Attachment I

CHPRC CONDITION REPORT FORM

Status: Analysis CR NUMBER: CR-2011-2037

Issue Identification and Processing

Initiator:	Initiating Document:	Date Identified:
Bannister, Roland J		6/23/2011

Title of Issue:
Extent of Condition review for S3000 containers

Description of Issue:
Extent of Condition Review arose from the Causal Analysis regarding the breached drum found in 2404WB on April 26, 2011. The scope of the review was to assess all other known S3000 (homogenous solids) waste streams to identify containers that appear to have a similar waste matrix and packaging configuration to the parent drum of the breached HEDL drum. These containers are considered to be of high risk of breaching, and therefore need to be placed into secondary containment until such time as the perceived corrosive effects of the waste are eliminated.

Requirements Not Met: (Orders, Requirements, Procedures)	Responsible Project/Program:
None. Good management practice to minimize future impacts of possible leak/breach of drum with waste matrix and packaging configuration known to have caused containment failure.	WASTE AND FUELS MANAGEMENT PRO
Date Submitted: 6/23/2011	**Other Related Documents:** Extent of Condition Review for RL-CPRC-WRAP-2011-0002, WRAP-2011-0002 Causal Analysis

Immediate Action(s) Taken:
None. These containers are subject to weekly RCRA inspections. No issues have been identified to date.

Recommended Corrective Actions:
Place "high risk" drums into secondary containment until such time as the perceived corrosive effects of the waste are eliminated.

Initiator Comments:
Suggest R. Bannister be responsible for coordinating response activities to completion.

Associated Files

Issue Significance, Analysis, Extent of Condition, Action Assignment, and Closure

Significance Level:	Date Submitted to Responsible Manager:	Date CAP was approved by Responsible Manager/Delegate:
Track Until Fixed	6/23/2011 - McCarthy, Edward T	

☐ ORPS ☐ Compliance Determination ☐ NTS

Significant Level Justification:
Screened as Track Umsntil Fixed (TUF).

This CR does not identify a compliance issue but instead identifies potential future issues and suggests solutions to a future problem. As a TUF, this CR will track to closure those actions taken to address the stated conditions.

DBW

Assigned To:	Date Assigned:
Bannister, Roland J	6/23/2011

Extent of Conditions:

Causal Analysis Method Used:	Analysis Completion Date:

Analysis Results:

Trend Codes:

MS06 - Hazard Identification/Analysis WM - Waste Management
Cause Codes:
PAAA/851 Citations:
ISMS:

WSCF
ANALYTICAL LABORATORY REPORT

Industrial Hygiene Analysis

for

CH2M Hill Plateau Remediation Company, LLC

Richland WA 99352

Attention: J.LOVELAND/R.CAMPBELL/C.GRADEN

Survey ID 11-22990

Data Validator

Group#: 20110853
Report Date 4-may-2011
w_0010 v.6

MSA
MSIN: S3-28
Richland, WA 99352 Phone 373-5366
Jonathan_B_Kon@rl.gov

WSCF
ANALYTICAL LABORATORY REPORT

Attention: J.LOVELAND/R.CAMPBELL/C.GRADENCH2M Hill Plateau Remediation Company, LLC **Group #:** 20110853

Sample #	Client ID	Test Performed	Matrix	Method	RG	Result	Units	RDL	Analyst	Sampled	Received	Analyzed
W11IM06280	11-22990-001	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06281	11-22990-002	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06282	11-22990-003	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06283	11-22990-004	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06284	11-22990-005	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06285	11-22990-006	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06286	11-22990-007	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06287	11-22990-008	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11

RDL=Reporting Detection Limit
RG = Result Range
na, NA, N/A, void = Not Analyzed

B - The analyte was detected in the associated method blank.
E - Compound concentration exceeded calibration range.
N - Identification is based on a mass spectral library search.
D - Compound concentration resulted from a dilution.
J - Estimated value.
U - The analyte was analyzed for but not detected.
RDL - > = 2 x MDL

* - Indicates results that have NOT been validated.

WSCF
ANALYTICAL LABORATORY REPORT

Attention: J.LOVELAND/R.CAMPBELL/C.GRADENCH2M Hill Plateau Remediation Company, LLC **Group #:** 20110853

Sample #	Client ID	Test Performed	Matrix	Method	RG	Result	Units	RDL	Analyst	Sampled	Received	Analyzed
W11IM06288	11-22990-009	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06289	11-22990-010	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06290	11-22990-011	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06291	11-22990-012	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06292	11-22990-013	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06293	11-22990-014	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06294	11-22990-015	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11
W11IM06295	11-22990-016	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11

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E - Compound concentration exceeded calibration range.
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D - Compound concentration resulted from a dilution.
J - Estimated value.
U - The analyte was analyzed for but not detected.
RDL - > = 2 x MDL

WSCF
ANALYTICAL LABORATORY REPORT

Attention: J.LOVELAND/R.CAMPBELL/C.GRADENCH2M Hill Plateau Remediation Company, LLC **Group #:** 20110853

Sample #	Client ID	Test Performed	Matrix	Method	RG	Result	Units	RDL	Analyst	Sampled	Received	Analyzed
W11IM06296	11-22990-017	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/01/11	05/02/11	05/03/11

RDL=Reporting Detection Limit
RG = Result Range
na, NA, N/A, void = Not Analyzed
* - Indicates results that have NOT been validated.

B - The analyte was detected in the associated method blank.
E - Compound concentration exceeded calibration range.
N - Identification is based on a mass spectral library search.

D - Compound concentration resulted from a dilution.
J - Estimated value.
U - The analyte was analyzed for but not detected.
RDL - > = 2 x MDL

WSCF
ANALYTICAL COMMENT REPORT

Attention: J.LOVELAND/R.CAMPBELL/C.GRADEN **Group #:** 20110853

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Reported results are based on the samples as received by the laboratory.
				The laboratory cannot verify that these values are representative of the original material sampled.
				Results have not been corrected for lab or field blanks unless otherwise noted in the
				Analytical Comment Report.
				Method and instrument QC were acceptable unless otherwise noted.
				Samples analyzed by ICP-AES following acid digestion using
				LA-505-417, which is based on NIOSH 7301 for the prep and
				NIOSH 7300 and SW-846 6010 for the analysis.
				Validated 05/04/11 by JB Kon, IH QA Manager.
W11IM06294	11-22990-015	LOGSAMP		SAMPLES RECEIVED AND LOGGED BY K.BREAZEALE ON 05/02/2011.
				SAMPLES OK UPON RECEIPT.
				MEDIA: GHOST WIPES

Lab Areas: VALGROUP - Group Validation VALTEST - Test Validation TESTDATA - Test Data Entry
LOGSAMP - Login for Sample LOGTEST - Login for Tests

5/10/11 1/2

INDUSTRIAL HYGIENE CHAIN OF CUSTODY AND LABORATORY REQUEST

20110853

Contractor: CH2M HILL Plateau Remediation Company			**Date Sampled:** 05/01/2011
COA: 401994	**CACN:** 401994 / CB90	**Survey No.:** 11-22990 - WRAP - Samples of SCBA gear from 2040WB; 1st dive	
Contact Name: Sweesy, Jason J	**Phone:** (509)373-1304		**Date Needed:** 5/10/11
Return Report To: Graden, Clinton / Jesse Loveland / Robert Campbell		**MSIN:** H8-20	**Phone:** (509)376-4254

Laboratory Log No.	Sample ID/Type/Description	Required Analysis
WHIM06280	11-22990-001 / Ghost Wipe (Env Exp)	Beryllium
81	11-22990-002 / Ghost Wipe (Env Exp)	Beryllium
82	11-22990-003 / Ghost Wipe (Env Exp)	Beryllium
83	11-22990-004 / Ghost Wipe (Env Exp)	Beryllium
84	11-22990-005 / Ghost Wipe (Env Exp)	Beryllium
85	11-22990-006 / Ghost Wipe (Env Exp)	Beryllium
86	11-22990-007 / Ghost Wipe (Env Exp)	Beryllium
87	11-22990-008 / Ghost Wipe (Env Exp)	Beryllium
88	11-22990-009 / Ghost Wipe (Env Exp)	Beryllium
89	11-22990-010 / Ghost Wipe (Env Exp)	Beryllium
90	11-22990-011 / Ghost Wipe (Env Exp)	Beryllium
91	11-22990-012 / Ghost Wipe (Env Exp)	Beryllium
92	11-22990-013 / Ghost Wipe (Env Exp)	Beryllium

Special Instructions:

	Signature	Printed Name	Date	Time
Relinquished By:		Jesse Loveland	5/2/11	1305
Received By:	KBreaker	K Breaker	5/2/11	1305
Relinquished By:				
Received By:				
Relinquished By:				
Received By:				

Additional Comments:

INDUSTRIAL HYGIENE CHAIN OF CUSTODY AND LABORATORY REQUEST

Contractor: CH2M HILL Plateau Remediation Company			**Date Sampled:** 05/01/2011
COA: 401994	**CACN:** 401994 / CB 90	**Survey No.:** 11-22990 - WRAP - Samples of SCBA gear from 2040WB; 1st dive	
Contact Name: Sweesy, Jason J	**Phone:** (509)373-1304		**Date Needed:** 5/10/11
Return Report To: Graden, Clinton / Jesse Loveland / Robert Campbell	**MSIN:** H8-20	**Phone:** (509)376-4254	

Laboratory Log No.	Sample ID/Type/Description	Required Analysis
WILM016293	11-22990-014 / Ghost Wipe (Env Exp)	Beryllium
94	11-22990-015 / Ghost Wipe (Env Exp)	Beryllium
95	11-22990-016 / Ghost Wipe (Env Exp)	Beryllium
96	11-22990-017 / Ghost Wipe (Env Exp)	Beryllium

Special Instructions:

	Signature	Printed Name	Date	Time
Relinquished By:		Jesse Loveland	5/2/11	1305
Received By:		K Brenner	5/2/11	1305
Relinquished By:				
Received By:				
Relinquished By:				
Received By:				

Additional Comments:

WSCF
ANALYTICAL LABORATORY REPORT

Industrial Hygiene Analysis

for

CH2M Hill Plateau Remediation Company, LLC

Richland WA 99352

Attention: J.LOVELAND/R.CAMPBELL/C.GRADEN

Survey ID 11-22991

Data Validator

Group#: 20110870
Report Date 12-may-2011
w_0010 v.6

MSA
MSIN: S3-28
Richland, WA 99352 Phone 373-5366
Jonathan_B_Kon@rl.gov

WSCF
ANALYTICAL LABORATORY REPORT

Attention: J.LOVELAND/R.CAMPBELL/C.GRADENCH2M Hill Plateau Remediation Company, LLC **Group #:** 20110870

Sample #	Client ID	Test Performed	Matrix	Method	RG	Result	Units	RDL	Analyst	Sampled	Received	Analyzed
W11IM06444	11-22991-1-A1	Beryllium by ICP-MS	FILTER		<	0.005	ug	0.005	kdf	05/01/11	05/03/11	05/05/11
W11IM06445	11-22991-1-A2	Beryllium by ICP-MS	FILTER		<	0.005	ug	0.005	kdf	05/01/11	05/03/11	05/05/11

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E - Compound concentration exceeded calibration range.
N - Identification is based on a mass spectral library search.

