



Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

January 30, 2017

Certified Mail

Mr. John Greenewald
The Black Vault

[REDACTED]
[REDACTED]

Dear Mr. Greenewald:

FREEDOM OF INFORMATION ACT REQUEST (FOI 2016-01555)

This letter is in response to the electronic *Freedom of Information Act* (FOIA) request you submitted to this office seeking “records, electronic or otherwise, pertaining to the measurement of the depletion of radioactive isotopes at the 216-U-10 pond, or the U-Pond, and the disposition of that pond and the reason for the disposition.” On October 5, 2016, this office sent you an electronic mail message to discuss the broad scope of your request and determine if the request could be narrowed as responsive documents spanned over approximately 60 years. This office also left you voice mail messages on October 7 and October 12, 2016. In a series of electronic mail messages between November 14 and November 15, 2016, you responded and narrowed the scope of your request for documents generated within the last 10 years and that are not currently available on the Hanford Site Administrative Record website, <http://pdw.hanford.gov/arpir/>

The documents have been reviewed and are enclosed with deletions of the payroll numbers and Hanford Identification Numbers assigned to specific individuals pursuant to Exemption 6 of the FOIA. Exemption 6 provides that an agency may protect from disclosure all personal information if its disclosure would constitute a clearly unwarranted invasion of privacy by subjecting the third-party individuals to unwanted communications, harassment, intimidation, retaliation, or other substantial privacy invasions by interested parties.

In invoking Exemption 6 we considered 1) whether a significant privacy interest would be invaded by disclosure of information, 2) whether release of the information would further the public interest by shedding light on the operations or activities of the government, and 3) whether disclosure would constitute a clearly unwarranted invasion of private or public interest. DOE has determined that the public interest in the personal information of the third-party individuals whose information appear in the documents does not outweigh the individuals’ privacy interests.

This satisfies the standard set forth by the Attorney General by Memorandum on March 19, 2009, that the agency is justified in not releasing material if it reasonably foresees that disclosure would harm an interest protected by one of the statutory exemptions or disclosure is prohibited by law. This also satisfies DOE’s regulation at Title 10, Code of Federal Regulations (CFR), Section 1004.1, to make records available which it is authorized to withhold under 5 U.S.C. 552 when it determines that such disclosure is in the public interest. Accordingly, we will not make discretionary disclosure of this information.

All releasable information in the documents has been segregated and is being provided to you. The undersigned individual is responsible for this determination. You have the right to appeal to the Office of Hearings and Appeals, as provided in 10 CFR 1004.8. Your appeal shall be filed within 90 days after receipt of this letter. You may submit your appeal by e-mail to OHA.filings@hq.doe.gov, including the phrase "Freedom of Information Appeal" in the subject line. Alternatively, any such appeal may be made in writing to the following address: Director, Office of Hearings and Appeals (HG-1), U.S. Department of Energy, L'Enfant Plaza Building, 1000 Independence Avenue SW, Washington, D.C. 20585-1615. Should you choose to appeal, please provide this office with a copy of your e-mail or letter.

You may contact DOE RL's FOIA Public Liaison, Richard Buel, at (509) 376-3375, or by mail at P.O. Box 550, Richland, Washington, 99352 for any further assistance and to discuss any aspect of your request. Additionally, you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, Maryland 20740-6001, e-mail at ogis@nara.gov; telephone at 202-741-5770; toll free at 1-877-684-6448; or facsimile at 202-741-5769.

For the purpose of assessment of fees, you have been categorized under the DOE regulation at Title 10, Code of Federal Regulations (CFR), Section 1004.9(b)(3), as a "news media" requester. Requesters in this category are charged fees for duplication only and are provided 100 pages at no cost. For your request, 67 pages of documents are being provided, therefore, there will be no charge for this response.

Should you have any questions regarding your request, please contact me on (509) 376-6288.

Sincerely,




Dorothy Riehle
Freedom of Information Act Officer
Office of Communications
and External Affairs

OCE:DCR

Enclosure

This document is made available through the declassification efforts
and research of John Greenewald, Jr., creator of:

The Black Vault



The Black Vault is the largest online Freedom of Information Act (FOIA) document clearinghouse in the world. The research efforts here are responsible for the declassification of hundreds of thousands of pages released by the U.S. Government & Military.

Discover the Truth at: <http://www.theblackvault.com>

PROJECT HANFORD RADIOLOGICAL SURVEY REPORT

Survey Report No.
RC-03615

Page 1 of 4

Date: 12-20-06 Time (Start/Stop): 0730 / 16:30 Area/Bldg./Room/Location: 200-W / 216-U-10 crib. F.C.: RC

RMP Number: N/A Work Package/Job Control Package/JSA: N/A Routine Surveillance Task Number: RC-A020 Radiological Shipping Rec. Number: Site-03-EXCEPTED

Purpose of Survey (check appropriate box(es)): Job Coverage, Required Task, Material Release, Ram Shipment

Contamination Incident: Skin, Clothing, Spill Alarm Response: Cam, ARM, APM

Exposure Incident HRA/VHRA Work Other: _____

Job Description: Completed annual Mobile Surface Contamination Survey Monitor (MSCM) survey of Site 216-U-10 crib. N/A-----
N/A -----

DOSE RATE MEASUREMENTS Note¹ F = Field (≥ 30 cm) C = Contact (≤ 1 cm)

No.	Description	Dist. (cm) Note	WO (mR/hr)	WC (mR/hr)	CF _{β}	CF _{γ}	Neutron Dose (mrem/hr)	Shallow Dose (mrem/hr)	Deep Dose (mrem/hr)
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->
<	-----	-----	-----	--N/A--	-----	-----	-----	-----	----->

CONTAMINATION MEASUREMENTS

No.	Description	Direct		Background		Total dpm/100 cm ²		Removable dpm/100 cm ²	
		Gross com/PA $\beta\gamma$	Gross com/PA α	$\beta\gamma$ (cpm)	α (cpm)	$\beta\gamma$	α	$\beta\gamma$	α
1	Vegetation (High)	1000	N/A	<100	N/A	54,000	N/A	N/A	N/A
2	1 sq Meter soil	<100	N/A	<100	N/A	<5000	N/A	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->
<	-----	-----	N/A	-----	-----	-----	-----	-----	----->

AIR SAMPLE MEASUREMENTS (μ CI/ml)

No.	BZ		GA		Initial	Decay	BZ		GA		Initial	Decay	Sample Counter Log Number or Sample ID Number
	$\beta\gamma^1$	$\beta\gamma^2$	$\beta\gamma^1$	$\beta\gamma^2$			$\beta\gamma^1$	$\beta\gamma^2$	$\beta\gamma^1$	$\beta\gamma^2$			
1	<	-----	<	-----	-----	-----	$\beta\gamma^1$	-----	<	-----	-----	-----	----->
2	<	-----	<	-----	-----	-----	$\beta\gamma^2$	-----	<	-----	-----	-----	----->

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-03615

Page 2 of 4

Map/Sketch

See attached Map

LEGEND

Smear
 Air Sample
 LAW
 Neutron
 * Contact Reading
 ----- (designation inside) -----
 Radiological Area Boundary
 Dose Rates in mrem/h unless otherwise noted

COMMENTS: (Additional information as necessary to interpret results)

Surveys performed by using MSCM as per task. Tractor speed of approximately 2 m.p.h. or less with average detector height at 6 inches. Contaminated weeds were bagged and taken to regulated compactor truck for disposal. This survey was performed over 4 days with managements approval.

