for dioxin. Section 4.5.2 states that the soil samples will be collected from the "ash layer." However, Section 1.1 states that incinerator ash may have been used as fill at the site. It is unclear how the "ash layer" will be identified or how the sampling locations for these samples will be selected. If the locations are to be determined in the field (as indicated on Table 4-3 and 4-4), the criteria that will be used to select these locations should be included in the plan.	Dioxin samples will be collected from locations where the "ash layer" is identified in the field. Soil boring data collected during previous environmental investigations indicates that the "ash layer" has been identified based on texture and fragments (i.e. metal, glass etc.) present in the fill. It is not anticipated that identification of the "ash layer" will present difficulties during sampling activities. Additional discussion of the selection of sample locations has been added to Section 4.2.2 .

3	Sec 4.1.1, Sec 4.2.1	[Section 4.1.1, Sampling Locations (Surface Soil); Section 4.2.1, Sampling Locations (Subsurface Soil)] Section 4.1.1 states that sampling locations for surface soils will be 30 to 50 feet apart. Section 4.2.2 states that sampling locations for subsurface soils will be 50 feet apart and that samples will be collected at two depths at each location. A rationale should be provided explaining why the sampling grid sizes were selected and why subsurface samples will be collected at two depths.	The sampling design has been revised to apply a systematic square grid sampling design to a most of the site. Biased sampling will be conducted in the area of the former USTs and hydraulic lift areas. Subsurface samples will be collected at 2 depths in order to identify potential contaminants both in the vadose zone and at the capillary fringe. The text and figures have been revised as appropriate. The sampling grid size (i.e. number of samples) was selected based on scheduling and budgetary constraints.
4	Sec 4.1.2, Sec 4.2.2, Fig 4-1, Fig4-2, Table 4-3	[Section 4.1.2, Target Chemical of Potential Concern (Surface Soil); Section 4.2.2, Target Analytes of Concern (Subsurface Soil); Figure 4-1, Surface Soil Sampling Locations; Figure 4-2, Subsurface Soil Sampling Locations; Table 4-3, Request for Analytical Services for Soil; Table 4-3, Request for Analytical Services for Groundwater] These sections state that some of the samples for TPH analyses will be collected in the vicinity of the underground storage tanks (USTs). However, only samples KBS11, KBA11 and KBB11, as shown on the figures, appear to be in the general vicinity of the former USTs. This discrepancy should be clarified.	The sampling design has been revised (see comment 3). Four biased surface soil and four biased subsurface soil samples will be collected from the area of the USTs. Figures 4-1 through 4-3 have been revised.
5	Sec 4.3.1, Sec 4.3.2, Fig 4-3	[Section 4.3.1, Sampling Locations (Groundwater); Section 4.3.2, Target Analytes of Concern; Figure 4-3, Monitoring Well Locations] These sections state that three [new] groundwater monitoring wells will be installed at specific locations...in close proximity to the harbor. The locations for the proposed monitoring wells, as shown on Figure 4-3, do not appear to be very close to the harbor, presuming that the harbor is located	The text has been added to indicate/specify that monitoring wells MW-1, MW-2, and MW-3 are the 3 wells located "in close proximity to the harbor", that will be sampled for purposes of the ecological risk evaluation. As mentioned in Section 4.3.1, the 3 "newly installed" wells (MW-6, MW-7, and MW-8) will be used to establish a general hydraulic gradient across the site.

		somewhere along the Kewalo Basin side of the site. A rationale for the locations of the proposed monitoring wells should be provided.	
6	Sec 5.2.2, Table 4-1	[Section 5.2.2, Soil Sampling Procedures; Table 4-1, Preservation Methods and Holding Time for Soil Samples] The plan states that volatile samples will be collected in 4-oz wide-mouth glass jars, brass tubes, or stainless steel tubes. It is Regional policy to collect samples for volatile analyses following EPA Method 5035, primarily using EnCore samplers. A rationale should be provided if Method 5035 is not to be followed. A copy of the "Regional Interim Policy for Determination of Volatile Organic Compound (VOC) Concentrations in Soil and Solid Matrices" is attached to this memorandum for reference.	Soil samples to be analyzed for VOCs will be collected following the requirements specified in EPA method 5035. Samples will be collected using an approved transfer device such as an Encore™ sampler. The text has been revised accordingly.
7	Sec 6.2.1	[Section 6.2.1, Chain of Custody] Samples sent through the Contract Laboratory Program (CLP) for analyses will be required to be documented on CLP chain of custody forms. A description and an example of these forms, and the appropriate distribution should be included in the plan. A copy of the "Instructions for Sample Shipping and Documentation," dated November 1997, is attached to this memorandum for reference.	Comment noted. Examples and descriptions of CLP COC forms and the appropriate distribution are included in the plan. The *Instructions for Sample Shipping and Documentation*, November 1997 provided by EPA Region IX will be used for detailed reference.
8	Sec 6.3.1	[Section 6.3.1, Sample Labeling/Identification] The bullet point labeled "Sample identification number (EPA ID# described below) and the accompanying example are not applicable for CLP samples. CLP sample numbers will be assigned to samples analyzed through the CLP system. Refer to "Instructions for Sample Shipping and Documentation" for a description of CLP sample numbers.	Comment noted. Sample identification numbers for CLP samples (i.e. samples to be analyzed for VOCs, SVOCs, metals, and Pesticides/PCBs) will be assigned in accordance with CLP Analytical Services program requirements.