D - Compound concentration resulted from a dilution.
J - Estimated value.
U - The analyte was analyzed for but not detected.
RDL - > = 2 x MDL

WSCF
ANALYTICAL COMMENT REPORT

Attention: J.LOVELAND/R.CAMPBELL/C.GRADEN **Group #:** 20110870

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Reported results are based on the samples as received by the laboratory.
				The laboratory cannot verify that these values are representative of the original material sampled.
				Results have not been corrected for lab or field blanks unless otherwise noted in the
				Analytical Comment Report.
				Method and instrument QC were acceptable unless otherwise noted.
				Samples analyzed by ICP-MS following acid digestion using
				LA-505-423, which is based on NIOSH 7301 for the prep and
				NIOSH 7300 and US EPA 200.8 for the analysis.
				Validated 05/12/11 by JB Kon, IH QA Manager.
W11IM06445	11-22991-1-A2	LOGSAMP		SAMPLES RECEIVED AND LOGGED BY K.BREAZEALE ON 05/03/2011.
				SAMPLES OK UPON RECEIPT.
				MEDIA: 0.8UM 37MM MCE FILTERS

Lab Areas: VALGROUP - Group Validation VALTEST - Test Validation TESTDATA - Test Data Entry
LOGSAMP - Login for Sample LOGTEST - Login for Tests

DK 5/12/11

PRCIHS- Chain of Custody

5/11/11

INDUSTRIAL HYGIENE CHAIN OF CUSTODY AND LABORATORY REQUEST

20110870

Contractor: CH2M HILL Plateau Remediation Company			**Date Sampled:** 05/01/2011
COA: 401994	**CACN:** 401994 / CB 90	**Survey No.:** 11-22991 - WRAP - 1st dive after contamination in 2404WB	
Contact Name: Sweesy, Jason J	**Phone:** (509)373-1304		**Date Needed:** 5/11/11
Return Report To: Graden, Clinton / Jesse Loveland / Robert Campbell	**MSIN:** H8-20		**Phone:** (509)376-4254

Laboratory Log No.	Sample ID/Type/Description	Required Analysis
WLIMD0444	11-22991-1-A1 / 37 mm MCE Filter (general)	Beryllium NIOSH 7300 Area **Method:** NIOSH 7300
L 45	11-22991-1-A2 / 37 mm MCE Filter (general)	Beryllium NIOSH 7300 Area **Method:** NIOSH 7300

Special Instructions:

	Signature	Printed Name	Date	Time
Relinquished By:		Jesse Loveland	5/3/11	1435
Received By:		K Brearcal	5/3/11	1435
Relinquished By:				
Received By:				
Relinquished By:				
Received By:				

Additional Comments:

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Date Sampled	Date Sent to Lab	Building	Room/area	Sample type
11-22990	11-22990-001	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-002	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-003	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-004	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-005	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-006	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-007	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-008	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-009	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-010	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-011	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-012	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-013	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
tio	11-22990-014	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-015	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-016	05/01/11	05/02/11	2404WB	SCBA bottle	wipe
11-22990	11-22990-017	05/01/11	05/02/11	2404WB	SCBA bottle	wipe blank
11-22991	11-22991-1-A1	05/01/11	05/03/11	2404WB	east man door (CA)	area (522.3 L)
11-22991	11-22991-1-A2	05/01/11	05/03/11	2404WB	east man door (CA)	area blank (0 L)
11-23063	11-23063-001	05/03/11	05/03/11	2404WB	step-of pad (CA/RBA)	wipe
11-23063	11-23063-002	05/03/11	05/03/11	2404WB	step-of pad (CA/RBA)	wipe
11-23063	11-23063-003	05/03/11	05/03/11	2404WB	step-of pad (CA/RBA)	wipe
11-23063	11-23063-004	05/03/11	05/03/11	2404WB	step-of pad (CA/RBA)	wipe blank
11-23079	11-23079-001	05/04/11	05/04/11	2404WB	SCBA bottle	wipe
11-23079	11-23079-002	05/04/11	05/04/11	2404WB	SCBA bottle	wipe
11-23079	11-23079-003	05/04/11	05/04/11	2404WB	SCBA bottle	wipe
11-23079	11-23079-004	05/04/11	05/04/11	2404WB	SCBA bottle	wipe
11-23079	11-23079-005	05/04/11	05/04/11	2404WB	SCBA bottle	wipe
11-23079	11-23079-006	05/04/11	05/04/11	2404WB	SCBA bottle	wipe
11-23079	11-23079-007	05/04/11	05/04/11	2404WB	SCBA bottle	wipe blank

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Date Sampled	Date Sent to Lab	Building	Room/area	Sample type
11-23198	11-23198-001	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-002	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-003	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-004	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-005	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-006	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-007	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-008	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-009	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-010	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-011	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-012	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-013	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-014	05/09/11	05/11/11	2404 WB	laundry bag	wipe
11-23198	11-23198-015	05/09/11	05/11/11	2404 WB	laundry bag	wipe blank
11-23198	11-23198-016	05/09/11	05/11/11	2404 WB	laundry bag	wipe blank
11-23283	11-23283-001	05/11/11	05/18/11	2404 WB	laundry bag	wipe
11-23283	11-23283-002	05/11/11	05/18/11	2404 WB	laundry bag	wipe
11-23283	11-23283-003	05/12/11	05/18/11	2404 WB	laundry bag	wipe
11-23283	11-23283-004	05/12/11	05/18/11	2404 WB	laundry bag	wipe
11-23283	11-23283-005	05/12/11	05/18/11	2404 WB	laundry bag	wipe
11-23283	11-23283-006	05/12/11	05/18/11	2404 WB	laundry bag	wipe
11-23249	11-23249-001	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-002	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-003	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-004	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-005	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-006	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-007	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-008	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-009	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-010	05/16/11	05/18/11	2404 WB	West End clearance	wipe

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Date Sampled	Date Sent to Lab	Building	Room/area	Sample type
11-23249	11-23249-011	05/16/11	05/18/11	2404 WB	West End clearance	wipe
11-23249	11-23249-012	05/16/11	05/18/11	2404 WB	West End clearance	wipe blank
11-23277	11-23277-001	05/17/11	05/18/11	2404 WB	East End Clearance	wipe
11-23277	11-23277-002	05/17/11	05/18/11	2404 WB	East End Clearance	wipe
11-23277	11-23277-003	05/17/11	05/18/11	2404 WB	East End Clearance	wipe
11-23277	11-23277-004	05/17/11	05/18/11	2404 WB	East End Clearance	wipe
11-23277	11-23277-005	05/17/11	05/18/11	2404 WB	East End Clearance	wipe
11-23277	11-23277-006	05/17/11	05/18/11	2404 WB	East End Clearance	wipe blank
11-23271	11-23271-1-A1	05/17/11	05/18/11	2404 WB	East End Area	area
11-23271	11-23271-1-A2	05/17/11	05/18/11	2404WB	East End Area	area
11-23271	11-2371-1-BK	05/17/11	05/18/11	2404WB	East End Area	area/blank
11-23271	11-23271-1-P1	05/17/11	05/18/11	2404WB	East End Area	Personal
11-23650	11-23650-1-A-1	06/08/11	06/09/11	2404WB	East End BCA	area
11-23650	11-23650-1-A-2	06/08/11	06/09/11	2404WB	East End BCA	area
11-23650	11-23650-1-A-3	06/08/11	06/09/11	2404WB	East End BCA	area
11-23650	11-23650-1-blank	06/08/11	06/09/11	2404WB	East End BCA	n/a
11-23650	11-23650-1-P-1	06/08/11	06/09/11	2404WB	East End BCA	OUO
11-23649	11-23649-001	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-002	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-003	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-004	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-005	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-006	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-007	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-008	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-009	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-010	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-011	06/08/11	06/09/11	2404WB	East End BCA	wipe
11-23649	11-23649-012	06/08/11	06/09/11	2404WB	East End BCA	blank

WRAP Complex Beryllium Sampling 2011: May-June

TAT = *NEW* WSCF
HOURS: M-F

PRCIHS-number	Sample ID	Rad? Y/N	Results	Date Data Received	Lab Sent	TAT	Final Report
11-22990	11-22990-001	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-002	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-003	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-004	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-005	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-006	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-007	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-008	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-009	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-010	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-011	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-012	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-013	N	<0.05 ug	5/4/2011	WSCF	2	recvd
tio	11-22990-014	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-015	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-016	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22990	11-22990-017	N	<0.05 ug	5/4/2011	WSCF	2	recvd
11-22991	11-22991-1-A1	N	<0.005 ug	5/12/2011	WSCF	7	recvd
11-22991	11-22991-1-A2	N	<0.005 ug	5/12/2011	WSCF	7	recvd
11-23063	11-23063-001	N	<0.0071 ug	5/11/2011	WSCF	6	recvd
11-23063	11-23063-002	N	<0.0071 ug	5/11/2011	WSCF	6	recvd
11-23063	11-23063-003	N	<0.0071 ug	5/11/2011	WSCF	6	recvd
11-23063	11-23063-004	N	<0.0071 ug	5/11/2011	WSCF	6	recvd
11-23079	11-23079-001	N	<0.0071 ug	5/11/2011	WSCF	5	recvd
11-23079	11-23079-002	N	<0.0071 ug	5/11/2011	WSCF	5	recvd
11-23079	11-23079-003	N	<0.0071 ug	5/11/2011	WSCF	5	recvd
11-23079	11-23079-004	N	<0.0071 ug	5/11/2011	WSCF	5	recvd
11-23079	11-23079-005	N	<0.0071 ug	5/11/2011	WSCF	5	recvd
11-23079	11-23079-006	N	<0.0071 ug	5/11/2011	WSCF	5	recvd
11-23079	11-23079-007	N	<0.0071 ug	5/11/2011	WSCF	5	recvd