N/A -----

N/A -----

Instr./Probe Model	RC-3B (CP)	GM Model g-m probe	PAM	MSCM/4 det	GM	N/A
Serial No.	N/A	CMEB3-0187	ACBC1-0136	HO-62-5509	CMEB3-0066	N/A
	NA	DTHN3-0561	DTHN3-0046	N/A	DTHNB9-0154	N/A
Efficiency (used)	NA	0.10	0.19	N/A	0.10	N/A

RCT:
Date: 12/20/06 Payroll No: (b)(6)

Reviewer:
Date: 1/9/07 Payroll No.: (b)(6)

Name (Print): D.J. Phipps \ R.A. Daughety

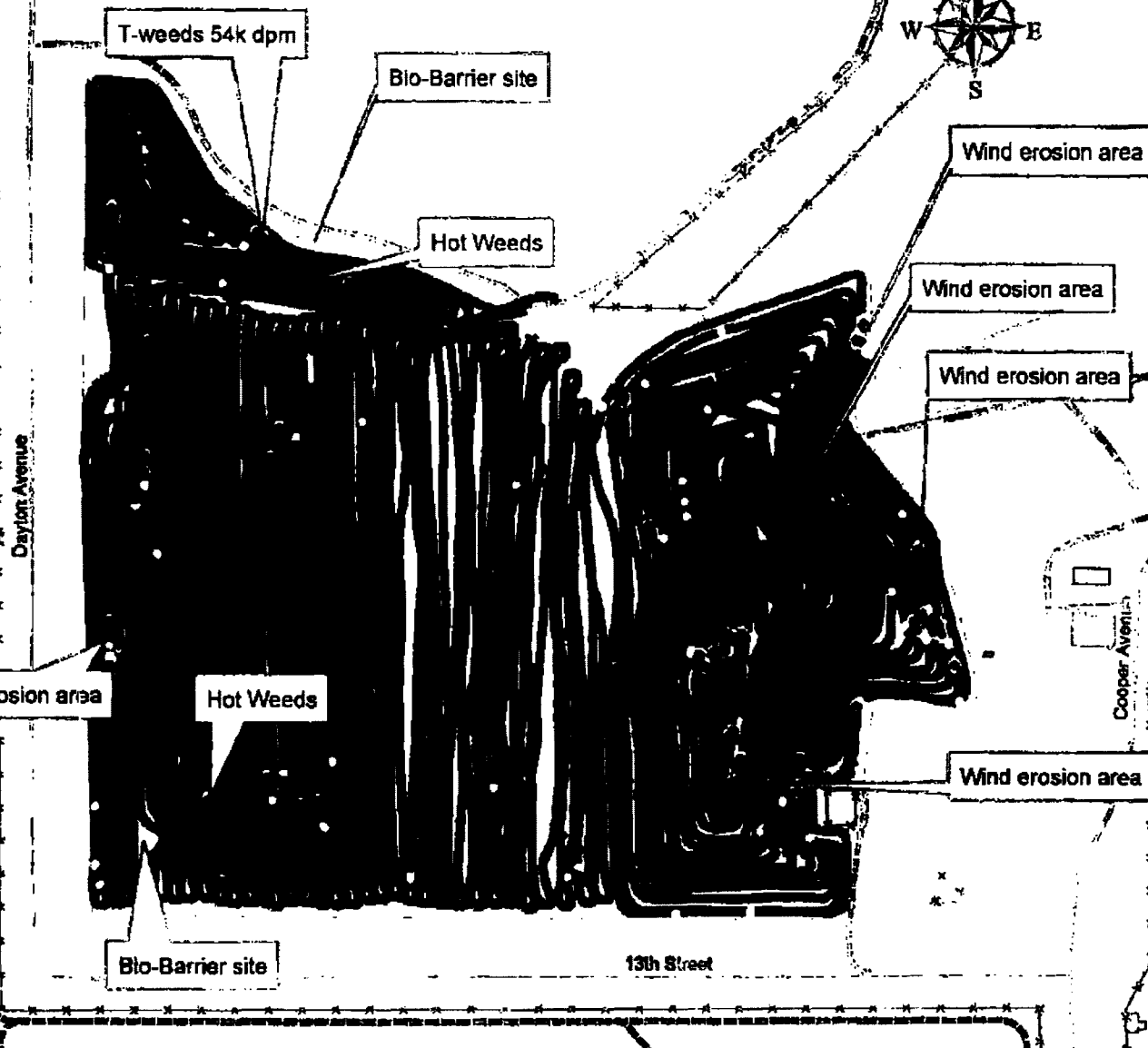
Name (Print): D.R. Ekstrom

Signature: D.J. Phipps \ R.A. Daughety

Signature: DR Ekstrom

Best Available Copy

Survey: RC-03615
Page 3 of 4



C.P.S. Summary Information	
×	< 750
×	750 - 1000
•	1001 - 1250
	1251 - 1500
	> 1500

Date of Survey: 12/13, 18, 19 & 20/2006
Project File: 216U10_08.mxd

**MSCM-II RC Radiological Survey
Survey of 216-U-10 Pond**



MSCM II
Mobile Surface Contamination Monitor

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENVIRONMENTAL RESTORATION
OFFICE OF PUBLIC AFFAIRS
WASHINGTON, DC 20545
OPERATIONAL SUPPORT CENTER
LANSING, MICHIGAN
48226-0001
TEL: 313/487-4000
WWW.EOR.DOE.GOV

ENVIRONMENTAL SURVEILLANCE DATA FORM
(Circle or Fill in Data as Applicable)

Site: 216-4-10 Survey #: AC-03615 Page 4 of 4

Cave-In or Depressions?	Yes	<u>No</u>		
Animal or Insect Intrusion?	Yes	<u>No</u>		
Tumbleweeds/Sagebrush?	None	Live	<u>Dead</u>	Blown-In
Current Radiological Posting	CA	<u>URMA</u>	Soil	RA Other _____
Steel Posts?	Yes	No	<u>N/A</u>	
Wells / Riser / Vents	Capped or Sealed	Intact	Open	<u>N/A</u>
Chain?	Yes	No	<u>N/A</u>	
Concrete Marker Posts?	<u>Surround Site</u>	Single	None	
	<u>In Place Upright</u>	Leaning / Down	N/A	
Signs?	<u>In Place</u>	Missing / Down	Faded	
Unidentified Containers?	Yes	<u>No</u>		
Abandon Equipment / Material?	Yes	<u>No</u>		

Comments: Site had a few dead T-Weeds. The Bio-Control group cleaned off contaminated weeds 2nd time the summer and it really paid off.

Surveillant's Signature: D.S. Phipps PA Deputy Date: 12-20-06

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-04296

Page 1 of 4

Date: 11-08-07 Time (Start/Stop): 07:30/11:30 Area/Bldg./Room/Location: 200W/ 216-U-10 covered pond F.C. RC

RWP Number: N/A Work Package/Job Control Package/JSA: N/A Routine Surveillance Task Number: RC-A020 Radiological Shipping Record No.: N/A

Purpose of Survey (check appropriate box(es)): Job Coverage Required Task Material Release RAM Shipment
 Contamination Incident: Skin Clothing Spill Alarm Response: CAM ARM APM
 Exposure Incident HRA/VHRA Work Other: N/A

Job Description:
Perform annual surveys of Waste Information Data Systems (WIDS Site), 216-U-10. All postings and boundaries checked and verified.

DOSE RATE MEASUREMENTS Note¹ F = Field (>30 cm) C = Contact (<1 cm)

No.	Description	Dist. (cm) Note ¹	WO (mR/hr)	WC (mR/hr)	CF _β	CF _γ	Neutron Dose (mrem/hr)	Shallow Dose (mrem/hr)	Deep Dose (mrem/hr)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CONTAMINATION MEASUREMENTS

No.	Description	Direct		Background		Total (dpm/100 cm ²)		Removable (dpm/100 cm ²)	
		Gross cpm/PA _{βγ}	Gross cpm/PA _α	βγ (cpm)	α (cpm)	βγ	α	βγ	α
1	Soil	<100	N/A	<100	N/A	<5000	N/A	N/A	N/A
2	Tumble Weeds (High)	2000	N/A	100	N/A	114,000	N/A	N/A	N/A
3	Ant mounds	<100	N/A	<100	N/A	<5000	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

AIR SAMPLE MEASUREMENTS (μCi/ml)

Sample Counter Log Number or
Sample ID Number

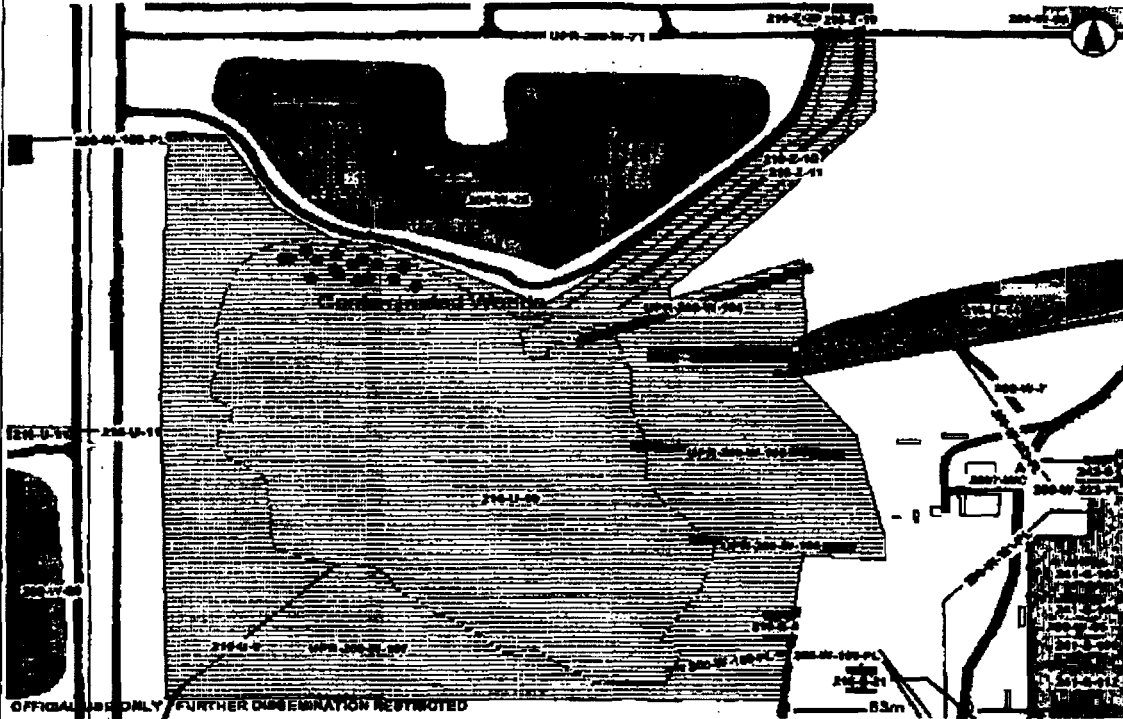
	BZ	GA	Initial	Decay	BZ	GA	Initial	Decay	
α ¹	N/A	N/A	N/A	N/A	βγ ¹	N/A	N/A	N/A	N/A
α ²	N/A	N/A	N/A	N/A	βγ ²	N/A	N/A	N/A	N/A/N/A/N/A