9	Sec 7.1.3	[Section 7.1.3, Trip Blanks] The text states that trip blanks will be prepared by the laboratory and analyzed only for CLP VOCs. There are no provisions under the CLP contract for laboratories to provide trip blanks or other sampling supplies. Also note that under Regional policy, trip blanks are the least preferred type of blanks. Only one blank per day should be submitted for analyses. The preferred order of collection is equipment blanks, field blanks, and finally, trip blanks (if no other blanks are to be collected).	Comment noted. No trip blanks will be submitted. The text has been revised as appropriate.
10A	Sec 7.2	[Section 7.2, Laboratory Quality Control Samples] This section states that a laboratory quality control (QC) sample will be collected at a frequency of one per 20 samples. Note also that a laboratory QC sample is required each 14 calendar days, whichever is more frequent.	Comment noted. However, it is anticipated that the duration of the field/sampling effort will be no longer than 5 calendar days.
10B		The text also states that the sample to be used as the laboratory QC sample will be designated with an "X" at the end of the sample ID. This will not be an acceptable procedure for CLP samples, as the assigned sample numbers are of fixed length. It is recommended that the text be amended to indicate that "laboratory QC" will be written on the chain-of-custody forms and sample container labels.	The text has been revised to indicate that "laboratory QC" will be written on the appropriate labels and COC forms.
11A	Sec 7.5	[Section 7.5, Analytical Data Quality Parameters] This section references specific SOPs; however, several of them, such as laboratory analysis and validation, could not be located in the appendix to the plan.	The text was intended to reference the general types/categories of SOPs, and not the specific SOPs. The text has been revised for clarification. Appropriate/applicable SOPs for field activities and QC procedures are included in Appendix B.

11B		It appears that there is text missing between the bottom of page 7-5 and the top of page 7-12.	The text portion on the top of page 7-12 (bullet no.2) should be a continuation of bullet no.1. The bulleting/list format has been revised.
12	Sec 7.7	[Section 7.7, Data Package Requirements and Data Validation] The text states that the data will be validated using Region 9 Option 2 protocol by the Ogden data validators. Rationale needs to be provided as to why Option 2 was chosen. In addition, Option 2 implies a focused validation. The plan should discuss what areas will be focused on, whether it will be specific analytes, methods, sampling locations, or some combination and how these decisions will be made.	Option Two validation effort was selected to evaluate all data at a summary level with a focused evaluation of the metals and semivolatile organic compounds. These two classes of compounds have been selected for more intense review based upon site history and past practices at the site. Metals in general, and specifically lead, have been identified as the primary risk drivers at the site. However, should anomalies arise with any analyses, the project manager will be notified and will have the option to increase the level of effort associated with the affected samples. This rationale has been added to the section.

To: **"Wetzstein, Eric, E." <eewetzstein@oees.com>**
Subject: **Response to Comments**
Date sent: **Wed, 10 May 2000 11:44:05**

Hi Eric.

I think we're still in disagreement on a couple of things. Maybe it's because I didn't explain myself well enough and we just aren't communicating. Also, just to make sure I am not off the wall or on some tangent, I also talked to Gina Ling about these things since she is quite knowledgeable about the DQO process and statistics. Anyway, she agreed with me.

But if there is still disagreement between you and me, please -- PLEASE -- talk to me about it. What I DON'T want is for you to change things just because DOH said so. We need to be on the same page. So...

Regarding your response to Comment 7a:

All I am asking is that we set the decision error rate for contaminant concentrations, not risk levels. This is because concentrations are NOT risk levels. There are a whole bunch of other parameters to be considered when calculating a risk level, such as body weights, averaging times, inhalation rates, ingestion rates, etc. And, all of these variables have their own distributions -- that is, not everyone has the same body weight, not everyone breathes the same, etc.

At this point, I believe we are only trying to control errors in our estimate of contaminant concentrations. In our discussions, I think we talked about calculating a 95 % UCL on the concentration data. If we are going to try to control errors in our estimate of risk (which I don't think is ever done in a screening level risk assessment), then that implies we are including all those other parameters in the equation, which implies a Monte Carlo Analysis.

Regarding your response to Comment 7b:

I agree that there are two types of error: design and measurement error. I also agree that the PARCC parameters are used to assess measurement error. However, what we are saying in the Section,

"Specify Limits on Decision Errors" -- or should be saying -- is that we are controlling false positives for soil concentration estimates to 5 % (i.e., we are calculating a 95 % UCL). I have never seen indicators of the PARCC parameters (Recoverys, RPDs, etc.) included in that calculation, and they cannot be included in that calculation without doing a Monte Carlo. It is common, however, to calculate a 95 % UCL using the measurement data alone, and include a discussion of uncertainty which talks about such things as the assessment of the PARCC parameter indicators.

Please call me about this. Thanks!!

Charley

(X) Not the most recent version of DOH comments & Ogden responses! Assume this was 1st version of responses & that version that accompanied final SAP (cover letter 5-26-00) included additional responses to Charley Langer's 10 May 2000 email to Eric Wetzstein.