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Rad? Y/N	Results	Date Data Received	Lab Sent	TAT	Final Report
11-23198	11-23198-001	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-002	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-003	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-004	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-005	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-006	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-007	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-008	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-009	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-010	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-011	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-012	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-013	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-014	Y	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-015	N	<0.05	5/23/2011	WSCF	8	rcvd
11-23198	11-23198-016	N	<0.05	5/23/2011	WSCF	8	rcvd
11-23283	11-23283-001	N	<0.05	5/23/2011	WSCF	3	recvd
11-23283	11-23283-002	N	<0.05	5/23/2011	WSCF	3	recvd
11-23283	11-23283-003	N	<0.05	5/23/2011	WSCF	3	recvd
11-23283	11-23283-004	N	<0.05	5/23/2011	WSCF	3	recvd
11-23283	11-23283-005	N	<0.05	5/23/2011	WSCF	3	recvd
11-23283	11-23283-006	N	<0.05	5/23/2011	WSCF	3	recvd
11-23249	11-23249-001	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-002	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-003	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-004	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-005	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-006	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-007	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-008	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-009	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-010	Y	<0.05	5/19/2011	WSCF	1	recvd

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Rad? Y/N	Results	Date Data Received	Lab Sent	TAT	Final Report
11-23249	11-23249-011	Y	<0.05	5/19/2011	WSCF	1	recvd
11-23249	11-23249-012	N	<0.05	5/19/2011	WSCF	1	recvd
11-23277	11-23277-001	Y	<0.05	5/23/2011	WSCF	3	recvd
11-23277	11-23277-002	Y	<0.05	5/23/2011	WSCF	3	recvd
11-23277	11-23277-003	Y	<0.05	5/23/2011	WSCF	3	recvd
11-23277	11-23277-004	Y	<0.05	5/23/2011	WSCF	3	recvd
11-23277	11-23277-005	Y	<0.05	5/23/2011	WSCF	3	recvd
11-23277	11-23277-006	N	<0.05	5/23/2011	WSCF	3	recvd
11-23271	11-23271-1-A1	Y	<0.005	5/23/2011	WSCF	3	recvd
11-23271	11-23271-1-A2	Y	<0.005	5/23/2011	WSCF	3	recvd
11-23271	11-2371-1-BK	N	<0.005	5/23/2011	WSCF	3	recvd
11-23271	11-23271-1-P1	Y	<0.005	5/23/2011	WSCF	3	recvd
11-23650	11-23650-1-A-1	Y	<0.005	6/15/2011	WSCF	3	recvd
11-23650	11-23650-1-A-2	Y	<0.005	6/15/2011	WSCF	3	recvd
11-23650	11-23650-1-A-3	Y	<0.005	6/15/2011	WSCF	3	recvd
11-23650	11-23650-1-blank	Y	<0.005	6/15/2011	WSCF	3	recvd
11-23650	11-23650-1-P-1	Y	<0.005	6/15/2011	WSCF	3	recvd
11-23649	11-23649-001	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-002	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-003	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-004	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-005	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-006	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-007	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-008	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-009	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-010	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-011	Y	<0.05	6/15/2011	WSCF	3	recvd
11-23649	11-23649-012	Y	<0.05	6/15/2011	WSCF	3	recvd

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Job/work/other
11-22990	11-22990-001	2404WB Recovery Plan; 1st team
11-22990	11-22990-002	2404WB Recovery Plan; 1st team
11-22990	11-22990-003	2404WB Recovery Plan; 1st team
11-22990	11-22990-004	2404WB Recovery Plan; 1st team
11-22990	11-22990-005	2404WB Recovery Plan; 1st team
11-22990	11-22990-006	2404WB Recovery Plan; 1st team
11-22990	11-22990-007	2404WB Recovery Plan; 2nd team
11-22990	11-22990-008	2404WB Recovery Plan; 2nd team
11-22990	11-22990-009	2404WB Recovery Plan; 2nd team
11-22990	11-22990-010	2404WB Recovery Plan; 2nd team
11-22990	11-22990-011	2404WB Recovery Plan; 2nd team
11-22990	11-22990-012	2404WB Recovery Plan; 2nd team
11-22990	11-22990-013	2404WB Recovery Plan; 2nd team
tio	11-22990-014	2404WB Recovery Plan; 2nd team
11-22990	11-22990-015	2404WB Recovery Plan; 2nd team
11-22990	11-22990-016	2404WB Recovery Plan; 2nd team
11-22990	11-22990-017	2404WB Recovery Plan
11-22991	11-22991-1-A1	2404WB Recovery Plan
11-22991	11-22991-1-A2	2404WB Recovery Plan
11-23063	11-23063-001	2404WB Recovery Plan
11-23063	11-23063-002	2404WB Recovery Plan
11-23063	11-23063-003	2404WB Recovery Plan
11-23063	11-23063-004	2404WB Recovery Plan
11-23079	11-23079-001	2404WB Recovery Plan; 1st team
11-23079	11-23079-002	2404WB Recovery Plan; 1st team
11-23079	11-23079-003	2404WB Recovery Plan; 1st team
11-23079	11-23079-004	2404WB Recovery Plan; 1st team
11-23079	11-23079-005	2404WB Recovery Plan; 1st team
11-23079	11-23079-006	2404WB Recovery Plan; 1st team
11-23079	11-23079-007	2404WB Recovery Plan; 1st team

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Job/work/other
11-23198	11-23198-001	2404 WB Recovery Plan laundry
11-23198	11-23198-002	2404 WB Recovery Plan laundry
11-23198	11-23198-003	2404 WB Recovery Plan laundry
11-23198	11-23198-004	2404 WB Recovery Plan laundry
11-23198	11-23198-005	2404 WB Recovery Plan laundry
11-23198	11-23198-006	2404 WB Recovery Plan laundry
11-23198	11-23198-007	2404 WB Recovery Plan laundry
11-23198	11-23198-008	2404 WB Recovery Plan laundry
11-23198	11-23198-009	2404 WB Recovery Plan laundry
11-23198	11-23198-010	2404 WB Recovery Plan laundry
11-23198	11-23198-011	2404 WB Recovery Plan laundry
11-23198	11-23198-012	2404 WB Recovery Plan laundry
11-23198	11-23198-013	2404 WB Recovery Plan laundry
11-23198	11-23198-014	2404 WB Recovery Plan laundry
11-23198	11-23198-015	2404 WB Recovery Plan laundry
11-23198	11-23198-016	2404 WB Recovery Plan laundry
11-23283	11-23283-001	2404 WB Recovery Plan laundry
11-23283	11-23283-002	2404 WB Recovery Plan laundry
11-23283	11-23283-003	2404 WB Recovery Plan laundry
11-23283	11-23283-004	2404 WB Recovery Plan laundry
11-23283	11-23283-005	2404 WB Recovery Plan laundry
11-23283	11-23283-006	2404 WB Recovery Plan laundry
11-23249	11-23249-001	2404 WB West End Clearance
11-23249	11-23249-002	2404 WB West End Clearance
11-23249	11-23249-003	2404 WB West End Clearance
11-23249	11-23249-004	2404 WB West End Clearance
11-23249	11-23249-005	2404 WB West End Clearance
11-23249	11-23249-006	2404 WB West End Clearance
11-23249	11-23249-007	2404 WB West End Clearance
11-23249	11-23249-008	2404 WB West End Clearance
11-23249	11-23249-009	2404 WB West End Clearance
11-23249	11-23249-010	2404 WB West End Clearance

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Job/work/other
11-23249	11-23249-011	2404 WB West End Clearance
11-23249	11-23249-012	2404 WB West End Clearance
11-23277	11-23277-001	2404 WB East End Clearance
11-23277	11-23277-002	2404 WB East End Clearance
11-23277	11-23277-003	2404 WB East End Clearance
11-23277	11-23277-004	2404 WB East End Clearance
11-23277	11-23277-005	2404 WB East End Clearance
11-23277	11-23277-006	2404 WB East End Clearance
11-23271	11-23271-1-A1	2404 WB East End Clearance
11-23271	11-23271-1-A2	2404 WB East End Clearance
11-23271	11-2371-1-BK	2404 WB East End Clearance
11-23271	11-23271-1-P1	Personal OUO
11-23650	11-23650-1-A-1	Area sampling during tarp operations
11-23650	11-23650-1-A-2	Area sampling during tarp operations
11-23650	11-23650-1-A-3	Area sampling during tarp operations
11-23650	11-23650-1-blank	Area sampling during tarp operations
11-23650	11-23650-1-P-1	Personal OUOArea sampling during tarp operations
11-23649	11-23649-001	Wipe samples of BCA Inside CA
11-23649	11-23649-002	Wipe samples of BCA Inside CA
11-23649	11-23649-003	Wipe samples of BCA Inside CA
11-23649	11-23649-004	Wipe samples of BCA Inside CA
11-23649	11-23649-005	Wipe samples of BCA Inside CA
11-23649	11-23649-006	Wipe samples of BCA Inside CA
11-23649	11-23649-007	Wipe samples of BCA Inside CA
11-23649	11-23649-008	Wipe samples of BCA Inside CA
11-23649	11-23649-009	Wipe samples of BCA Inside CA
11-23649	11-23649-010	Wipe samples of BCA Inside CA
11-23649	11-23649-011	Wipe samples of BCA Inside CA
11-23649	11-23649-012	Wipe samples of BCA Inside CA