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-04296

Page 2 of 4

Map/Sketch



LEGEND: (S) Smear (A) Air Sample (LAW) LAW (#) Neutron * Contact Reading
 ----- (designation inside) ----- Radiological Area Boundary Note: Dose Rates in mrem/hr unless otherwise noted.

COMMENTS: (Additional information as necessary to interpret results)
 Surveys performed by using MSCM. Tractor speed of approximately 2 m.p.h. or less with average detector height at 6 inches. The area was found to have > 100 tumble weeds contaminated in a small area on the North end. The area was turned over to Bio-Control response team for clean up. Surveys will continue in the area after clean up is completed.

Instrument/Probe Model	RO-3B (CP)	GM Model g-m probe	PAM	N/A	N/A	N/A
Serial No.	ICEB3-0377	CMEBC-0033	ACBC1-0350	N/A	N/A	N/A
	NA	DTHNC-0914	DTHN3-0339	N/A	N/A	N/A
Efficiency (used)	NA	10%	17%	N/A	N/A	N/A

RCT:
 Date: 11-07-07 Payroll No: (b)(6)
 Name (Print): D. J. Phipps
 Signature: D.J. Phipps

Reviewer:
 Date: 11/19/07 Payroll No.: (b)(6)
 Name (Print): D. R. Ekstrom
 Signature: DR Ekstrom

ENVIRONMENTAL SURVEILLANCE DATA FORM
(Circle or Fill In Data as Applicable)

Site: 216-4-10 Covered Pond Survey #: RC-04296 Page 3 of 4

Cave-In or Depressions? Yes No

Animal or Insect Intrusion? Yes No Ants

Tumbleweeds/Sagebrush? None Live Dead Blown-In

Current Radiological Posting CA URMA Soil RA Other _____

Steel Posts? Yes No N/A

Wells / Riser / Vents Capped or Sealed Intact Open N/A

Chain? Yes No N/A

Concrete Marker Posts? Surround Site Single None

In Place Upright Leaning / Down N/A

Signs? In Place Missing / Down Faded

Unidentified Containers? Yes No

Abandon Equipment / Material? Yes No

Comments: Site has a lot of weeds
look bad?

Surveillant's Signature: D.J. Phippo Date: 11-8-07

NOTIFICATION OF RADIOLOGICAL PROBLEM

RADIATION SURVEY
REPORT # RC-04296
PAGE 4 OF 4

Phipps, David J

From: Phipps, David J
Sent: Thursday, November 08, 2007 10:22 AM
To: Coleman, Diane L; Daughety, Rick A; Ekstrom, Deanna R (Dee); Garnett, Steven B (Steve); Harrison, William C; Johnson, Austin Ray; Lamson, Sally B; McKinney, Stephen M; Meeker, James; Morris, Karen R; Norman, Dottie L; Osborne, Bill L (FH); Phipps, David J; Roos, Richard C; Sherman, Christopher D; Shupe, Steven D
Subject: 1108070900.doc

NOTIFICATION OF RADIOLOGICAL PROBLEM

This message is notification of a radiological problem found in your area or facility. It is your responsibility to determine if this condition is a deficiency and to assume responsibility for the reporting requirements.

Date: 11/08/07 **Time of discovery:** 09:00

Assumed Owner: RARA (Steve Shupe)

Location: 216-U-10 Pond

Description of problem (Suggest this paragraph be used by the ONC if required):

More than 100 contaminated tumbleweeds were detected in a posted URMA while performing MSCM surveys. Maximum contamination levels found were 114,000 dpm/100cm² beta/gamma direct, no removable. No alpha contamination was detected. RARA D&D operator and Bio Control Response Team responded to the area. The weeds were placed in the regulated compactor truck for disposal. The weeds are green and attached to the soil.

Identified by: D.J. Phipps

Posting of area before and after immediate corrective actions: *URMA before and after clean up of the Tumble weeds.*

Radiological Survey Report Number: RC-04296

Other information: Ray Johnson and Steve Shupe were verbally notified. The area has been turned over to the Bio- Control response team for further evaluation and possible clean-up. Surveys will continue in the area.

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-04896

Page 1 of 5

Date 07/24/08	Time (Start/Stop) 06:30/16:00	Area/Bldg./Room/Location 200W / 216-U-10 pond	F.C. RC
RWP Number N/A	Work Package/Job Control Package/JSA N/A	Routine Surveillance Task Number RC-A020	Radiological Shipping Record No. N/A

Purpose of Survey (check appropriate box(es)): Job Coverage Required Task Material Release RAM Shipment
 Contamination Incident: Skin Clothing Spill Alarm Response: CAM ARM APM
 Exposure Incident HRA/VHRA Work Other: N/A

Job Description:
Perform annual surveys of Waste Information Data Systems (WIDS Site) 216-U-10. All postings and boundaries checked and verified.

DOSE RATE MEASUREMENTS									
Note ¹ F = Field (>30 cm) C = Contact (<1 cm)									
No.	Description	Dist (cm) Note ¹	WO (mR/hr)	WC (mR/hr)	CF _p	CF _y	Neutron Dose (mrem/hr)	Shallow Dose (mrem/hr)	Deep Dose (mrem/hr)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CONTAMINATION MEASUREMENTS									
No.	Description	Direct		Background		Total (dpm/100 cm ²)		Removable (dpm/100 cm ²)	
		Gross cpm/PA _{βγ}	Gross cpm/PA _α	βγ (cpm)	α (cpm)	βγ	α	βγ	α
1	Soil, gravel & vegetation after decon.	<100	N/A	<100	N/A	<5k	N/A	N/A	N/A
2	MSCM source - case LAW	N/A	N/A	100	N/A	N/A	N/A	<1k/LAW	N/A
3	Approximately 300 Tumble weeds	1000	0	100	0	54K	0	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

AIR SAMPLE MEASUREMENTS (μCi/ml)										Sample Counter Log Number or Sample ID Number	
	BZ	GA	Initial	Decay		BZ	GA	Initial	Decay		
α ¹	N/A	N/A	N/A	N/A		βγ ¹	N/A	N/A	N/A	N/A	N/A
α ²	N/A	N/A	N/A	N/A		βγ ²	N/A	N/A	N/A	N/A	N/A

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-04896

Page 2 of 5

Map/Sketch

See attached Map

LEGEND: Smear Air Sample LAW Neutron * Contact Reading
 ----- (designation inside) ----- Radiological Area Boundary Note: Dose Rates in mrem/hr unless otherwise noted.