Dan Cogne July 10, 2000

Type of Review:	Kakaako Field Sampling Plan Draft
Reviewed by:	Charlie Langer, DOH
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Page	Reviewer's Comments	Response to Comments
1	Section 3.4.5	1. first paragraph. EPA recommends a statistical parameter be selected during this step of the DQO process (see EPA, *Guidance for the Data Quality Objectives Process*, September 1994). A "reasonable maximum exposure (RME)" is used during risk assessment to represent the highest exposure that is reasonably expected to occur at a site. While the RME is often an upper confidence limit on a mean, "RME" and "statistical parameter" are not synonymous.	The RME is chosen as a central component of the decision rule since it bears directly on the primarily goal of the study: to conduct a screening level risk assessment. The RME is defined as the upper 95% confidence limit based on current EPA guidance for conducting screening level risk assessments (see EPA 1991, *Risk Assessment Guidance for Superfund: Volume I- Human Health Evaluation Manual (Part B)).* This qualifies as statistical parameter and conforms to the intent of the DQO guidance. The text will be clarified to state that the RME is defined as the 95% confidence interval on the mean. This should address DOH's concern.
2	Sec 3.4.5	2. *Steps for Soil Data Decisions, Step 2: Identify chemicals of concern for soil.* Please include all detected analytes as COPCs, as it is possible for all contaminants to be below Region IX PRGs and still have a cumulative site risk greater than 10^{-6} and/or a hazard index greater than 1. This does not mean that cleanup levels are likely to be below PRGs, or that background levels etc. cannot be considered at a later time – only that DOH wants the "complete picture" to make an informed risk management	Comment noted. All detected analytes will be included as COPCs for the purposes of a risk evaluation. The text had been revised accordingly.

		decision.	
3	Section 3.4.5	3. *Steps for Soil Data Decisions, Step 3: Conduct preliminary human risk evaluation for soil exposures.* A couple of minor inconsistencies are noted: a. Ecological risks are discussed in a paragraph focused on human health. Please separate this out. *b.* The methodology for human health risk evaluation is cited, while no citation is provided for ecological risk evaluation.	a. The reference to ecological risk will be removed from the paragraph. b. The methodology for ecological risk evaluation is a more simplistic process and did not warrant a separate appendix. The ecological risk evaluation is described fully under step 2 of "Steps for Groundwater Data Decisions" along with a NOAA, 1998 citation.
4	Sec. 3.4.5	4. *Steps for Soil Data Decisions, Data Quality Objectives.* Data Quality Objectives (DQOs) are all the qualitative and quantitative statements derived from the DQO Process that clarify study objectives, define appropriate types of data, specify tolerable levels of decision errors, etc. Thus, SRQLs, as well as PARCC parameter indicators, are some of the DQOs. However, DQOs and SRQLs are not synonymous, as the referenced text and tables imply.	Comment noted. The text and section heading has been modified to clarify that SQLs are included as DQOs, but that SQLs and DQOs are not synonymous..
5	Section 3.4.5	5. *Steps for Groundwater Data Decisions, Step 2: Identify chemicals of concern for groundwater.* Please include all detected analytes as COPCs, as discussed above.	Comment noted. See response to comment 2.

6	Section 3.4.5	6. *Steps for Groundwater Data Decisions, Data Quality Objectives.* See comment 5 above.	See the response to comment 5.
7	Section 3.4.6	7. *Specify Limits on Decision Errors.* a. Setting the null hypothesis and error limits for a specific risk level implies that a probabilistic risk assessment will be conducted (e.g., Monte Carlo Analysis). Is this what is envisioned, or are you only wanting to control errors for estimated contaminant concentrations? b. Also, the text says (page 3-15) that the indicators assessing the PARCC parameters will be used to place limits on decision errors. Again, this implies a Monte Carlo Analysis, which is probably not appropriate at this stage. What may be appropriate is to set confidence limits on a mean (or whatever parameter is chosen) of the validated data set, and discuss the PARCC parameters in a separate section addressing uncertainty. c. Finally, the last paragraph of this section says that false positives will be controlled to 10%. Please control false positives to 5%.	a. EPA *Guidance for the Data Quality Objectives Process September 1994* requires that the null hypothesis be set to the decision that if in error has the most adverse consequence (i.e. concluding there is no significant health effects when in fact there are effects). Therefore we are effectively stating the site is "guilty until proven innocent". Since we are employing the standard EPA protocol for conducting a screening level human health risk assessment it is appropriate to use the conservative excess cancer value and hazard index as stated. This value is highly protective of human health. If the site does exceed these values, the next step would be to conduct a baseline risk assessment. In some cases Monte Carlo Analysis maybe warranted if the site progresses to this stage. b. EPA guidance (September 1994) states that there are two types of error: design error (i.e. not enough samples or coverage) and measurement error (errors caused by analytical methods). The PARCC parameters are used as a program to assess measurement error. Consequently they are appropriate in this section and do not imply the use of Monte Carlo statistics. c. The section will be changed to 5%, however, 10% is fairly standard for this application.