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Location Description
11-22990	11-22990-001	SCBA bottle #2016
11-22990	11-22990-002	SCBA bottle #2180
11-22990	11-22990-003	SCBA bottle #2150
11-22990	11-22990-004	SCBA bottle #2067
11-22990	11-22990-005	SCBA bottle #SP001
11-22990	11-22990-006	SCBA bottle #2058
11-22990	11-22990-007	SCBA bottle #2190
11-22990	11-22990-008	SCBA bottle #2109
11-22990	11-22990-009	SCBA bottle #2104
11-22990	11-22990-010	SCBA bottle #2054
11-22990	11-22990-011	SCBA bottle #2097
11-22990	11-22990-012	SCBA bottle #2047
11-22990	11-22990-013	SCBA bottle #2187
tio	11-22990-014	SCBA bottle #2069
11-22990	11-22990-015	SCBA bottle #2205
11-22990	11-22990-016	SCBA bottle #SP011
11-22990	11-22990-017	n/a
11-22991	11-22991-1-A1	East side door in CA
11-22991	11-22991-1-A2	n/a
11-23063	11-23063-001	post Team 1 exit; Left side
11-23063	11-23063-002	post Team 1 exit; center
11-23063	11-23063-003	post Team 1 exit; right side
11-23063	11-23063-004	n/a
11-23079	11-23079-001	SCBA bottle #2002
11-23079	11-23079-002	SCBA bottle #2091
11-23079	11-23079-003	SCBA bottle #2189
11-23079	11-23079-004	SCBA bottle #2099
11-23079	11-23079-005	SCBA bottle #2208
11-23079	11-23079-006	SCBA bottle #2134
11-23079	11-23079-007	n/a

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Location Description
11-23198	11-23198-001	laundry bag dated 05/06/2011
11-23198	11-23198-002	laundry bag dated 05/06/2011
11-23198	11-23198-003	laundry bag dated 05/09/2011
11-23198	11-23198-004	laundry bag dated 05/09/2012
11-23198	11-23198-005	laundry bag dated 05/09/2013
11-23198	11-23198-006	laundry bag dated 05/09/2014
11-23198	11-23198-007	laundry bag dated 05/06/2011
11-23198	11-23198-008	laundry bag dated 05/06/2011
11-23198	11-23198-009	laundry bag dated 05/09/2014
11-23198	11-23198-010	laundry bag dated 05/09/2014
11-23198	11-23198-011	laundry bag dated 05/09/2014
11-23198	11-23198-012	laundry bag dated 05/09/2014
11-23198	11-23198-013	laundry bag dated 05/10/2011
11-23198	11-23198-014	laundry bag dated 05/10/2012
11-23198	11-23198-015	n/a
11-23198	11-23198-016	n/a
11-23283	11-23283-001	laundry bag dated 05/11/2011
11-23283	11-23283-002	laundry bag dated 05/11/2011
11-23283	11-23283-003	laundry bag dated 05/12/2011
11-23283	11-23283-004	laundry bag dated 05/12/2011
11-23283	11-23283-005	laundry bag dated 05/12/2011
11-23283	11-23283-006	laundry bag dated 05/12/2011
11-23249	11-23249-001	Survey point 133 Row 34
11-23249	11-23249-002	Survey point 159 row 28
11-23249	11-23249-003	Drum 0062288 row 24 problem drum
11-23249	11-23249-004	Drum 0061308 row 26 sister drum
11-23249	11-23249-005	survey point 123 row 18
11-23249	11-23249-006	hot pallet row 19
11-23249	11-23249-007	survey point 274 row 23
11-23249	11-23249-008	drum 0067469 row 27
11-23249	11-23249-009	drum 0069944 row 31
11-23249	11-23249-010	survey point 329 row 39

WRAP Complex Beryllium Sampling 2011: May-June

PRCIHS-number	Sample ID	Location Description
11-23249	11-23249-011	n/a
11-23249	11-23249-012	n/a
11-23277	11-23277-001	drum 0061231
11-23277	11-23277-002	fork lift 40-75-04878
11-23277	11-23277-003	floor crate
11-23277	11-23277-004	south east spill
11-23277	11-23277-005	south west spill
11-23277	11-23277-006	n/a
11-23271	11-23271-1-A1	2404 WB East End Area
11-23271	11-23271-1-A2	2405 WB East End Area
11-23271	11-2371-1-BK	2406 WB East End Area
11-23271	11-23271-1-P1	2404 WB Recovery
11-23650	11-23650-1-A-1	SW corner of row 12
11-23650	11-23650-1-A-2	SE corner of BCA CA
11-23650	11-23650-1-A-3	NW corner of CA by exit
11-23650	11-23650-1-blank	N/A
11-23650	11-23650-1-P-1	
11-23649	11-23649-001	Reduction of BCA area Tarp characterization
11-23649	11-23649-002	Reduction of BCA area Tarp characterization
11-23649	11-23649-003	Reduction of BCA area Tarp characterization
11-23649	11-23649-004	Reduction of BCA area Tarp characterization
11-23649	11-23649-005	Reduction of BCA area Tarp characterization
11-23649	11-23649-006	Reduction of BCA area Tarp characterization
11-23649	11-23649-007	Reduction of BCA area Tarp characterization
11-23649	11-23649-008	Reduction of BCA area Tarp characterization
11-23649	11-23649-009	Reduction of BCA area Tarp characterization
11-23649	11-23649-010	Reduction of BCA area Tarp characterization
11-23649	11-23649-011	Reduction of BCA area Tarp characterization
11-23649	11-23649-012	Reduction of BCA area Tarp characterization

WSCF
ANALYTICAL LABORATORY REPORT

Industrial Hygiene Analysis

for

CH2M Hill Plateau Remediation Company, LLC

Richland WA 99352

Attention: F.KELM/ M. VESELY/ C.GRADEN

Survey ID 11-23277

Data Validator

Group#: 20110965
Report Date 23-may-2011
w_0010 v.6

MSA
MSIN: S3-28
Richland, WA 99352 Phone 373-5366
Jonathan_B_Kon@rl.gov

WSCF
ANALYTICAL LABORATORY REPORT

Attention: F.KELM/ M. VESELY/ C.GRADEN CH2M Hill Plateau Remediation Company, LLC **Group #:** 20110965

Sample #	Client ID	Test Performed	Matrix	Method	RG	Result	Units	RDL	Analyst	Sampled	Received	Analyzed
W11IM07151	11-23277-001	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/17/11	05/18/11	05/20/11
W11IM07152	11-23277-002	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/17/11	05/18/11	05/20/11
W11IM07153	11-23277-003	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/17/11	05/18/11	05/20/11
W11IM07154	11-23277-004	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/17/11	05/18/11	05/20/11
W11IM07155	11-23277-005	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/17/11	05/18/11	05/20/11
W11IM07156	11-23277-006	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/17/11	05/18/11	05/20/11

RDL=Reporting Detection Limit
RG = Result Range
na, NA, N/A, void = Not Analyzed
* - Indicates results that have NOT been validated.

B - The analyte was detected in the associated method blank.
E - Compound concentration exceeded calibration range.
N - Identification is based on a mass spectral library search.

D - Compound concentration resulted from a dilution.
J - Estimated value.
U - The analyte was analyzed for but not detected.
RDL - > = 2 x MDL

WSCF
ANALYTICAL COMMENT REPORT

Attention: F.KELM/ M. VESELY/ C.GRADEN **Group #:** 20110965

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Reported results are based on the samples as received by the laboratory.
				The laboratory cannot verify that these values are representative of the original material sampled.
				Results have not been corrected for lab or field blanks unless otherwise noted in the
				Analytical Comment Report.
				Method and instrument QC were acceptable unless otherwise noted.
				Samples analyzed by ICP-AES following acid digestion using
				LA-505-417, which is based on NIOSH 7301 and SW-846 3050
				for the prep and NIOSH 7300, ASTM D7035-04, and SW-846 6010
				for the analysis.
				Validated 05/23/11 by JB Kon, IH QA Manager.
W11IM07156	11-23277-006	LOGSAMP		SAMPLES RECIEVED AND LOGGED BY K.BREAZEALE ON 05/18/2011.
				SAMPLES OK UPON RECEIPT.
				MEDIA: GHOST WIPES

Lab Areas: VALGROUP - Group Validation VALTEST - Test Validation TESTDATA - Test Data Entry
LOGSAMP - Login for Sample LOGTEST - Login for Tests

5/23/11

PRCIHS- Chain of Custody

5/19/11

INDUSTRIAL HYGIENE CHAIN OF CUSTODY AND LABORATORY REQUEST

2D1109105

Contractor: CH2M HILL Plateau Remediation Company			**Date Sampled:** 05/17/2011
COA:	**CACN:** 104941 / 6890	**Survey No.:** 11-23277 - Ghost Wipe 2404 be sample	
Contact Name: Kelm, Fred R / Miranda Vesely	**Phone:** (509)372-1947 / 373-0939		**Date Needed:** 05/19/2011
Return Report To: Graden, Clinton	**MSIN:** H8-20	**Phone:** (509)376-4254	

Laboratory Log No.	Sample ID/Type/Description	Required Analysis
W1IM07151	11-23277-001 / Ghost Wipe (Env Exp)	Beryllium
52	11-23277-002 / Ghost Wipe (Env Exp)	Beryllium
53	11-23277-003 / Ghost Wipe (Env Exp)	Beryllium
54	11-23277-004 / Ghost Wipe (Env Exp)	Beryllium
55	11-23277-005 / Ghost Wipe (Env Exp)	Beryllium
56	11-23277-006 / Ghost Wipe (Env Exp)	Beryllium

Special Instructions:

	Signature	Printed Name	Date	Time
Relinquished By:		Miranda Vesely	5/18/11	8:33
Received By:		K. Brecheisen	5-18-11	0833
Relinquished By:				
Received By:				
Relinquished By:				
Received By:				