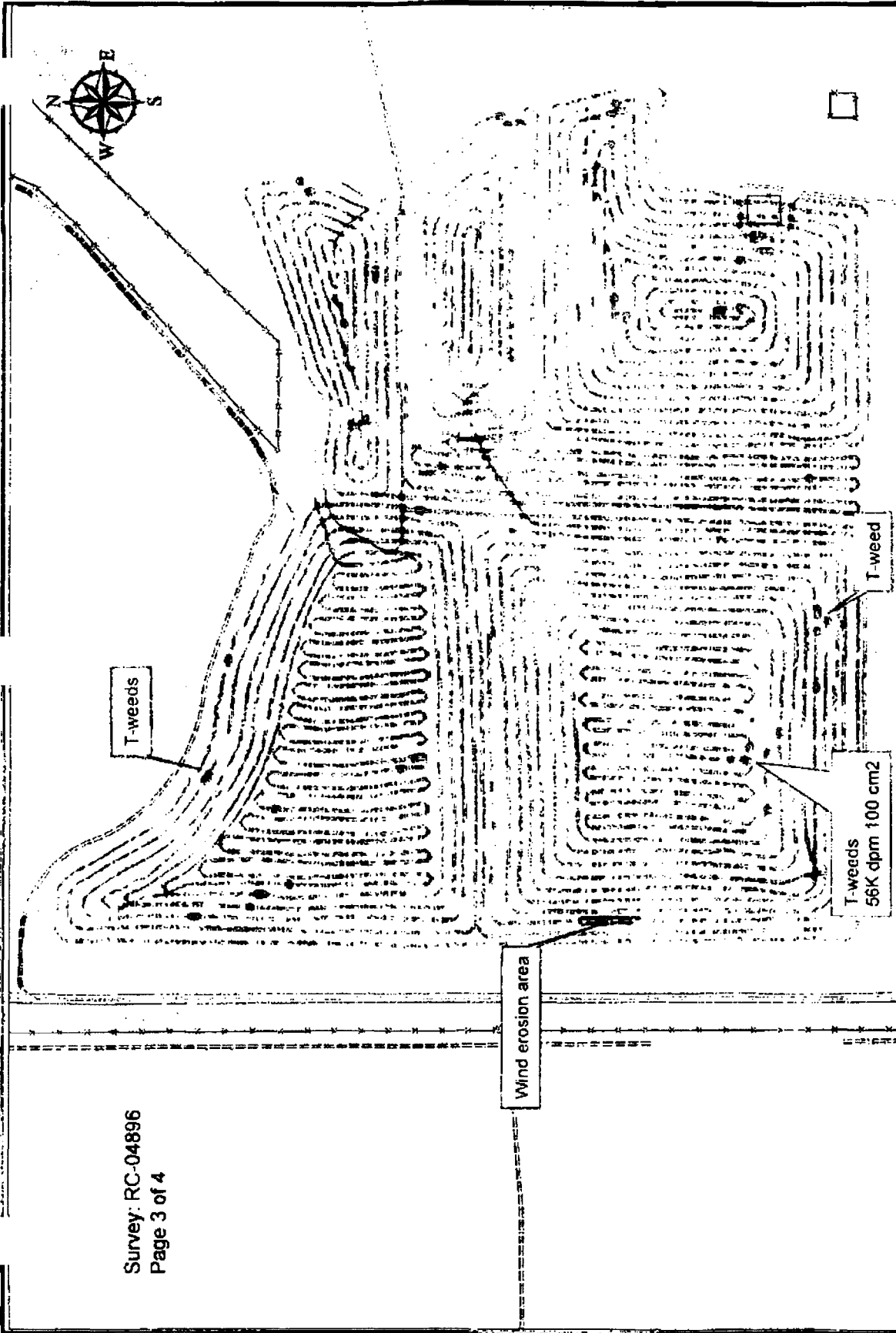
COMMENTS: (Additional information as necessary to interpret results)
 Surveys performed by using MSCM. Tractor speed of approximately 2 m.p.h. or less with average detector height at 6 inches. This survey was performed over several days with managements approval.

Instrument/Probe Model	R0-3B (CP)	<u>GM Model</u> g-m probe	<u>PAM</u>	N/A	N/A	N/A
Serial No.	N/A	CMEB5-0013	ACHN2-0433	N/A	N/A	N/A
	NA	DTHNC-0490	DTHN3-0339	N/A	N/A	N/A
Efficiency (used)	NA	10%	16%	N/A	N/A	N/A

RCT: <u>07</u> <u>7/31/08</u> Date: <u>06/24/08</u> <u>de</u> Name (Print): <u>D. J. Phipps</u> Signature: <u>D.S. Phipps</u>	Payroll No.: <u>(b)(6)</u> Reviewer: Date: <u>7/31/08</u> <u>(b)(6)</u> Name (Print): <u>D. R. Ekstrom</u> Signature: <u>D.R. Ekstrom</u>
--	--

Best Available Copy

Survey: RC-04896
Page 3 of 4



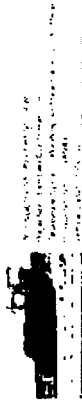
C.P.S.
 < 750
 750 - 1000
 1001 - 1250
 1251 - 1500
 > 1500

Summary Information
 Date of Survey: 07/09, 10, 21, 23, 24, / 2008
 Project File: 216U10_08.mxd

MSCM-II RC Radiological Survey
Survey of 216-U-10 Pond

0 75 150 300
 Meters

MSCM II
 Mobile Surface Contamination Monitor
 U.S. DEPARTMENT OF ENERGY



ENVIRONMENTAL SURVEILLANCE DATA FORM
(Circle or Fill in Data as Applicable)

At 7-24-08

Site: 216-4-10 Pond

Survey #: RC-04896

Page 24 of 5

Cave-In or Depressions?

Yes No

Animal or Insect Intrusion?

Yes No Red Ants

Tumbleweeds/Sagebrush?

None Live Dead Blown-In

Current Radiological Posting

CA URMA Soil RA Other _____

Steel Posts?

Yes No N/A

Wells/Riser/Vents

Capped or Sealed Intact Open N/A

Chain?

Yes No N/A

Concrete Marker Posts?

Surround Site Single None

In Place Upright Leaning / Down N/A

Signs?

In Place Missing / Down Faded

Unidentified Containers?

Yes No

Abandon Equipment / Material?

Yes No

Comments:

We cleaned 300 contaminated Tumbleweeds from the site.

Surveillant's Signature:

D.S. Phillips

Date:

7-24-08

NOTIFICATION OF RADIOLOGICAL PROBLEM

This message is notification of a radiological problem found in your area or facility. It is your responsibility to determine if this condition is a deficiency and to assume responsibility for the reporting requirements.

Date: 07/24/08

Time of discovery: 07:30 AM

Assumed Owner: RARA (Bill Osborne)

Location: 216-U-10 pond

Description of problem (Suggest this paragraph be used by the ONC if required):

300 Contaminated tumble weeds were detected in a posted URMA while performing surveys on the 216-U-10 covered pond. Maximum contamination levels found were 56,000 dpm/100cm² beta/gamma direct, no removable. No alpha contamination was detected. Dose rate of 2 mR/hr W/O and <0.2 WC. Biological Control & RARA D&D operator responded to the area and removed the contaminated weeds and placed them in the regulated compacter truck for disposal. Cleanup was completed at 10:30 AM.

Identified by: D.J. Phipps

Posting of area before and after immediate corrective actions: *URMA before and after cleanup.*

Radiological Survey Report Number: RC-04896

Other information: Ray Johnson and Bill Osborne were verbally notified.

See page 2 for attached Map.

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-05066

Page 1 of 2

Date 09/17/08	Time (Start/Stop) 12:00/14:00	Area/Bldg./Room/Location 200-E / 216-U-10	F.C. RC
------------------	----------------------------------	--	------------

RWP Number N/A	Work Package/Job Control Package/JSA N/A	Routine Surveillance Task Number RC-A021	Radiological Shipping Record No. N/A
-------------------	---	---	---

Purpose of Survey (check appropriate box(es)): Job Coverage Required Task Material Release RAM Shipment
 Contamination Incident: Skin Clothing Spill Alarm Response: CAM ARM ARM
 Exposure Incident HRA/VHRA Work Other: N/A

Job Description:
Perform annual survey of Waste Information Data Systems (WIDS SITE) site 216-U-10. No action levels exceeded. All postings and boundaries checked and verified. N/A

DOSE RATE MEASUREMENTS Note¹ F = Field (≥ 30 cm) C = Contact (≤ 1 cm)

No.	Description	Dist. (cm) Note ¹	WO (mR/hr)	WC (mR/hr)	CF _B	CF _Y	Neutron Dose (mrem/hr)	Shallow Dose (mrem/hr)	Deep Dose (mrem/hr)
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CONTAMINATION MEASUREMENTS

No.	Description	Direct		Background		Total (dpm/100 cm ²)		Removable (dpm/100 cm ²)	
		Gross cpm/PA _{βγ}	Gross cpm/PA _α	P _γ (cpm)	α (cpm)	P _γ	α	P _γ	α
1	Tumble weed.	1000	N/A	100	N/A	54k	N/A	N/A	N/A
2	1 square meter soil after weed removal.	100	N/A	100	N/A	<5K	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

AIR SAMPLE MEASUREMENTS (μCi/ml)

	AIR SAMPLE MEASUREMENTS (μCi/ml)				Sample Counter Log Number or Sample ID Number				
	BZ	GA	Initial	Decay	BZ	GA	Initial	Decay	
α ¹	N/A	N/A	N/A	N/A	P _γ	N/A	N/A	N/A	N/A
α ²	N/A	N/A	N/A	N/A	P _γ	N/A	N/A	N/A	N/A

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-05066

Page 2 of 2

Map/Sketch



LEGEND: Smear Air Sample LAW Neutron * Contact Reading
----- (designation inside) ----- Radiological Area Boundary Note: Dose Rates in mrem/hr unless otherwise noted.