8	Section 3.4.7	8. Regarding sampling design: a. DOH agrees with the proposed purposive "source-area sampling" of the UST, hydraulic lifts, transformer pads, etc. as a means of identifying possible contaminants which may be present. However, care should be taken as to how the data are used and/or presented, as the measurements will not be a representative sample (see EPA, *Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies*, 1992).	Care will be taken when evaluating these samples. If they become the singular or primary source for driving risk at the site, specific recommendations can be made for remedial options or further assessment.
9	Section 3.4.7	b. Contamination from incinerator ash is of particular concern due to potential constituents, concentrations, and volumes of materials. In this case, it is desirable to have accurate estimates of potential exposure concentrations; areas and volumes of materials that may have to be managed, removed, or treated; and other characteristics which may be important to remedy selection. While unavoidable to some extent due to site constraints, bias should reduced to the extent practical. i. The current sampling design is biased toward easily accessible areas, and appears to be representative of less than half the property area. This is understandable. It is likely, though, that contamination exists under the warehouses which will be exposed when they are removed in the near future. Conversations with DOT-Harbors indicate that, with some coordination, it is administratively possible to sample through	Since access to building interiors may be more practical then we were anticipating, it may be prudent to employ a more grid-like system vice a transect system between structures. Please recognize sample locations inside buildings would likely be limited to hand auger locations vice strataprobe, and a significant portion of them may need to be moved in the field given actual conditions. Also the same number of samples would be maintained to keep within scheduling and DOH budget constraints.

		the warehouse floors. ii. EPA guidance suggests that a grid design may be most appropriate when investigative results are to be mapped, and should be less subject to biases than the current design. Unless there is a suspected concentration gradient, both the point of origin and the orientation of one axis should be randomly selected (see EPA, *Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies*, 1992). Inaccessible points will either need to be moved to a nearby accessible location, or deleted.	
10	Section 4.1.1.	10 HEER agrees that the incinerator ash is likely to be somewhat evenly distributed across the site. However, when basing a sampling design on such assumptions, the investigator's own bias is built into the sampling effort and the data becomes suspect.	See comment response 9
11	Section 4.1.2.	11. The number of TPH and VOC samples in the text do not appear to match the numbers in Section 4.5.1, and Tables 4-1 through 4-3. Also, the only reason to analyze surface soil for volatiles – since, barring a recent surface spill, they probably won't be in surface soil – would be to meet an AR or TBC. Are 40 analyses necessary for this?	Agreed, VOC samples will only be collected from subsurface soils. The number discrepancies for TPH-diesel samples have been clarified in the text.

12	Section 4.2.1.	12. Assuming changes are made in the sampling design, this section may need some revision.	Comment noted
13	Section 4.4 and Table 4-1.	13. A policy memo from EPA (date?) stated that Method 5035 must be used to prepare soil for volatile analysis on all EPA-funded projects. This imposes certain requirements for containers and preservatives where volatile are concerned. The table on EPA's Web page is out of date.	The new method 5035 will be employed for soil VOC samples.
14	Section 5.2.2	14. *Soil Sampling Locations*. Locations of points in the field are approximate due to measurement error, rounding, judgment on the part of the field staff, etc. EPA recommends there be a specific unbiased procedure to locate exact collection points. The purpose of adding this extra step is to reduce the influence of subtle factors (sampling difficulty, soil color, vegetation, etc.) which can affect where soil is collected, and thus bias the results (see EPA, *Methods for Evaluating the Attainment of Cleanup Standards*, 1989). Similarly, there should be a specified procedure for moving an inaccessible point.	The level of location precision should be set to meet the intended use of the data. For example wells need to be surveyed within a vertical tolerance of a hundredth of an inch because the survey marker will become a reference for water levels that require that precision. In the case of soil samples, locations could have a tolerance of one meter without impacting the intended data use in a human health screening risk assessment. Based on this comment we will survey approximately 20% of the points with a surveyed location at the same time the wells are surveyed to assess the accuracy of the GPS and tape located points to ensure they are meeting the data objectives. All locations can not be surveyed due to budget constraints nor does the intended use of the data warrant their being surveyed. A procedure for locating grid points that fall in inaccessible locations will be included in the text.

15	Section 5.2.2,	15. *Surface Soil Sampling Procedures.* a. Sections 3.4.4 and 3.4.7 appear to say that surface soil would be collected from 0 to 2 feet bgs. However, Section 5.2.2 suggests that the interval sampled may be variable. For the sake of comparability, the size and shape of soil cores collected at each point should be the same, or similar to the degree practical. Please more specifically define the sampling intervals and limit sampling tools to coring devices. Trowels and shovels may be appropriate for some sampling purposes, but are not technically "correct" sampling devices, and generally produce biased and incomparable samples (see EPA, *Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies*, 1992).	The section 5.2.2 will define the surface soil interval as 0 to 2 feet. A hand-held hammer driven coring device will be employed to collect surface soil samples in most locations when practical. Trowels when decontaminated properly (or dedicated) can also be used and are a technically acceptable method for sampling non-volatiles and may be used at some locations. Trowels and bowls will need to be employed for homogenization as requested in comment 15.
15	Section 5.2.2,	*b.* Samples to be analyzed for non-volatiles should be homogenized in the field or prior to analysis.	Non-volatile samples (including SVOCs will be homogenized using properly decontaminated trowels and bowls