Additional Comments:

WSCF
ANALYTICAL LABORATORY REPORT

Industrial Hygiene Analysis

for

CH2M Hill Plateau Remediation Company, LLC

Richland WA 99352

Attention: F.KELM/ M.VESELY/ C.GRADEN

Survey ID 11-23271

Data Validator Marisol Avila

Group#: 20110964
Report Date 23-may-2011
w_0010 v.6

MSA
MSIN: S3-28
Richland, WA 99352 Phone 373-5366
Jonathan_B_Kon@rl.gov

WSCF
ANALYTICAL LABORATORY REPORT

Attention: F.KELM/ M.VESELY/ C.GRADEN CH2M Hill Plateau Remediation Company, LLC **Group #:** 20110964

Sample #	Client ID	Test Performed	Matrix	Method	RG	Result	Units	RDL	Analyst	Sampled	Received	Analyzed
W11IM07147	11-23271-1-A1	Beryllium by ICP-MS	FILTER		<	0.005	ug	0.005	jfg	05/17/11	05/18/11	05/19/11
W11IM07148	11-23271-1-A2	Beryllium by ICP-MS	FILTER		<	0.005	ug	0.005	jfg	05/17/11	05/18/11	05/19/11
W11IM07149	11-23271-1-BK	Beryllium by ICP-MS	FILTER		<	0.005	ug	0.005	jfg	05/17/11	05/18/11	05/19/11
W11IM07150	11-23271-1-P1	Beryllium by ICP-MS	FILTER		<	0.005	ug	0.005	jfg	05/17/11	05/18/11	05/19/11

RDL=Reporting Detection Limit
RG = Result Range
na, NA, N/A, void = Not Analyzed
* - Indicates results that have NOT been validated.

B - The analyte was detected in the associated method blank.
E - Compound concentration exceeded calibration range.
N - Identification is based on a mass spectral library search.

D - Compound concentration resulted from a dilution.
J - Estimated value.
U - The analyte was analyzed for but not detected.
RDL - > = 2 x MDL

WSCF
ANALYTICAL COMMENT REPORT

Attention: F.KELM/ M.VESELY/ C.GRADEN **Group #:** 20110964

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Reported results are based on the samples as received by the laboratory.
				The laboratory cannot verify that these values are representative of the original material sampled.
				Results have not been corrected for lab or field blanks unless otherwise noted in the
				Analytical Comment Report.
				Method and instrument QC were acceptable unless otherwise noted.
				Samples analyzed by ICP-MS following acid digestion using
				LA-505-423, which is based on NIOSH 7301 for the prep and
				NIOSH 7300 and USEPA 200.8 for the analysis.
				Validated 05/23/11 by M Avila, IH report validator.
W11IM07150	11-23271-1-P1	LOGSAMP		SAMPLES RECEIVED AND LOGGED BY K.BREAZEALE ON 05/18/2011.
				SAMPLES OK UPON RECEIPT.
				MEDIA: 0.8UM 37MM MCE FILTERS

Lab Areas: VALGROUP - Group Validation VALTEST - Test Validation TESTDATA - Test Data Entry
LOGSAMP - Login for Sample LOGTEST - Login for Tests

PRCIHS- Chain of Custody

5/18/11

INDUSTRIAL HYGIENE CHAIN OF CUSTODY AND LABORATORY REQUEST

2D11D964

Contractor: CH2M HILL Plateau Remediation Company			**Date Sampled:** 05/17/2011
COA:	**CACN:** 4D1994 / CB9D	**Survey No.:** 11-23271 - 2404 WB be Area and Personal sampling	
Contact Name: Kelm, Fred R Miranda Vasley	**Phone:** (509)372-1947 / 373-6937		**Date Needed:** 5-18-11
Return Report To: Graden, Clinton	**MSIN:** H8-20	**Phone:** (509)376-4254	

Laboratory Log No.	Sample ID/Type/Description	Required Analysis
WIHM07147	11-23271-1-A1 / 37 mm MCE Filter (general)	Beryllium Area
48	11-23271-1-A2 / 37 mm MCE Filter (general)	Beryllium Area
49	11-23271-1-BK / 37 mm MCE Filter (general)	Beryllium Area
50	11-23271-1-P1 / 37 mm MCE Filter (general)	Beryllium Personal

Special Instructions:

	Signature	Printed Name	Date	Time
Relinquished By:		Miranda Vasley	5-18-11	0835
Received By:		K Brennock	5-18-11	0835
Relinquished By:				
Received By:				
Relinquished By:				
Received By:				

Additional Comments:

WSCF
ANALYTICAL LABORATORY REPORT

Industrial Hygiene Analysis

for

CH2M Hill Plateau Remediation Company, LLC

Richland WA 99352

Attention: R.CAMPBELL/ M.VESELY/C.GRADEN

Survey ID 11-23283

Data Validator

Group#: 20110966
Report Date 23-may-2011
w_0010 v.6

MSA
MSIN: S3-28
Richland, WA 99352 Phone 373-5366
Jonathan_B_Kon@rl.gov

WSCF
ANALYTICAL LABORATORY REPORT

Attention: R.CAMPBELL/ M.VESELY/C.GRADEN CH2M Hill Plateau Remediation Company, LLC **Group #:** 20110966

Sample #	Client ID	Test Performed	Matrix	Method	RG	Result	Units	RDL	Analyst	Sampled	Received	Analyzed
W11IM07157	11-23283-001	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/11/11	05/18/11	05/20/11
W11IM07158	11-23283-002	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/11/11	05/18/11	05/20/11
W11IM07159	11-23283-003	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/11/11	05/18/11	05/20/11
W11IM07160	11-23283-004	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/11/11	05/18/11	05/20/11
W11IM07161	11-23283-005	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/11/11	05/18/11	05/20/11
W11IM07162	11-23283-006	Beryllium by ICP	WIPE		<	0.05	ug	0.05	skb	05/11/11	05/18/11	05/20/11

RDL=Reporting Detection Limit
RG = Result Range
na, NA, N/A, void = Not Analyzed

B - The analyte was detected in the associated method blank.
E - Compound concentration exceeded calibration range.
N - Identification is based on a mass spectral library search.

D - Compound concentration resulted from a dilution.
J - Estimated value.
U - The analyte was analyzed for but not detected.

* - Indicates results that have NOT been validated.

RDL - > = 2 x MDL

WSCF
ANALYTICAL COMMENT REPORT

Attention: R.CAMPBELL/ M.VESELY/C.GRADEN **Group #:** 20110966

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Reported results are based on the samples as received by the laboratory. The laboratory cannot verify that these values are representative of the original material sampled. Results have not been corrected for lab or field blanks unless otherwise noted in the Analytical Comment Report. Method and instrument QC were acceptable unless otherwise noted. Samplesd analyzed by ICP-AES following acid digestion using LA-505-417, which is based on NIOSH 7301 and SW 846 3050 for the prep and NIOSH 7300, ASTM D7035-04, and SW-846 6010 for the analysis. Validated 05/23/11 by JB Kon, IH QA Manager.
W11IM07162	11-23283-006	LOGSAMP		SAMPLES RECEIVED AND LOGGED BY K.BREAZEALE ON 05/18/2011. SAMPLES OK UPON RECEIPT. MEDIA: GHOST WIPES

Lab Areas: VALGROUP - Group Validation VALTEST - Test Validation TESTDATA - Test Data Entry
LOGSAMP - Login for Sample LOGTEST - Login for Tests

3/3

5/23/11

5/19/11

PRCIHS- Chain of Custody

INDUSTRIAL HYGIENE CHAIN OF CUSTODY AND LABORATORY REQUEST

2D1109616

Contractor: CH2M HILL Plateau Remediation Company			**Date Sampled:** 05/11/2011
COA:	**CACN:** 107194 / CB90	**Survey No.:** 11-23283 - 2404WB Recovery Laundry	
Contact Name: Campbell, Robert A / Miranda Vesely	**Phone:** (509)373-9599 / 373-1039		**Date Needed:** 05/19/2011
Return Report To: Graden, Clinton	**MSIN:** H8-20	**Phone:** (509)376-4254	

Laboratory Log No.	Sample ID/Type/Description	Required Analysis
W1107157	11-23283-001 / Ghost Wipe (Env Exp)	Beryllium
58	11-23283-002 / Ghost Wipe (Env Exp)	Beryllium
59	11-23283-003 / Ghost Wipe (Env Exp)	Beryllium
60	11-23283-004 / Ghost Wipe (Env Exp)	Beryllium
61	11-23283-005 / Ghost Wipe (Env Exp)	Beryllium
62	11-23283-006 / Ghost Wipe (Env Exp)	Beryllium

Special Instructions:

	Signature	Printed Name	Date	Time
Relinquished By:		Miranda Vesely	5-18-11	8:33
Received By:		K. Breeggle	5-18-11	0833
Relinquished By:				
Received By:				
Relinquished By:				
Received By:				

Additional Comments:

1

1112621

W 1112621

ANALYTICAL REQUEST FORM

1. ☒ REGULAR Status 5/12/11 please

☐ RUSH Status Requested - ADDITIONAL CHARGE
RESULTS REQUIRED BY _____ DATE
CONTACT ALS SALT LAKE PRIOR TO SENDING SAMPLES

2. Date 5/5/11 Purchase Order No. 24952

3. Company Name MSA
Address P.O. Box 650 MSIN S3-30
Richland, WA 99352
Person to Contact Bruce Hey
Telephone (509) 373-7197
Fax Telephone (509) 372-0456
E-mail Address WSCF_IH_DATA_RECEIVED@rl.gov
Billing Address (if different from above)
MSA Accounts Payable,
P.O. Box 650 MSIN G1-80
Richland, WA 99352

4. Quote No. _____
ALS Project Manager Paul Pope

5. Sample Collection
Sampling Site _____
Industrial Process _____
Date of Collection _____
Time Collected _____
Date of Shipment 5/5/11
Chain of Custody No. _____