COMMENTS: (Additional information as necessary to interpret results)
Surveys performed per walking stick method. No biological hazards encountered. No removable contamination detected. N/A

Instrument/Probe Model	R0-3B (CP)	GM Model g-m probe	PAM	N/A	N/A	N/A
Serial No.	N/A	CMEB5-0013	N/A	N/A	N/A	N/A
	NA	DTHNC-0490	N/A	N/A	N/A	N/A
Efficiency (used)	NA	0.10	N/A	N/A	N/A	N/A

RCT:		Reviewer:	
Date: 09/17/08	Payroll No. (b)(6)	Date: 10/02/08	Payroll No. (b)(6)
Name (Print): D. J Phipps		Name (Print): D.R. Elton	S. Verde #27
Signature: <i>D.J. Phipps</i>		Signature: <i>D.R. Elton</i>	

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-05166

Page 1 of 4

Date: 11/03/08 Time (Start/Stop): 07:00/11:00 Area/Bldg./Room/Location: 200-E / 216-U-10 F.C. RC

RWP Number: N/A Work Package/Job Control Package/JSA: N/A Routine Surveillance Task Number: RC-A019 Radiological Shipping Record No.: N/A

Purpose of Survey (check appropriate box(es)): Job Coverage Required Task
 Contamination Incident: Skin Clothing Spill Alarm Response: CAM ARM AFM
 Exposure Incident HRA/VHRA Work Other: N/A

Job Description:
Perform annual survey of Waste Information Data Systems (WIDS SITE) site 216-U-10. All postings and boundaries checked and verified. N/A

DOSE RATE MEASUREMENTS Note¹ F = Field (>30 cm) C = Contact (<=1 cm)

No.	Description	Dist. (cm) Note ¹	WO (mR/hr)	WC (mR/hr)	CF _p	CF _y	Neutron Dose (mrem/hr)	Shallow Dose (mrem/hr)	Deep Dose (mrem/hr)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CONTAMINATION MEASUREMENTS

No.	Description	Direct		Background		Total (dpm/100 cm ²)		Removable (dpm/100 cm ²)	
		Gross cpm/PA _{βγ}	Gross cpm/PA _α	βγ (cpm)	α (cpm)	βγ	α	βγ	α
1	10 Tumble weeds.	1000	N/A	100	N/A	54k	N/A	N/A	N/A
2	1 square meter soil after weed removal.	100	N/A	100	N/A	<5K	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

AIR SAMPLE MEASUREMENTS (μCi/ml)

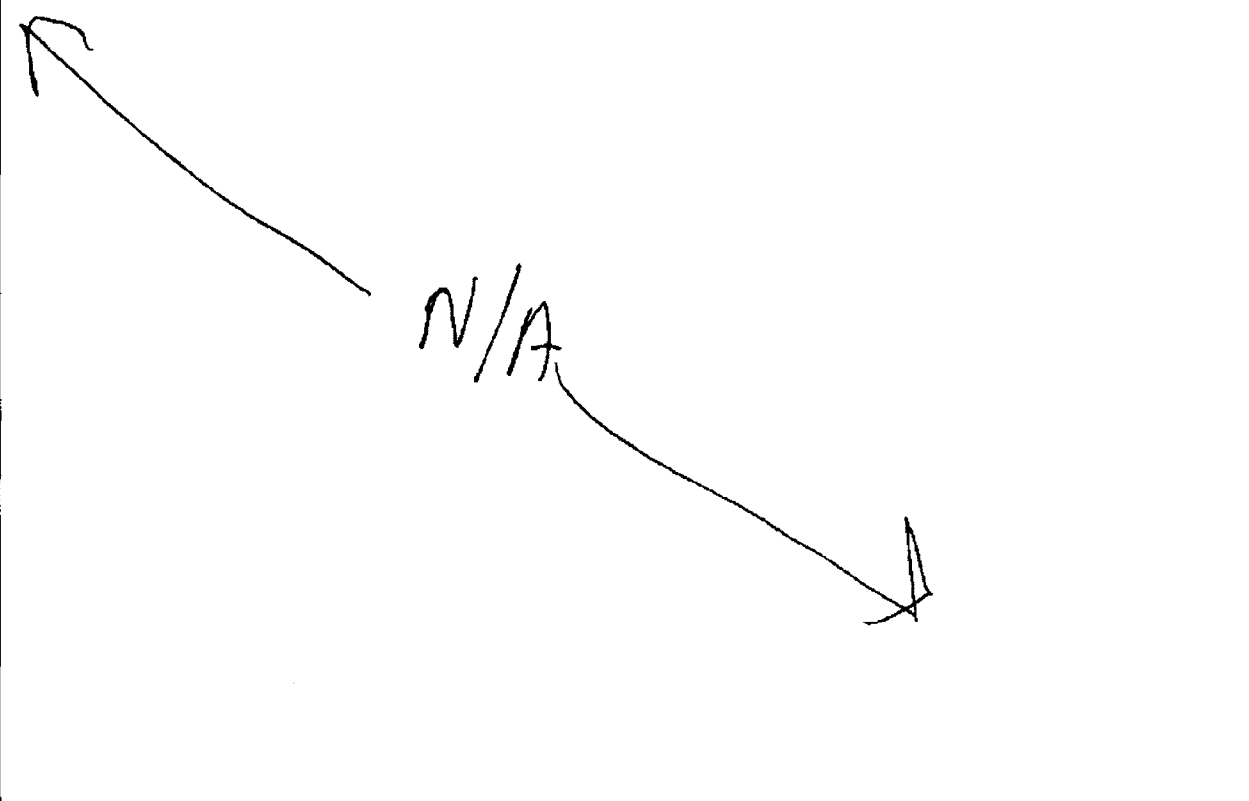
	AIR SAMPLE MEASUREMENTS (μCi/ml)				Sample Counter Log Number or Sample ID Number				
	BZ	GA	Initial	Decay	BZ	GA	Initial	Decay	
α ¹	N/A	N/A	N/A	N/A	β ¹	N/A	N/A	N/A	N/A
α ²	N/A	N/A	N/A	N/A	β ²	N/A	N/A	N/A	N/A

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-05166

Page 2 of 4

Map/Sketch



LEGEND: Smear Air Sample LAW Neutron * Contact Reading
 ----- (designation inside) ----- Radiological Area Boundary Note: Dose Rates in mrem/hr unless otherwise noted.

COMMENTS: (Additional information as necessary to interpret results)
 Surveys performed per walking stick method. No biological hazards encountered. ~~No removable contamination detected.~~ The weeds were bagged and turned over to Bio-Control. N/A -----
 DSP: 12-2-08

Instrument/Probe Model	RO-3B (CP)	GM Model g-m probe	PAM	N/A	N/A	N/A
Serial No.	N/A	CMEBB-0353	N/A	N/A	N/A	N/A
	NA	DTHNC-0198	N/A	N/A	N/A	N/A
Efficiency (used)	NA	0.10	N/A	N/A	N/A	N/A

RCT: Date: 10/03/08 Payroll No: (b)(6)
 Name (Print): D. J Phipps Signature: *D.J. Phipps*

Reviewer: Date: 09/06/12 Payroll No: (b)(6)
 Name (Print): *D. J. Phipps* Signature: *[Signature]*



NOTIFICATION OF RADIOLOGICAL PROBLEM

This message is notification of a radiological problem found in your area or facility. It is your responsibility to determine if this condition is a deficiency and to assume responsibility for the reporting requirements.

Date: 11/03/08

Time of discovery: 09:30

Assumed Owner: RARA (Bill Osborne)

Location: 216-U-10 pond

Description of problem (Suggest this paragraph be used by the ONC if required):

10 Contaminated tumble weeds were detected in a posted URMA while performing surveys on the 216-U-10 covered pond. Maximum contamination levels found were 54,000 dpm/100cm² beta/gamma direct, no removable. No alpha contamination was detected. RARA D&D operator responded to the area and removed the contaminated weeds. The weeds were placed in a RMA for disposal.