16	Section 5.2.4,	16. *Groundwater Sampling Procedures*. There has been considerable discussion/debate on filtering of groundwater samples to be analyzed for non-volatiles. Studies indicate that colloidal transport can be significant under certain conditions. However, commonly used sampling protocols and well installation practices in certain soils produce groundwater samples in which particles have been artificially entrained. Traditionally, suspended particles have been removed from samples by filtering in the field, despite known biases introduced by this procedure. HEER has not taken a strong stand on filtered vs. unfiltered samples, but only raises the concern because it became a difficult issue at a very similar site. Therefore, please elaborate a little more on whether the samples will be filtered or unfiltered, and how this issue will be addressed.	Text changed to include filtering water samples for metal analyses.
17	Section 7.1,	17. *Field Quality Control Samples*. a. Please include some collocated samples to help assess potential short-term spatial variability.	Text changed to include collocated samples and replicate samples.
18	Section 7.1	b. When collecting field duplicates to assess laboratory performance, please take splits from the same homogenized (non-volatiles only) core sample.	Agreed, this is our standard procedure. Text has been revised accordingly.
19	Section 7.3	18. *Background Samples*. Has it been confirmed that sufficient background information exists? .	The general literature values for metals can be found chromium, arsenic, and other trace metals. Organic compounds detected at the site will be presumed to have originated from site activities.

Type of Review:	Kakaako Field Sampling Plan Draft
Reviewed by:	Gail Jones, EPA Region IX
Project No.:	319620005
Project Manager:	E. Wetzstein
Project Title:	Kakaako Brownfield – Unit 8
Project Location:	Honolulu, Hawaii
Author(s):	C. Domingo, M. Kamaka, J. Kotoshirodo, S. Toma, E. Wetzstein

No.	Page	Reviewer's Comments	Response to Comments
1A	Sec 3.4.5, Sec 7.2, Table 7-2	[Section 3.4.5, Step 5: Develop a Decision Rule; Section 7.2, Data Quality Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] References are made in this section, that in order to meet project data quality objectives, the quantitation limits (QLs) will have to meet or exceed the residential preliminary remediation goals (PRGs) for soil samples, or the federal and state ambient water quality criteria (AWQC) for groundwater samples, where practical. Many of the QLs listed on Table 7-2 appear to be higher than the PRGs or AWQC. The plan should discuss in greater detail how these discrepancies will be reconciled.	The QLs provided in Table 7-2 have been revised. For those compounds with method limitations (i.e. the CRDL/SQL exceeds the screening level PRGs or AWQC), … → *in progress*
1B		Under Step 1 for groundwater data decisions, the plan states that analyses for three of the eight groundwater samples will be performed at the lowest detection limits possible by the laboratory. Since it is uncertain at this point which laboratory will be performing the analyses, it is impossible to determine if the lowest detection limits possible will meet project needs. It is recommended that the required detection limits be specified in the plan. In addition, Table 7-2 states that low level methods will be used for some of the water	Comment noted. Table 7-2 has been revised to include laboratory reporting limits for the low level method analyses. The low level methods required for the low detection limits are specified in Table 7-2 (and also Table 4-4) in the same row as the CLP method numbers.

		methods. The methods that will be used to achieve these low detection limits should be specified.	
1C		The analyses of the investigation derived waste (IDW) is discussed under the heading "Evaluate Disposal Criteria." Please note that it is the sampling agency's responsibility to arrange for the analyses and proper disposal of IDW. The EPA analytical system should not be utilized for this purpose.	Comment noted. The EPA analytical system will not be utilized for the TCLP analyses to be performed for IDW disposal purposes.
2A	Sec. 3.4.7, Sec. 4.5.2, Table 4-3, Table 4-4	[Section 3.4.7, Step 7: Optimize the Design for Obtaining Data; Section 4.5.2, Subsurface Soil Analysis; Table 4-3, Request for Analytical Services for Soil; Table 4-4, Request for Analytical Services for Groundwater] Section 3.4.7 states that 40 surface soil and 40 subsurface soil samples will be analyzed for total petroleum hydrocarbons (TPH)-diesel. However, Table 4-3 shows only 27 samples for TPH-diesel analyses. This discrepancy should be clarified.	Section 3.4.7 has been revised to clarify the discrepancy between the number of soil samples to be collected for TPH-diesel analysis. A total of 27 soil samples will be collected for TPH analysis (20 surface soil samples + 2 surface soil field duplicates, 4 subsurface soil samples + 1 field duplicate).
2B		In addition, the text states that 4 subsurface soil and 2 groundwater samples will be analyzed for dioxin. Section 4.5.2 states that the soil samples will be collected from the "ash layer." However, Section 1.1 states that incinerator ash may have been used as fill at the site. It is unclear how the "ash layer" will be identified or how the sampling locations for these samples will be selected. If the locations are to be determined in the field (as indicated on Table 4-3 and 4-4), the criteria that will be used to select these locations should be included in the plan.	Dioxin samples will be collected from locations where the "ash layer" is identified in the field. Soil boring data collected during previous environmental investigations indicates that the "ash layer" has been identified based on texture and fragments (i.e. metal, glass etc.) present in the fill. It is not anticipated that identification of the "ash layer" will present difficulties during sampling activities. Additional discussion of the selection of sample locations has been added to Section 4.2.2 .