6. How did you first learn about ALS?

7. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**	Date Collected
1	11-23079-001	Ghost-Wipe	N/A	Be by ICP	µg	5/4/11
2	-002					
3	-003					
4	-004					
5	-005					
6	-006					
7	-007					
8	11-23063-001					5/3/11
9	-002					
10	-003					
11	-004					

* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

** 1. µg/sample 2. mg/m^3 3. ppm 4. % 5. µg/m^3 6. _____ (other) Please indicate one or more units in the column entitled Units**

Comments _____

Possible Contamination and/or Chemical Hazards _____

7. Chain of Custody (Optional)

Relinquished by	Jaime Edwards	Date/Time	5/5/11 0822
Received by		Date/Time	5/10/11 9:55
Relinquished by		Date/Time	
Received by		Date/Time	

960 West LeVoy Drive / Salt Lake City, UT 84123 800-356-9135 or 801-266-7700 / FAX: 801-268-9992
ALS Environmental

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Quality Control Sample Batch Report

Analysis Information

Workorder: 1112621

Limits: Historical/Performance
Basis: ALS Laboratory Group

Preparation: IH Metals QC, Wipe Prep
Batch: IIPX/8453 (HBN: 66013)
Prepared By: Lance Hellmann

Analysis: NIOSH 7300 Mod.
Batch: IICP/5641 (HBN: 66069)
Analyzed By: Penny A. Foote

Blank

LMB: 218129
Analyzed: 05/11/2011 08:03
Units: ug/sample

Analyte	Result	RL
Beryllium	ND	0.00708

Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 218130
Analyzed: 05/11/2011 08:05
Units: ug/sample

LCSD: 218131
Analyzed: 05/11/2011 08:07

Analyte	Result	Target	% Recovery	QC Limits		Result	RPD	QC Limits	
Beryllium	11.3	10	113	83.9	138.6	11.1	1.43	0	20

Comments

None

QC Data Approved and Reviewed by

Penny A. Foote	Anna Petersen	5/11/2011
Analyst	**Peer Review**	**Date**

Symbols and Definitions
* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

ANALYTICAL REPORT

Report Date May 11, 2011

Bruce Hey
Mission Support Alliance
P.O. Box 650
MSIN S3-30
Richland, WA 99352

Phone: (509) 373-7197
Fax: (509) 372-0456
E-mail: wscf_ih_data_received@rl.gov

Client Project ID: Mission Support Alliance050611
Purchase Order: 24952
Workorder: 1112621
Project Manager Paul Pope

Analytical Results

Sample ID: **11-23079-001** Media: Ghost Wipe Collected: 05/04/2011
Lab ID: 1112621001 Received: 05/06/2011

Method: NIOSH 7300 Mod. Prepared: 05/10/2011
Analyzed: 05/11/2011

Analyte	ug/sample	RL (ug/sample)
Beryllium	<0.0071	0.0071

Sample ID: **11-23079-002** Media: Ghost Wipe Collected: 05/04/2011
Lab ID: 1112621002 Received: 05/06/2011

Method: NIOSH 7300 Mod. Prepared: 05/10/2011
Analyzed: 05/11/2011

Analyte	ug/sample	RL (ug/sample)
Beryllium	<0.0071	0.0071

Sample ID: **11-23079-003** Media: Ghost Wipe Collected: 05/04/2011
Lab ID: 1112621003 Received: 05/06/2011

Method: NIOSH 7300 Mod. Prepared: 05/10/2011
Analyzed: 05/11/2011

Analyte	ug/sample	RL (ug/sample)
Beryllium	<0.0071	0.0071

Sample ID: **11-23079-004** Media: Ghost Wipe Collected: 05/04/2011
Lab ID: 1112621004 Received: 05/06/2011

Method: NIOSH 7300 Mod. Prepared: 05/10/2011
Analyzed: 05/11/2011

Analyte	ug/sample	RL (ug/sample)
Beryllium	<0.0071	0.0071

ANALYTICAL REPORT

Client Project ID: Mission Support Alliance050611
Purchase Order: 24952
Workorder: 1112621
Project Manager Paul Pope

Analytical Results

Sample ID: 11-23079-005	Media: Ghost Wipe	Collected: 05/04/2011
Lab ID: 1112621005		Received: 05/06/2011

Method: NIOSH 7300 Mod.			Prepared: 05/10/2011 Analyzed: 05/11/2011
Analyte	ug/sample	RL (ug/sample)	
Beryllium	<0.0071	0.0071	

Sample ID: 11-23079-006	Media: Ghost Wipe	Collected: 05/04/2011
Lab ID: 1112621006		Received: 05/06/2011

Method: NIOSH 7300 Mod.			Prepared: 05/10/2011 Analyzed: 05/11/2011
Analyte	ug/sample	RL (ug/sample)	
Beryllium	<0.0071	0.0071	

Sample ID: 11-23079-007	Media: Ghost Wipe	Collected: 05/04/2011
Lab ID: 1112621007		Received: 05/06/2011

Method: NIOSH 7300 Mod.			Prepared: 05/10/2011 Analyzed: 05/11/2011
Analyte	ug/sample	RL (ug/sample)	
Beryllium	<0.0071	0.0071	

Sample ID: 11-23063-001	Media: Ghost Wipe	Collected: 05/03/2011
Lab ID: 1112621008		Received: 05/06/2011

Method: NIOSH 7300 Mod.			Prepared: 05/10/2011 Analyzed: 05/11/2011
Analyte	ug/sample	RL (ug/sample)	
Beryllium	<0.0071	0.0071	

Sample ID: 11-23063-002	Media: Ghost Wipe	Collected: 05/03/2011
Lab ID: 1112621009		Received: 05/06/2011

Method: NIOSH 7300 Mod.			Prepared: 05/10/2011 Analyzed: 05/11/2011
Analyte	ug/sample	RL (ug/sample)	
Beryllium	<0.0071	0.0071	

ANALYTICAL REPORT

Client Project ID: Mission Support Alliance050611
Purchase Order: 24952
Workorder: 1112621
Project Manager Paul Pope

Analytical Results

Sample ID: **11-23063-003**	Media: Ghost Wipe	Collected: 05/03/2011
Lab ID: 1112621010		Received: 05/06/2011

Method: NIOSH 7300 Mod.
Prepared: 05/10/2011
Analyzed: 05/11/2011

Analyte	ug/sample	RL (ug/sample)
Beryllium	<0.0071	0.0071

Sample ID: **11-23063-004**	Media: Ghost Wipe	Collected: 05/03/2011
Lab ID: 1112621011		Received: 05/06/2011

Method: NIOSH 7300 Mod.
Prepared: 05/10/2011
Analyzed: 05/11/2011

Analyte	ug/sample	RL (ug/sample)
Beryllium	<0.0071	0.0071

Report Authorization

Method: NIOSH 7300 Mod.

Penny A. Foote — Analyst

Anna Petersen — Peer Review

Laboratory Contact Information

Phone: (801) 266-7700
Email: alslt.lab@alsglobal.com
Web: www.datachem.com

ALS Laboratory Group (formerly DataChem Laboratories, Inc.)
960 W Levoy Drive
Salt Lake City, Utah 84123

ANALYTICAL REPORT

Client Project ID: Mission Support Alliance050611
Purchase Order: 24952
Workorder: 1112621
Project Manager Paul Pope

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS is accredited by ANSI/ACLASS (ISO 17025:2005) for specific fields of testing as documented in its current scope of accreditation (ID#AT-1421) which is available on request by contacting your project manager or view on the internet at http://www.aclasscorp.com. The quality systems implemented in the laboratory apply to all technologies performed by ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

Client Sampe ID	Lab Sample ID	Laboratory Name	Matrix	Sample Type	Date Collected	Date Received	Date Prepared	Date Analyzed
11-23079-001	1112621001	ALS SLC	Ghost Wipe	FLD	5/4/2011	5/6/2011	5/10/2011	5/11/2011
11-23079-002	1112621002	ALS SLC	Ghost Wipe	FLD	5/4/2011	5/6/2011	5/10/2011	5/11/2011
11-23079-003	1112621003	ALS SLC	Ghost Wipe	FLD	5/4/2011	5/6/2011	5/10/2011	5/11/2011
11-23079-004	1112621004	ALS SLC	Ghost Wipe	FLD	5/4/2011	5/6/2011	5/10/2011	5/11/2011
11-23079-005	1112621005	ALS SLC	Ghost Wipe	FLD	5/4/2011	5/6/2011	5/10/2011	5/11/2011
11-23079-006	1112621006	ALS SLC	Ghost Wipe	FLD	5/4/2011	5/6/2011	5/10/2011	5/11/2011
11-23079-007	1112621007	ALS SLC	Ghost Wipe	FLD	5/4/2011	5/6/2011	5/10/2011	5/11/2011
11-23063-001	1112621008	ALS SLC	Ghost Wipe	FLD	5/3/2011	5/6/2011	5/10/2011	5/11/2011
11-23063-002	1112621009	ALS SLC	Ghost Wipe	FLD	5/3/2011	5/6/2011	5/10/2011	5/11/2011
11-23063-003	1112621010	ALS SLC	Ghost Wipe	FLD	5/3/2011	5/6/2011	5/10/2011	5/11/2011
11-23063-004	1112621011	ALS SLC	Ghost Wipe	FLD	5/3/2011	5/6/2011	5/10/2011	5/11/2011
LABQC	218129	ALS SLC		BLK			5/10/2011	5/11/2011
LABQC	218130	ALS SLC		LCS			5/10/2011	5/11/2011
LABQC	218131	ALS SLC		LCSD			5/10/2011	5/11/2011

Client Sampe ID	Lab Sample ID	Analytical Method	CAS Number	Analyte Name	Result Flags	Result	Units	Result Qualifiers
11-23079-001	1112621001	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23079-002	1112621002	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23079-003	1112621003	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23079-004	1112621004	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23079-005	1112621005	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23079-006	1112621006	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23079-007	1112621007	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23063-001	1112621008	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23063-002	1112621009	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23063-003	1112621010	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
11-23063-004	1112621011	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
LABQC	218129	NIOSH 7300 Mod.	7440-41-7	Beryllium	<	0.0071	ug/sample	U
LABQC	218130	NIOSH 7300 Mod.	7440-41-7	Beryllium		11	ug/sample	
LABQC	218131	NIOSH 7300 Mod.	7440-41-7	Beryllium		11	ug/sample	