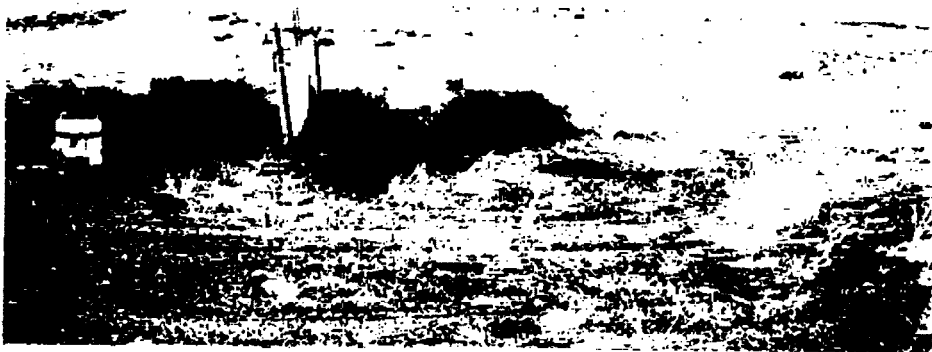
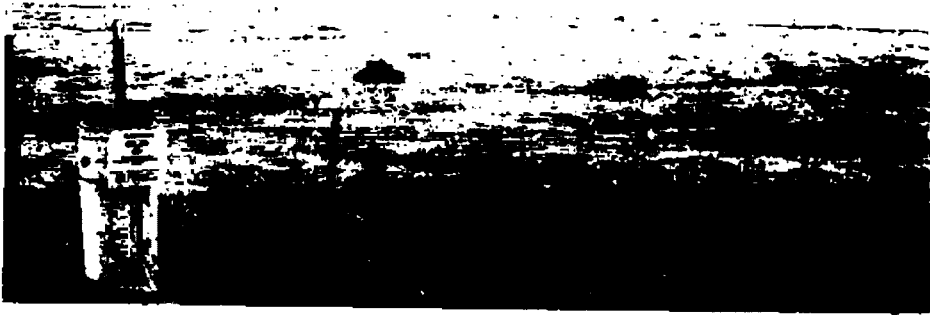
Identified by: D.J. Phipps

Posting of area before and after immediate corrective actions: *URMA before and after cleanup.*

Radiological Survey Report Number: *RC-05166 page 3 of 4*

Other information: Ray Johnson and Bill Osborne were verbally notified.

See attached pictures of area. This area is a known problem area and should be considered for remediation and soil sterilization.



**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-05172

Page 1 of 4

Date: 11/04/08 Time (Start/Stop): 07:00/11:00 Area/Bldg./Room/Location: 200-E / 216-U-10 F.C. RC

NWP Number: N/A Work Package/Job Control Package/JSA: N/A Routine Surveillance Task Number: RC-A019 Radiological Shipping Record No.: N/A

Purpose of Survey (check appropriate box(es)): Job Coverage Required Task
 Contamination incident: Skin Clothing Spill Alarm Response: CAM ARM AFM
 Exposure Incident HRA/HRA Work Other: N/A

Job Description:
Perform annual survey of Waste Information Data Systems (WIDS SITE) site 216-U-10. All postings and boundaries checked and verified. N/A

DOSE RATE MEASUREMENTS Note¹ F = Field (>30 cm) C = Contact (<1 cm)

No.	Description	Dist. (cm) Note ¹	WC (mR/hr)	WC (mR/hr)	CF _F	CF _F	Neutron Dose (mrem/hr)	Shallow Dose (mrem/hr)	Deep Dose (mrem/hr)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CONTAMINATION MEASUREMENTS

No.	Description	Direct		Background		Total (dpm/100 cm ²)		Removable (dpm/100 cm ²)	
		Gross cpm/PAβγ	Gross cpm/PAα	βγ (cpm)	α (cpm)	βγ	α	βγ	α
1	>200 Tumble weeds.	2000	N/A	100	N/A	114k	N/A	N/A	N/A
2	1 square meter soil after weed removal.	100	N/A	100	N/A	<5K	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

AIR SAMPLE MEASUREMENTS (μCi/ml)

	AIR SAMPLE MEASUREMENTS (μCi/ml)				Sample Counter Log Number or Sample ID Number				
	BZ	GA	Initial	Decay	BZ	GA	Initial	Decay	
α ¹	N/A	N/A	N/A	N/A	βγ ¹	N/A	N/A	N/A	N/A
α ²	N/A	N/A	N/A	N/A	βγ ²	N/A	N/A	N/A	N/A

**PROJECT HANFORD
RADIOLOGICAL SURVEY REPORT**

Survey Report No.
RC-05172

Page 2 of 4

Map/Sketch

See attached

LEGEND:

⊙ Smear

△ Air Sample

⊙ LAW

⊙ Neutron

* Contact Reading

----- (designation inside) ----- Radiological Area Boundary

Note: Dose Rates in mrem/hr unless otherwise noted.

COMMENTS: (Additional information as necessary to interpret results)

Surveys performed per walking stick method. No biological hazards encountered. ~~No removable contamination detected.~~ The weeds were cleaned up by the D&D operator and compactor truck. N/A -----

ad 11/30/08

Instrument/Probe Model	R0-3B (CP)	<u>GM Model</u> g-m probe	<u>PAM</u>	N/A	N/A	N/A
Serial No.	N/A	CMEBB-0353	N/A	N/A	N/A	N/A
	NA	DTHNC-0198	N/A	N/A	N/A	N/A
Efficiency (used)	NA	0.10	N/A	N/A	N/A	N/A

RCT:

Date: 10/04/08

Payroll No. (b)(6)

Name (Print): D. J Phipps

Signature: *DJ Phipps*

Reviewer:

Date: 12-29-2008

Payroll No. (b)(6)

Name (Print): D. ALT

SCOTT Demiva

Signature: *Scott Demiva*

NOTIFICATION OF RADIOLOGICAL PROBLEM

This message is notification of a radiological problem found in your area or facility. It is your responsibility to determine if this condition is a deficiency and to assume responsibility for the reporting requirements.

Date: 11/04/08

Time of discovery: 09:15

Assumed Owner: RARA (Bill Osborne)

Location: 216-U-10 pond

Description of problem (Suggest this paragraph be used by the ONC if required):

>200 contaminated tumble weeds were detected in a posted URMA while performing surveys on the 216-U-10 covered pond. Maximum contamination levels found were 114,000 dpm/100cm² beta/gamma direct, no removable. No alpha contamination was detected. RARA D&D operator responded to the area and removed the contaminated weeds. The weeds were placed in regulated compactor for disposal.

Identified by: D.J. Phipps / Rick Daughety

Posting of area before and after immediate corrective actions: *URMA before and after cleanup.*

Radiological Survey Report Number: *RC-05172 page 3 of 4*

Other information: Ray Johnson and Bill Osborne were verbally notified.

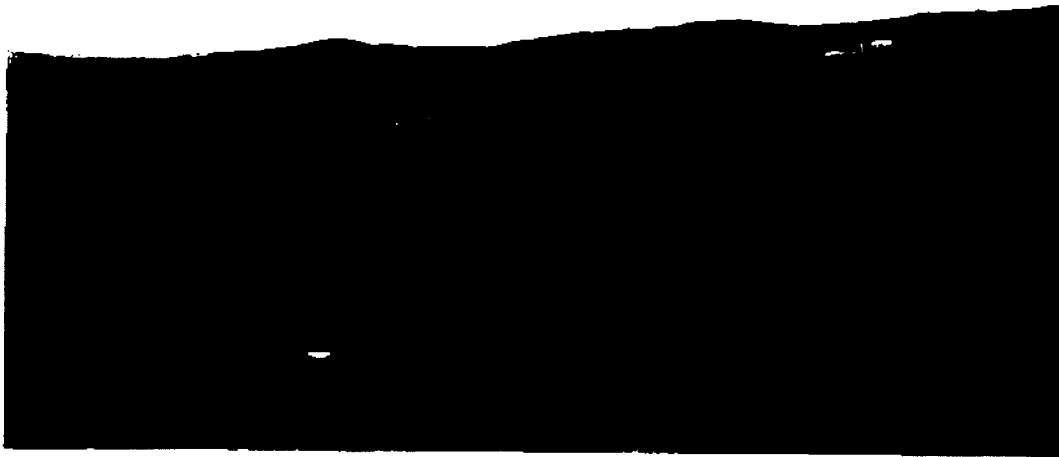
The weeds were small, medium and large in size and attached to the ground.

See attached pictures of area. This area is a known problem area and should be considered for remediation and soil sterilization.