3	Sec 4.1.1, Sec 4.2.1	[Section 4.1.1, Sampling Locations (Surface Soil); Section 4.2.1, Sampling Locations (Subsurface Soil)] Section 4.1.1 states that sampling locations for surface soils will be 30 to 50 feet apart. Section 4.2.2 states that sampling locations for subsurface soils will be 50 feet apart and that samples will be collected at two depths at each location. A rationale should be provided explaining why the sampling grid sizes were selected and why subsurface samples will be collected at two depths.	The sampling design has been revised to apply a systematic square grid sampling design to a most of the site. Biased sampling will be conducted in the area of the former USTs and hydraulic lift areas. Subsurface samples will be collected at 2 depths in order to identify potential contaminants both in the vadose zone and at the capillary fringe. The text and figures have been revised as appropriate. The sampling grid size (i.e. number of samples) was selected based on scheduling and budgetary constraints.
4	Sec 4.1.2, Sec 4.2.2, Fig 4-1, Fig4-2, Table 4-3	[Section 4.1.2, Target Chemical of Potential Concern (Surface Soil); Section 4.2.2, Target Analytes of Concern (Subsurface Soil); Figure 4-1, Surface Soil Sampling Locations; Figure 4-2, Subsurface Soil Sampling Locations; Table 4-3, Request for Analytical Services for Soil; Table 4-3, Request for Analytical Services for Groundwater] These sections state that some of the samples for TPH analyses will be collected in the vicinity of the underground storage tanks (USTs). However, only samples KBS11, KBA11 and KBB11, as shown on the figures, appear to be in the general vicinity of the former USTs. This discrepancy should be clarified.	The sampling design has been revised (see comment 3). Four biased surface soil and four biased subsurface soil samples will be collected from the area of the USTs. Figures 4-1 through 4-3 have been revised.
5	Sec 4.3.1, Sec 4.3.2, Fig 4-3	[Section 4.3.1, Sampling Locations (Groundwater); Section 4.3.2, Target Analytes of Concern; Figure 4-3, Monitoring Well Locations] These sections state that three [new] groundwater monitoring wells will be installed at specific locations...in close proximity to the harbor. The locations for the proposed monitoring wells, as shown on Figure 4-3, do not appear to be very close to the harbor, presuming that the harbor is located	The text has been added to indicate/specify that monitoring wells MW-1, MW-2, and MW-3 are the 3 wells located "in close proximity to the harbor", that will be sampled for purposes of the ecological risk evaluation. As mentioned in Section 4.3.1, the 3 "newly installed" wells (MW-6, MW-7, and MW-8) will be used to establish a general hydraulic gradient across the site.

		somewhere along the Kewalo Basin side of the site. A rationale for the locations of the proposed monitoring wells should be provided.	
6	Sec 5.2.2, Table 4-1	[Section 5.2.2, Soil Sampling Procedures; Table 4-1, Preservation Methods and Holding Time for Soil Samples] The plan states that volatile samples will be collected in 4-oz wide-mouth glass jars, brass tubes, or stainless steel tubes. It is Regional policy to collect samples for volatile analyses following EPA Method 5035, primarily using EnCore samplers. A rationale should be provided if Method 5035 is not to be followed. A copy of the "Regional Interim Policy for Determination of Volatile Organic Compound (VOC) Concentrations in Soil and Solid Matrices" is attached to this memorandum for reference.	Soil samples to be analyzed for VOCs will be collected following the requirements specified in EPA method 5035. Samples will be collected using an approved transfer device such as an Encore™ sampler. The text has been revised accordingly.
7	Sec 6.2.1	[Section 6.2.1, Chain of Custody] Samples sent through the Contract Laboratory Program (CLP) for analyses will be required to be documented on CLP chain of custody forms. A description and an example of these forms, and the appropriate distribution should be included in the plan. A copy of the "Instructions for Sample Shipping and Documentation," dated November 1997, is attached to this memorandum for reference.	Comment noted. Examples and descriptions of CLP COC forms and the appropriate distribution are included in the plan. The *Instructions for Sample Shipping and Documentation*, November 1997 provided by EPA Region IX will be used for detailed reference.
8	Sec 6.3.1	[Section 6.3.1, Sample Labeling/Identification] The bullet point labeled "Sample identification number (EPA ID# described below) and the accompanying example are not applicable for CLP samples. CLP sample numbers will be assigned to samples analyzed through the CLP system. Refer to "Instructions for Sample Shipping and Documentation" for a description of CLP sample numbers.	Comment noted. Sample identification numbers for CLP samples (i.e. samples to be analyzed for VOCs, SVOCs, metals, and Pesticides/PCBs) will be assigned in accordance with CLP Analytical Services program requirements.

9	Sec 7.1.3	[Section 7.1.3, Trip Blanks] The text states that trip blanks will be prepared by the laboratory and analyzed only for CLP VOCs. There are no provisions under the CLP contract for laboratories to provide trip blanks or other sampling supplies. Also note that under Regional policy, trip blanks are the least preferred type of blanks. Only one blank per day should be submitted for analyses. The preferred order of collection is equipment blanks, field blanks, and finally, trip blanks (if no other blanks are to be collected).	Comment noted. One trip blank will be submitted per day. The text has been revised as appropriate.
10A	Sec 7.2	[Section 7.2, Laboratory Quality Control Samples] This section states that a laboratory quality control (QC) sample will be collected at a frequency of one per 20 samples. Note also that a laboratory QC sample is required each 14 calendar days, whichever is more frequent.	Comment noted. However, it is anticipated that the duration of the field/sampling effort will be no longer than 5 calendar days.
10B		The text also states that the sample to be used as the laboratory QC sample will be designated with an "X" at the end of the sample ID. This will not be an acceptable procedure for CLP samples, as the assigned sample numbers are of fixed length. It is recommended that the text be amended to indicate that "laboratory QC" will be written on the chain-of-custody forms and sample container labels.	The text has been revised to indicate that "laboratory QC" will be written on the appropriate labels and COC forms.
11A	Sec 7.5	[Section 7.5, Analytical Data Quality Parameters] This section references specific SOPs; however, several of them, such as laboratory analysis and validation, could not be located in the appendix to the plan.	The text was intended to reference the general types/categories of SOPs, and not the specific SOPs. The text has been revised for clarification. Appropriate/applicable SOPs for field activities and QC procedures are included in Appendix B.