Client Sampe ID	Lab Sample ID	Dilution	Percent Moisture	Method Detection Limit	Quantitation Limit	Analysis Group	Amount Spiked	Parent Result	Duplicate Result
11-23079-001	1112621001			0.0021	0.0071	66069			
11-23079-002	1112621002			0.0021	0.0071	66069			
11-23079-003	1112621003			0.0021	0.0071	66069			
11-23079-004	1112621004			0.0021	0.0071	66069			
11-23079-005	1112621005			0.0021	0.0071	66069			
11-23079-006	1112621006			0.0021	0.0071	66069			
11-23079-007	1112621007			0.0021	0.0071	66069			
11-23063-001	1112621008			0.0021	0.0071	66069			
11-23063-002	1112621009			0.0021	0.0071	66069			
11-23063-003	1112621010			0.0021	0.0071	66069			
11-23063-004	1112621011			0.0021	0.0071	66069			
LABQC	218129			0.00708		66069			
LABQC	218130			0.00708		66069	10		
LABQC	218131			0.00708		66069	10		11.29

Client Sampe ID	Lab Sample ID	% Recovery	Relative % Difference (RPD)	Minimum Recovery Limit	Maximum Recovery Limit	Maximum RPD Limit
11-23079-001	1112621001					
11-23079-002	1112621002					
11-23079-003	1112621003					
11-23079-004	1112621004					
11-23079-005	1112621005					
11-23079-006	1112621006					
11-23079-007	1112621007					
11-23063-001	1112621008					
11-23063-002	1112621009					
11-23063-003	1112621010					
11-23063-004	1112621011					
LABQC	218129					
LABQC	218130	112.9		83.9	138.6	
LABQC	218131	111.3	1.4273	83.9	138.6	20

Attachment II

TRU Retrieval Project (WRAP, T Plant, LPCS, & TRU)

John Trevino **WRAP**

Rpt #:	Date Entered:	Date Observed:	Last Modified Date:
37167	04/28/2011	04/28/2011	04/28/2011

Entry Type: ARRA Include in CIR: No Hours in Field:

Title:

Recovery plan – Recent leaky waste drum event.

Summary:

The FR attended a meeting to plan for recovery of the leaking waste drum. The work will be done on SCBA to address the high rad potentials, the potential acid vapors, and the beryllium potentials since the drum was a beryllium drum. The recovery will involve fork lift operations (using SCBA) to get to the drum. An AJHA meeting will be held and the AJHA will be developed; the recovery package will be reviewed at a meeting chaired by the HRB chairman to be sure the hazards are adequately identified and controlled.

TRU Retrieval Project (WRAP, T Plant, LPCS, & TRU)

John Trevino **WRAP**

Rpt #:	Date Entered:	Date Observed:	Last Modified Date:
37266	05/04/2011	05/04/2011	05/04/2011

Entry Type: ARA Include in CIR: No Hours in Field:

Title:

Post Job Review/lessons learned meeting for repackaging of leaky waste drum HEDL-63.

Summary:

Key information/facts discussed during the meeting.

• There is a process and procedure for selecting containers for repackaging and developing repackaging instructions. [WMP 400, WIPP Procedures, Section 7.1.13, Waste Repackaging Guidance.] The procedure focuses on remediating WIPP packaging & certification issues (e.g., treating or removing noncompliant items) versus instructions for how to safely repackage waste.
o Aerosol cans are crushed or removed from the drum.
o Sealed containers (> 4 liters) are remediated by removing the lid/seal or puncturing the container.
o Containerized liquids (> 1 inch or 2.5 cm within the container) are absorbed or removed from the drum.
o Free liquids (> 1% volume of the container) are absorbed or removed from the drum.
The goal of this procedure is to provide instruction to the repackaging facilities to arrive at containers that meet these expectations.
• There is a proceduralized process for repackaging waste in the TRU glovebox line. [WRP1-OP-0725, TRU Sorting Glovebox Operations] The procedure focuses on how to operate the glovebox equipment, removal of prohibited items, and placing waste into the new waste drum. The procedure includes warnings for some hazards that may be encountered in the waste (i.e., pressurized inner containers, shock sensitive crystalline material, pyrophorics, and segregation of reactive materials) but does not provide instructions for treating acidic or caustic materials (except if being removed as a prohibited item).
• Legacy information about the contents of older waste drums is incomplete and typically inconclusive. Information about the contents of the HEDL drum was generic for the waste stream (such that all of the drums of this waste stream were listed the same). The Solid Waste Information and Tracking System (SWITS) identifies the contents as 27 kg of solid material (contaminated debris, paper, cloth, rags, wood, empty fiber or plastic containers, glass, piping, or other solids); no mention of liquids. The waste stream states "TRU Project Debris – Solvents, Organics, Metals," but any liquids (solvents or organics) should have been properly absorbed in the Vermiculite. The pH Value was identified as > 2 - <12.5; Curie content: 10 DE-Ci.
• The original drum was originally packaged in 1979 (55 gallon drum, HEDL-63); the waste was packaged/contained in a plastic inner container slightly smaller than the outer 55 gallon drum.
• The drum was buried for future retrieval in the Low Level Burial Ground (LLBG) 218-W-4C (late 70s, early 80s). The drum was retrieved and overpacked in an 85 gallon drum due to corrosion (breached container) in 2006.
• The drum contents were repackaged into two new waste drums in February 2011 (the drum was exited from TRU Glovebox on February 9, 2011). Operating personnel said that the drum contained a lot of wet looking absorbent material (Vermiculite). Four lbs of baking soda was spread over the wet absorbent material to neutralize it.
• There are 15 drums listed in this HEDL waste stream; 2 have been repackaged; both contained acidic liquids, the other three daughter drums are being addressed (inspect & placed on spill pallets).
• Other HEDL waste drums of a different waste stream are being evaluated (but have not been repackaged).

Actions:

• Continue to evaluate the extent of condition and address other at risk drums. In addition to general weekly inspections of waste drum storage, conduct more thorough inspections of the at risk drums for corrosion or leakage. Decide if any additional drums need to be placed on spill pallets.
• Evaluate engineering controls for specific waste streams and revise procedures as appropriate.
• Evaluate the glovebox/repacking procedure and revise as necessary to address the issues. Add steps to the repackagingprocedure to address neutralization of acidic material, verification of adequate neutralization (i.e., verify/test prior to placing waste in the new drum), or containing the material so that it doesn't corrode the drum.
• Strengthensteps and controls for tipping and unloading waste from drums in the glovebox.
• Evaluate the Documented Safety Analysis requirements related to safe configuration of waste that is located in the glovebox (e.g., , can waste be left on the sorting table over night or does it have to be containerized prior to completing the shift.
• Train personnel according to the results of the evaluations and the procedure revisions.

• Review the actions of the previous drum leak event (August 2010). Evaluate if these actions were adequate. Take additional actions to address the event and prevent recurrence of drum acid attack events.

TRU Retrieval Project (WRAP, T Plant, LPCS, & TRU)

John Trevino **WRAP**

Rpt #:	Date Entered:	Date Observed:	Last Modified Date:
37315	05/06/2011	05/06/2011	05/06/2011

Entry Type: ARRA Include in CIR: No Hours in Field:

Title:

Finding – ineffective corrective actions for WRAP waste drum acid breach event from last August timeframe - similar to last week's leaking drum event.

Summary:

The FR evaluated the corrective actions associated with Occurrence report EM-RL-CPRC-WRAP-2010-0003 (involving a drum that leaked due to residual acid attack). The cause analysis did not focus on the possibility that repacking of waste drums could result in residual acids coming in contact with the metal drum interior. The analysis seems to conclude that the event was isolated to the specific drum of waste and the what happened (scratch the interior of the drum) during the repackaging. As a result of the leaking drum event from last week, the issue appears to be much broader and the cause analysis and corrective actions from last year's event weren't efective to prevent recurrence. The following finding was written:

Finding: The corrective actions associated with an event were not effect to prevent recurrence. The events involved acid corrosion through the wall of new waste drums after the waste was repackaged into the new drums inthe WRAP TRU glovebox.

Issue Type: Finding **Significance Level:** 2

Statement:

The corrective actions associated with an event were not effect to prevent recurrence. The events involved acid corrosion through the wall of new waste drums after the waste was repackaged into the new drums in the WRAP TRU glovebox.

Discussion:

Occurrence report EM-RL-CPRC-WRAP-2010-0003 documented an event where a drum corroded through the wall of a new drum which was identified in August, 2010. The cause of this event focused on acid corrosion and contents scratching the inside wall of the drum. The corrective actions do not address either and were inadequate toprevent recurrence. Three of the four corrective actions address only the event problems and the recovery actions. The forth corrective action states, "Corrective Action 4: Review waste stream affected drum originated (error in grammar). Add actions as determined appropriate." It is not clear what actions were identified to be taken but whatever actions were taken, they did not prevent recurrence. Actions should have been taken to identify and completely absorb and neutralize any acids that could cause internal drum corrosion.

Requirements:

• 10 CFR 830.122, Quality Assurance Criteria, states in part, "(c) Criteria 3, Management/Quality Improvement, (1) Establish and implement processes to detect and prevent quality problems. (2) Identify, control, and correct items, services, and processes that do not meet established requirements. (3) Identify the causes of problems and work to prevent recurrence as a part of correcting the problem. (4) Review item characteristics, process implementation, and other quality-related information to identify items, services, and processes needing improvement."

• DOE O 414.1C Quality Assurance, Section 4.b.(3) Management/Criterion 3 - Quality Improvement:
(a Establish and implement processes to detect and prevent quality problems.
(b Identify, control, and correct items, services, and processes that do not meet established requirements.
(c Identify the causes of problems, and include prevention of recurrence as a part of corrective action planning.
(d Review item characteristics, process implementation, and other quality-related information to identify items, services, and processes needing improvement.