Area before clean up



Area after clean up



**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT**

RSR No.
RC-05695

Page 1 of 4

Date 08/27/2009	Start/Stop Time 0730 / 1530	Area/Location 200W / 216-U-10 Pond	RWP/Rev. N/A
--------------------	--------------------------------	---------------------------------------	-----------------

Purpose of Survey <input type="checkbox"/> Material Release Release Survey Plan #: N/A Released to: N/A <input type="checkbox"/> RAM Shipment: N/A <input checked="" type="checkbox"/> Required Task: RC-A020 <input type="checkbox"/> Job Coverage: N/A <input type="checkbox"/> Other: N/A	Description of Work/Comments: Completed annual survey of WIDS (Waste Information Data Site) 216-U-10 Pond (to include UPR-200-W-104,105,106,107). No action levels exceeded. All postings and boundaries checked and verified. A live ant mound was found and poisoned and buried. No other biological hazards were encountered.
--	--

No.	Description	Dose Rate Measurements								Contamination Measurements							
		Note ¹ F = Field (≥30 cm) C = Contact (≤1 cm)								Background cpm		Direct Gross cpm/PA		Total dpm/100 cm ²		Removable dpm/100 cm ²	
		Dist (cm) Note 1	WO mR/hr	WC mR/hr	CF β	CF γ	Neutron Dose mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr	βγ	α	βγ	α	βγ	α	βγ	α
1	Soil, gravel & vegetation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A	100	N/A	<5K	N/A	N/A	N/A
2	Ant mound	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	0	8.1K	0	8K	<100	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

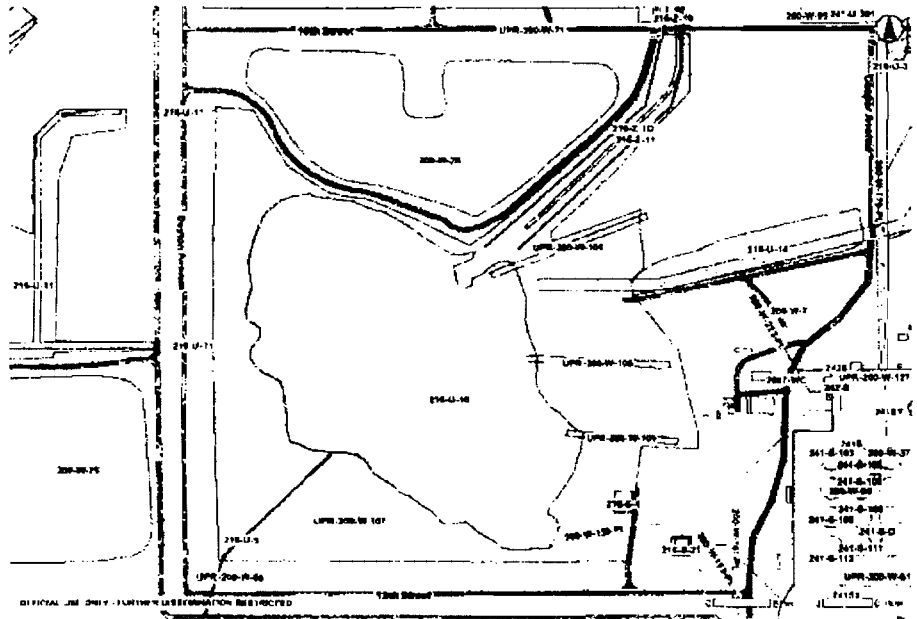
Verification survey α < D in/s N/A inches away, count time (seconds), N/A% of items surveyed or swiped, N/A # of static counts, N/A sq. feet. Area Swiped. No Audible counts above background.

Verification survey βγ < D in/s N/A inches away, count time (seconds), N/A% of items surveyed or swiped, N/A # of static counts, N/A sq. feet. Area Swiped. No Audible counts above background.

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT**

RSR No.
RC-05695

Map/Sketch



Legend:

- + Direct Measurement
 - ▲ Air Sample
 - Smear
 - x LAW
 - ◆ Neutron
 - T = Transferability
- (designation inside) ----- Radiological Area Boundary

Field Dose Rate
* Contact Dose Rate

Note: Dose Rates in mrem/hr unless otherwise noted

Air Sample Log Number	Instruments						
1 N/A	Instrument/Probe Model	GM Mode g-m Probe	PAM Probe	N/A	N/A	N/A	N/A
2 N/A	Serial No.	GM55A-0040	ACRO-0034	N/A	N/A	N/A	N/A
3 N/A		JOHN-0000	JOHN-0112	N/A	N/A	N/A	N/A
4 N/A	Efficiency (used)	10%	14%	N/A	N/A	N/A	N/A
5 N/A	Smear Log Number	HPT: Date 06/17/2004	Payroll No (b)(6)	Review Date 8-27-05		Payroll No (b)(6)	
6 N/A	N/A	HPT Name (Print) S. Cuevas		Reviewer Name (Print) S. M. Dentler			
7 N/A	N/A	Signature <i>[Signature]</i>		Signature: <i>[Signature]</i>			



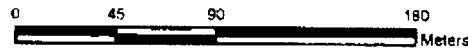
Survey: RC-05695
Page 3 of 4



Handwritten notes or signatures in the center of the page.

C.P.S. Summary Information
< 750 Date of Survey: 08/19/2009
750 - 1000 Project File: 216U10_09.mxd
1001 - 1250
1251 - 1500
> 1500

MSCM-II RC Radiological Survey
Survey of 216-U10 pond & 216-S-4



MSCM II
Mobile Surface Contamination Monitor

U.S. DEPARTMENT OF ENERGY

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENVIRONMENTAL RESTORATION
WASHINGTON, DC 20545

ENVIRONMENTAL SURVEILLANCE DATA FORM
(Circle or Fill in Data as Applicable)

Site: 216-U-10

Survey #: RC-DS695

Page 4 of 4

Cave-In or Depressions?	Yes	<input checked="" type="radio"/> No			
Animal or Insect Intrusion?	<input checked="" type="radio"/> Yes	No			
Tumbleweeds/Sagebrush?	None	Live	<input checked="" type="radio"/> Dead	Blown-In	
Current Radiological Posting	CA	<input checked="" type="radio"/> URMA	Soil	RA	Other _____
Steel Posts?	Yes	<input checked="" type="radio"/> No	N/A		
Wells / Riser / Vents		Capped or Sealed	Intact	Open	<input checked="" type="radio"/> N/A
Chain?	Yes	<input checked="" type="radio"/> No	N/A		
Concrete Marker Posts?		<input checked="" type="radio"/> Surround Site	Single		None
		<input checked="" type="radio"/> In Place Upright	Leaning / Down		N/A
Signs?		<input checked="" type="radio"/> In Place	Missing / Down		Faded
Unidentified Containers?	Yes	<input checked="" type="radio"/> No			
Abandon Equipment / Material?	Yes	<input checked="" type="radio"/> No			

Comments: Ant mound was taken CASE 2

Surveillant's Signature: [Signature]

Date: 8/27/09

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT**

RSR No.
RC-06012

Page 1 of 2

Date 12/10/09	Start/Stop Time 0730 / 1430	Area/Location 200W/MULTIPLE LOCATIONS	RWP/Rev. N/A
Purpose of Survey <input type="checkbox"/> Material Release		Description of Work/Comments: PERFORMED SEMI-ANNUAL VISUAL INSPECTIONS OF WASTE INFORMATION DATA SYSTEMS (WIDS SITES) 216-U-14, 216-U-10, 216-S-4, 218-W-3, 216-Z-7, 216-Z-16, 216-U-17, 216-U-8, 216-U-12 . ALL POSTINGS AND BOUNDARIES VERIFIED. NO ACTION LEVELS EXCEEDED. NO BIOLOGICAL HAZARDS ENCOUNTERED. ALL DEFICIENCIES WERE TURNED OVER TO P. RASCON AND/OR D. PHIPPS.	
Release Survey Plan #: N/A			
Released to: N/A			
<input type="checkbox"/> RAM Shipment: N/A			
<input checked="" type="checkbox"/> Required Task: RC-SA-003			
<input type="checkbox"/> Job Coverage: N/A			
<input type="checkbox"/> Other: N/A			

No.	Description	Dose Rate Measurements									Contamination Measurements							
		Dist. (cm) Note 1	Note ¹ F = Field (≥30 cm) C = Contact (≤1 cm)							Background cpm		Direct Gross cpm/PA		Total dpm/100 cm ²		Removable dpm/100 cm ²		
			WO mR/hr	WC mR/hr	CF β	CF γ	Neutron Dose mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr	βγ	α	βγ	α	βγ	α	βγ	α	
1	Random survey points	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A	100	N/A	<5000	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

- Verification survey α < D -- in/s --- inches away, -- count time (seconds), ---% of items surveyed or swiped, --- # of static counts, --- sq. feet. Area Swiped. No Audible counts above background.
- Verification survey βγ < D -- in/s --- inches away, -- count time (seconds), ---% of items surveyed or swiped, --- # of static counts, --- sq. feet. Area Swiped. No Audible counts above background.