11B		It appears that there is text missing between the bottom of page 7-5 and the top of page 7-12.	The text portion on the top of page 7-12 (bullet no.2) should be a continuation of bullet no.1. The bulleting/list format has been revised.
12	Sec 7.7	[Section 7.7, Data Package Requirements and Data Validation] The text states that the data will be validated using Region 9 Option 2 protocol by the Ogden data validators. Rationale needs to be provided as to why Option 2 was chosen. In addition, Option 2 implies a focused validation. The plan should discuss what areas will be focused on, whether it will be specific analytes, methods, sampling locations, or some combination and how these decisions will be made.	→ *in progress*

P.O. BOX 3378
HONOLULU, HAWAII 96801

STATE OF HAWAII
DEPARTMENT OF HEALTH

HAZARD EVALUATION
AND
EMERGENCY RESPONSE OFFICE

DATE: April 28, 2000 NO. OF PAGES: 7

TO: Eric Wetzstein

COMPANY: Ogden

TELEPHONE: (808) 545-2462 FAX: (808) 528-5379

FROM: Charley Langer

TELEPHONE: (808) 586-4249 FAX: (808) 586-7537

COMMENTS: Eric: Here are EPA's comments. Some are the same as ours. However, her focus was a little different. Call me later, ok? Thanks.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901
415-744-1498 (Phone)
415-744-1476 (Facsimile)

FACSIMILE COVER SHEET

FROM:

TO: Charlie Langer

ORGANIZATION:

PHONE NUMBER:

FACSIMILE NUMBER: 808-586-7537

DATE:

NUMBER OF PAGES: 6 incl cover

Please call if there are any questions.

Jack Jones

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April 20, 2000

MEMORANDUM

SUBJECT: Kaka'ako Brownfield Unit 8 Site Characterization Study Sampling and Analysis Plan, Oahu, HI (EPA QA Program Document Control Number [DCN] BNFD031S00VSF1)

FROM: Gail Jones, Environmental Scientist
Quality Assurance Office, PMD-3

THROUGH: Vance S. Fong, P.E., Manager
for Quality Assurance Office, PMD-3

TO: Thomas Mix, Project Manager
Brownfields Team, SFD-1-1

The subject Sampling and Analysis Plan (SAP) for the Kaka'ako Brownfield Unit 8 Site Characterization Study, prepared by Ogden Environment and Energy Services, and dated February 2000, was reviewed. The review was based on guidance provided in the "One-Time Sampling Event" template, February 1998; "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," (EPA QA/R-5, Draft Final, October, 1997); and "Guidance for Quality Assurance Project Plans" (EPA QA/G-5, February, 1998).

Due to the nature of Brownfields projects, site investigations are typically conducted in a less stringent manner than normally applied to other Superfund projects. It is understood that if the investigation indicates that there are problems within the study area requiring additional characterization, it may be necessary to develop an addendum to this Plan, documenting the findings and providing guidance for further investigation.

The subject document cannot be approved by the QA Office until the following concerns are addressed.

Concerns:

1A. [Section 3.4.5, Step 5: Develop a Decision Rule; Section 7.2, Data Quality Objectives; Table 7-2, Laboratory Detection Limits and Sample Quantitation Limits] References are made in this section, that in order to meet project data quality

objectives, the quantitation limits (QLs) will have to meet or exceed the residential preliminary remediation goals (PRGs) for soil samples, or the federal and state ambient water quality criteria (AWQC) for groundwater samples, where practical. Many of the QLs listed on Table 7-2 appear to be higher than the PRGs or AWQC. The plan should discuss in greater detail how these discrepancies will be reconciled.

1B. Under Step 1 for groundwater data decisions, the plan states that analyses for three of the eight groundwater samples will be performed at the lowest detection limits possible by the laboratory. Since it is uncertain at this point which laboratory will be performing the analyses, it is impossible to determine if the lowest detection limits possible will meet project needs. It is recommended that the required detection limits be specified in the plan. In addition, Table 7-2 states that low level methods will be used for some of the water methods. The methods that will be used to achieve these low detection limits should be specified.

1C. The analyses of the investigation derived waste (IDW) is discussed under the heading "Evaluate Disposal Criteria." Please note that it is the sampling agency's responsibility to arrange for the analyses and proper disposal of IDW. The EPA analytical system should not be utilized for this purpose.

2A. [Section 3.4.7, Step 7: Optimize the Design for Obtaining Data; Section 4.5.2, Subsurface Soil Analysis; Table 4-3, Request for Analytical Services for Soil; Table 4-4, Request for Analytical Services for Groundwater] Section 3.4.7 states that 40 surface soil and 40 subsurface soil samples will be analyzed for total petroleum hydrocarbons (TPH)-diesel. However, Table 4-3 shows only 27 samples for TPH-diesel analyses. This discrepancy should be clarified.