• PRC-MP-QA-599, Quality Assurance Program, states in part, "Quality improvement processes shall be established and implemented to satisfy the requirements of this section in accordance with 10 CFR 830.122 (c), "Criterion 3-Management/Quality Improvement," and DOE O 414.1C CRD, Attachment 2, 3.c, "Management/Criterion 3-Quality Improvement", which state:
o Establish and implement processes to detect and prevent quality problems.
o dentify, control and correct items, services, and processes that do not meet established requirements.
o dentify the causes of problems, and include prevention of recurrence as a part of corrective action planning.

o Review item characteristics, process implementation, and other quality-related information to identify items, services, and processes needing improvement."

Funct. Area:	Trend Code:	ISMS Funct.:	Causal Code:	
F&I	CONOPS-INVST	FEEDBK	LrngImprov	Issue Number: 9885

TRU Retrieval Project (WRAP, T Plant, LPCS, & TRU)

John Trevino **WRAP**

Rpt #:	Date Entered:	Date Observed:	Last Modified Date:
37316	05/06/2011	05/06/2011	05/06/2011

Entry Type: ARRA Include in CIR: No Hours in Field:

Title:

Recovery work – leaky drum in WRAP 2404-WB warehouse.

Summary:

The FR observed selected preparations, briefings, and performance of personnel entering 2404-WB in response to the April 26 leaky drum event. Radiological levels in 2404-WB are extreme. The building is posted as a HCA/ARA and also a Beryllium Controlled Area. A special RWP was written to support recovery operations. SCBA equipment and acid protective PPE were selected and used for entry. Wet rags were placed over the spill to keep contamination from drying up and becoming flighty. Soil cement was also used as appropriate to temporarily fix contamination until it is cleaned up and decontaminated. Paper, plastic, tapes, tarps, etc. were placed to minimize the spread of contamination. After several entries made on overtime last weekend, the team reached the leaking drum on Tuesday night and were able to overpack it in an 85 gallon drum and bag the pallet that the drum was on. The drum was bagged 1st and soda ash was placed in the bag to neutralize any acid that leaks into the bag. The team continues to make daily entries to continue the cleanup operations. When the team is able, the other at risk daughter drums will be placed on spill pallets. Plans are to place an engineered enclosure over the spill area so that it can be cleaned up /decontaminated within a controlled area (HEPA filtered, personnel on fresh air).

TRU Retrieval Project (WRAP, T Plant, LPCS, & TRU)

John Trevino **WRAP**

Rpt #:	Date Entered:	Date Observed:	Last Modified Date:
37569	05/20/2011	05/02/2011	05/20/2011

Entry Type: Routine Oversight | Include in CIR: No | Hours in Field:

Title:

Recovery Plan, AJHA, & RWP – WRAP leaky waste drum.

Summary:

Reviewed the recovery plan, AJHA, and RWP for response to the leaky drum found in warehouse 2404-WB. The documents appear to be adequate to safely conduct the work and several entries were already made using the documents. The recovery plan requires a pre-job brief of the hazards and controls which are included in the work documents. SCBA PPE and chemical resistant outer clothing and gloves were required for the recovery entry work. The plan was presented to the WRAP HRB committee chairman. Personnel entered the building using the recovery plan and associated documents on May 1.
Late entry from May2.

TRU Retrieval Project (WRAP, T Plant, LPCS, & TRU)

John Trevino **WRAP**

Rpt #:	Date Entered:	Date Observed:	Last Modified Date:
37702	06/01/2011	05/20/2011	06/29/2011

Entry Type: ARRA Include in CIR: No Hours in Field:

Title:

Extent of condition evaluation / actions - WRAP leaky waste drum.

Summary:

Late entry for May 20.

During the post job meeting held the week of May 2, the FR questioned the extent of condition related to the leaky drum event and other drums that are considered high risk of acid attack and leakage due to their contents. The drums of highest risk of leakage are the second daughter drum packaged from drum HEDL-63 (sister drum to the leaky drum) and the two daughter drums packaged from HEDL-262 which are the only other daughter drums from this waste steam (see OA37700). These drums are located in 2404-WB and will be placed on spill pallets when supported by the recovery plan actions. The FR questioned if the other HEDL drums (13 drums) which have not been repackaged but are from the same waste stream have been inspected and placed on spill pallets. PRC management did not seem to believe that these drums are at risk of leaking and had not initiated actions to inspect them based in part because they have not yet been repackaged. The FR emphasized that if one of the plastic inner liners started to leak in one these drums, another significant and costly leak could occur. Some of these drums were located in warehouse 2404-WB so they would have to be inspected after the recovery operations allow. But some of these drums were located in CWC with easy access allowing easy inspection. One PRC manager told the FR that a management decision had been made to wait until an evaluation was conducted prior to inspecting these drums and placing them on a spill pallet. The FR did not believe this was a good decision. After discussing the need to inspect the other at risk drums during the post job review and causal analysis meetings during the weeks May 2 through May 9, the FR became aware that the TRU Repackaging and Processing manager had initiated actions to inspect the drums that were available at CWC and in the WRAP process area and these were placed on spill pallets on May 9th and May 10th. The FR verified that the correct HEDL drums had been selected from the information available and that CWC had inspected these drums, moved them to a common location, and placed them on spill pallets as appropriate.

Another set of at risk drums were identified and discussed. These were HEDL drums packaged during the late 70s but are from a different waste stream. From radiography, these drums also contained an inner liner. In addition, their contents were much lower than the other 15 HEDL drums. However, when these were retrieved from Low Level Burial Ground 218-W-4C in 2006, these drums were highly corroded and were overpacked upside down (a technique used to overpack drums that were so corroded that they could not be safely tipped and slid into the overpack drum). The FR was concerned that that the inner containers for these drums could leak resulting in a possible acid attack of the overpack drum. This concern was based in part to the lack of knowledge of the packaging and contents of these drums. On May 20 PRC conducted a review of this HEDL waste stream and determined that some of these drums had already been processed at PermaFix Northwest and their contents were determined to be non acidic (neutral) thus putting to rest the concern for acid attack.

TRU Retrieval Project (WRAP, T Plant, LPCS, & TRU)

John Trevino **WRAP**

Rpt #:	Date Entered:	Date Observed:	Last Modified Date:
38141	06/28/2011	06/01/2011	06/28/2011

Entry Type: ARRA Include in CIR: No Hours in Field:

Title:

Oversight of recovery operations and radiological work practices - WRAP leaky waste drum.

Summary:

Late entry from June 1st.

On April 26, WRAP personnel found a waste drum that was leaking a highly radioactive / strong acid liquid onto the floor of waste storage warehouse 2404-WB (see Occurrence Report RL—CPRC-WRAP-2011-0002, Contamination Found on Waste Drum). A recovery plan was developed. During May, WRAP performed almost daily entries into 2404-WB as part of the recovery operations. The FR attended many of the planning meetings, prejob briefings and observed many of the entry operations that were accomplished during this period of time. The RADCON organization did a good job identifying the extreme radiological hazards and risks associated with this work and the controls that needed to implemented. Concern was expressed that the leaky material could dry which would cause it to be flighty and spread easily. Initial entries were made using Self Contained Breathing Apparatus (SCBA) which provided a high level of protection to personnel entering the area. Wet rags were used to cover the spilled material, to keep it wet, and to minimize contamination spread. This is considered a good radiological practice. The FR observed radiological practices associated with donning and doffing of PPE and radiological surveys of personnel and equipment exiting the area. Donning and doffing of PPE and personnel conduct of radiological surveys was good. The FR had a comment on use of acid resistant tape over the protective gloves; a lesson that was learned during an acid spill event that occurred at the Savannah River site. The WRAP team was able to find the appropriate tape and used it for operations involving a potential for contact with the acidic material.

The FR identified one issue related to the spill recovery operations and radiological practices:

Finding: The Radiological survey map for WRAP warehouse 2404-WB was updated or maintained current to the radiological postings and controls within 2404-WB.

Issue Type: Finding **Significance Level:** 2

Statement:

The Radiological survey map for WRAP warehouse 2404-WB was updated or maintained current to the radiological postings and controls within 2404-WB.

Discussion:

Following the radioactive waste drum leak that was found on April 26, the radiological postings within the WRAP warehouse 2404-WB were changed as radiological conditions within the building changed. On one occasion, the survey map of the facility was not updated in a timely manner to reflect the current radiological conditions within the building. This issues was raised with the WRAP RADCON manager; the radiological survey map was update within a short period of time. Rad personnel were briefed on management's expectations to keep the survey maps current. When radiological conditions change significantly or if the Rad postings change, the Rad survey map needs to be updated in a timely manner to reflect the changed conditions.

Requirements:

CHPRC-00073, CHPRC Radiological Control Manual, Part 5, Radiological Monitring and Surveys:

Article 551 states in part:

"#1. Monitoring of individuals and areas shall be performed to:
a. Demonstrate compliance with the requirements of this Manual;
b. Document radiological conditions;
c. Detect changes in radiological conditions...

#11. Monitoring results should be reviewed by the cognizant radiological supervisor. The review should ensure that all required surveys have been performed and that the documentation is accurate and complete.
#12. Results of current surveys or survey maps should be conspicuously posted to inform personnel of the

radiological conditions...
#14. Monitoring data in each building or area should be compiled and reviewed at least quarterly or upon entry..."

Article 552, Radiation Exposure Surveys, states in part,

"In addition to the requirements of Article 55 1, unless the survey frequency has been reduced and specifically identified in an approved Radiation Protection Technical Equivalency Determination (see Article 113.3), routine radiation surveys should be performed in accordance with the following minimum frequencies:

a. Weekly, in routinely occupied Radiological Buffer Areas and Radiation Areas;
b. Upon initial entry, weekly during continuing operations, and when levels are expected to change in High Radiation Areas;
c. Weekly, for temporary Radiation Area boundaries to ensure that Radiation Areas do not extend beyond posted boundaries;
d. Monthly, or upon entry, if entries are less frequent than monthly for Radioactive Material Areas..."

Funct. Area:	Trend Code:	ISMS Funct.:	Causal Code:	
RP	RADCON-RADPRC	WORK	OpExcel	Issue Number: 10063