2B. In addition, the text states that 4 subsurface soil and 2 groundwater samples will be analyzed for dioxin. Section 4.5.2 states that the soil samples will be collected from the "ash layer." However, Section 1.1 states that incinerator ash may have been used as fill at the site. It is unclear how the "ash layer" will be identified or how the sampling locations for these samples will be selected. If the locations are to be determined in the field (as indicated on Table 4-3 and 4-4), the criteria that will be used to select these locations should be included in the plan.

3. [Section 4.1.1, Sampling Locations (Surface Soil); Section 4.2.1, Sampling Locations (Subsurface Soil)] Section 4.1.1 states that sampling locations for surface soils will be 30 to 50 feet apart. Section 4.2.2 states that sampling locations for subsurface soils will be 50 feet apart and that samples will be collected at two depths at each location. A rationale should be provided explaining why the sampling grid sizes were selected and why subsurface samples will be collected at two depths.

4. [Section 4.1.2, Target Chemical of Potential Concern (Surface Soil); Section 4.2.2, Target Analytes of Concern (Subsurface Soil); Figure 4-1, Surface Soil Sampling Locations; Figure 4-2, Subsurface Soil Sampling Locations; Table 4-3, Request for Analytical Services for Soil; Table 4-3, Request for Analytical Services for Groundwater] These sections state that some of the samples for TPH analyses will be collected in the vicinity of the underground storage tanks (USTs). However, only samples KBS11, KBA11 and KBB11, as shown on the figures, appear to be in the general vicinity of the former USTs. This discrepancy should be clarified.

5. [Section 4.3.1, Sampling Locations (Groundwater); Section 4.3.2, Target Analytes of Concern; Figure 4-3, Monitoring Well Locations] These sections state that three [new] groundwater monitoring wells will be installed at specific locations...in close proximity to the harbor. The locations for the proposed monitoring wells, as shown on Figure 4-3, do not appear to be very close to the harbor, presuming that the harbor is located somewhere along the Kewalo Basin side of the site. A rationale for the locations of the proposed monitoring wells should be provided.

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Questions or comments regarding this review should be referred to Gail Jones of the EPA QA Office, at (415) 744-1498.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April 20, 2000

MEMORANDUM

SUBJECT: Kaka'ako Brownfield Unit 8 Site Characterization Study Sampling and Analysis Plan, Oahu, HI (EPA QA Program Document Control Number [DCN] BNFD031S00VSF1)

FROM: Gail Jones, Environmental Scientist
Quality Assurance Office, PMD-3

THROUGH: Vance S. Fong, P.E., Manager
Quality Assurance Office, PMD-3

TO: Thomas Mix, Project Manager
Brownfields Team, SFD-1-1

The subject Sampling and Analysis Plan (SAP) for the Kaka'ako Brownfield Unit 8 Site Characterization Study, prepared by Ogden Environment and Energy Services, and dated February 2000, was reviewed. The review was based on guidance provided in the "One-Time Sampling Event" template, February 1998; "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," (EPA QA/R-5, Draft Final, October, 1997); and "Guidance for Quality Assurance Project Plans" (EPA QA/G-5, February, 1998).

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Questions or comments regarding this review should be referred to Gail Jones of the EPA QA Office, at (415) 744-1498.

Date sent: Thu, 13 Apr 2000 12:33:53 -0700
From: Jones.Gail@epamail.epa.gov
Subject: Re: Kakaako Unit 8 SAP
To: Mix.Thomas@epamail.epa.gov
Copies to: clanger@eha.health.state.hi.us

I'm working on the review memo as we "speak." I hope to be finished by early next week.

Thomas Mix
04/13/2000 10:49 AM

To: gail jones
cc:
Subject: Kakaako Unit 8 SAP

Gail, hi. I have been in LA and DC the last 2 weeks. Could you please get back to Charlie. Thanks, Tom

---------- Forwarded by Thomas Mix/R9/USEPA/US on 04/13/2000 10:49 AM ----------

clanger@eha.health.state.hi.us on 04/11/2000 04:29:47 AM

To: Thomas Mix/R9/USEPA/US@EPA
cc: "EHANVL1/CMORITA"@ehaunx0.health.state.hi.us
Subject: Kakaako Unit 8 SAP

Hi Tom.

I spoke with Gail Jones on February 25, and she said that she expected to have comments on the SAP in 3-4 weeks from that date. I tried calling her about a week ago -- only once because I don't want to be a pest -- but I didn't get a return phone call. DOT Harbors is calling me to get a schedule. Do you know when Gail might have comments for me?

Thanks.

Charley

TELEPHONE DECISION LOG

Date: 12/1/99 Time: 1125	Phone Numbers: Fax Number:

Name of Person Calling: Eric Wetzstein / Ogden

Affiliation:

Incident/Site being referenced: Unit 8 - Kakaako

Brief Discussion of Communication:

- Cost estimate: $180,000 to $190,000. That include 100 samples partial validation; full validation on risk driven - TEG for 7 days. Ogden will also check on costs for XRF. I should have a proposal by Friday the 3rd
- Called Eric back to let him know we only have $100,000. He said he would see what he could do.

Decision Documented:

HEER Staff Signature: Chuley Lyon

Date: 12/1/99