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT**

RSR No.
RC-06012

Page 2 of 2

Map/Sketch

N/A

Legend:	Direct Measurement	Air Sample	Smear	LAW	Neutron	T = Transferability	Field Dose Rate * Contact Dose Rate	Note: Dose Rates in mrem/hr unless otherwise noted.
	----- (designation inside) ----- Radiological Area Boundary							

Air Sample Log Number		Instruments						
1	N/A	Instrument/Probe Model	GM Model g-m Probe	PAM Probe	N/A	N/A	N/A	N/A
2	N/A	Serial No.	CMEBB-0204	N/A	N/A	N/A	N/A	N/A
3	N/A		DTEB9-0929	N/A	N/A	N/A	N/A	N/A
4	N/A	Efficiency (used)	10%	N/A	N/A	N/A	N/A	N/A
5	N/A	Smear Log Number	HPT: Date: 12/10/09	Payroll No: (b)(6)	Review Date: 12-14-07		Payroll No: (b)(6)	
6	N/A	N/A	HPT Name (Print): H. WOODS		Reviewer Name (Print): S. M. DEMETER			
7	N/A	N/A	Signature:		Signature:			

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT**

RSR No.
RC-06498

Page 1 of 2

Date 08/09/10	Start/Stop Time 0730 / 1130	Area/Location 200W/216-U-10	RWP/Rev. RC-10-007
-------------------------	---------------------------------------	---------------------------------------	------------------------------

Purpose of Survey <input type="checkbox"/> Material Release Release Survey Plan #: N/A Released to: N/A <input type="checkbox"/> RAM Shipment: N/A <input checked="" type="checkbox"/> Required Task: RC-A019 <input type="checkbox"/> Job Coverage: N/A <input type="checkbox"/> Other: N/A	Description of Work/Comments: A CONTAMINATED TUMBLEWEED SEED WAS DETECTED WHILE PERFORMING AN ANNUAL TRACTOR SURVEY OF WASTE INFORMATION DATA SYSTEMS (WIDS SITES) 216-U-10. A VERIFICATION SURVEY WAS PERFORMED USING A GM. AREA IS POSTED URMA. ALL NOTIFICATIONS WERE MADE.
--	--

No.	Description	Dose Rate Measurements								Contamination Measurements									
		Note ¹ F = Field (≥30 cm) C = Contact (≤1 cm)										Background cpm		Direct Gross cpm/PA		Total dpm/100 cm ²		Removable dpm/100 cm ²	
		Dist. (cm) Note 1	WO mR/hr	WC mR/hr	CF β	CF γ	Neutron Dose mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr	βγ	α	βγ	α	βγ	α	βγ	α		
1	TUMBLEWEED SEED	C	8	<.5	N/A	N/A	N/A	8	<.5	75	0	OFF SCALE	0	OFF SCALE	0	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

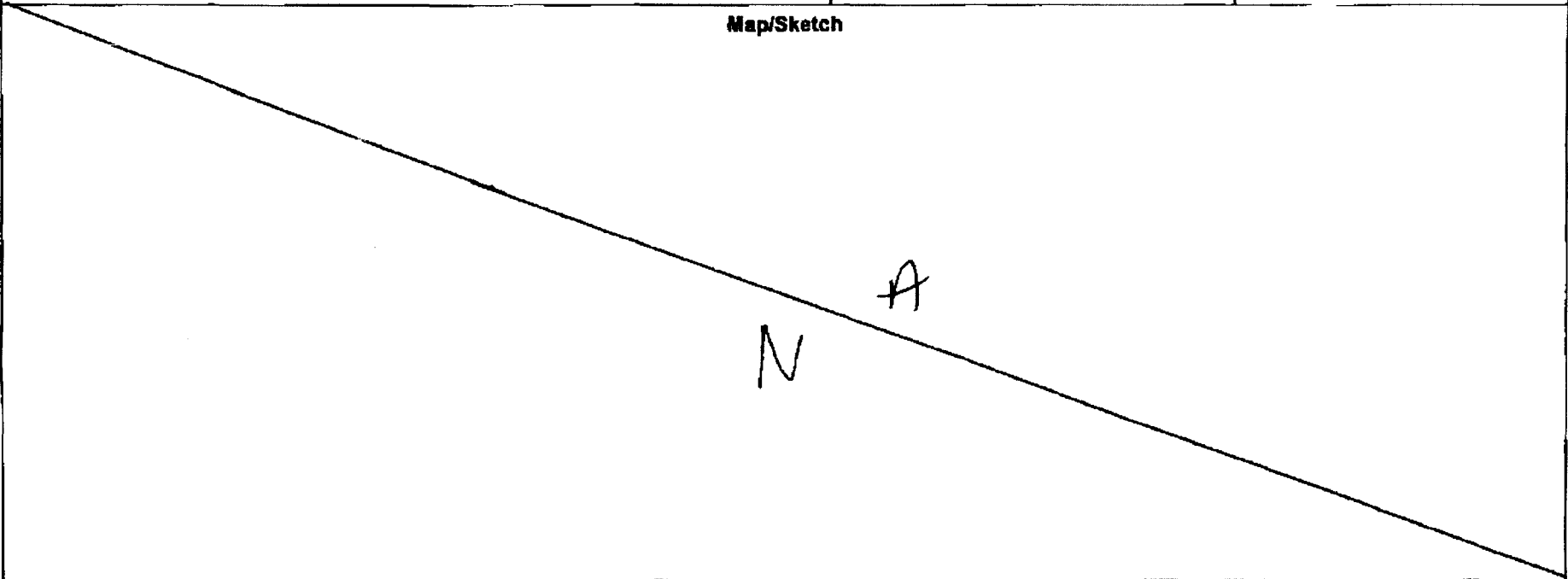
Verification survey α = <D in/s inches away, count time (seconds), % of items surveyed or swiped, # of static counts, sq. feet. Area Swiped. No Audible counts above background.
 Verification survey βγ = <D in/s inches away, count time (seconds), % of items surveyed or swiped, # of static counts, sq. feet. Area Swiped. No Audible counts above background.

CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT

RSR No.
RC-06498

Page 2 of 2

Map/Sketch



Legend:	<input checked="" type="checkbox"/> Direct Measurement	<input type="checkbox"/> Air Sample	<input type="checkbox"/> Smear	<input type="checkbox"/> LAW	<input type="checkbox"/> Neutron	T = Transferability	Field Dose Rate * Contact Dose Rate	Note: Dose Rates in mrem/hr unless otherwise noted.
	----- (designation inside) ----- Radiological Area Boundary							

Air Sample Log Number		Instruments						
1	N/A	Instrument/Probe Model	GM Model g-m Probe	PAM Probe	CP	N/A	N/A	N/A
2	N/A	Serial No.	CMEBB-0087	ACBC1-0239	TCEB3-0272	N/A	N/A	N/A
3	N/A		DTHNC-1114	DTHNC-0964	N/A	N/A	N/A	N/A
4	N/A	Efficiency (used)	10%	17%	N/A	N/A	N/A	N/A
5	N/A	Smear Log Number	HPT: Date: 08/09/10	Payroll No: (b)(6)		Review Date: 2-11-10	Payroll No: (b)(6)	
6	N/A	N/A	HPT Name (Print): S. CUEVAS			Reviewer Name (Print): S. DEMETER		
7	N/A	N/A	Signature: <i>[Signature]</i>			Signature: <i>[Signature]</i>		

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT**

RSR No.
RC-06528

Page 1 of 4

Date 08/23/2010	Start/Stop Time 0800 / 1500	Area/Location 200E/ 216-U-10 Pond	RVP/Rev. RC-10-007
---------------------------	---------------------------------------	---	------------------------------

Purpose of Survey <input type="checkbox"/> Material Release	Description of Work/Comments: Completed Annual survey of WIDS (Waste Information Data Site) 216-U-10. Survey performed using MSCM II with a tractor speed of 2 mph or less and average detector height of 6 inches. All postings and boundaries checked and verified. This survey was performed over several days. There were 2 areas where contamination was detected and cleaned up. See survey#'s RC-06498 and RC-06509 for details. Nothing detected in all other alarm areas. There are a few spots that appear to be shine or wind erosion.
Release Survey Plan #: N/A	
Released to: N/A	
<input type="checkbox"/> RAM Shipment: N/A	
<input checked="" type="checkbox"/> Required Task: RC-A020	
<input type="checkbox"/> Job Coverage: N/A	
<input type="checkbox"/> Other: N/A	

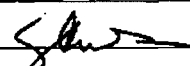

No.	Description	Dose Rate Measurements									Contamination Measurements							
		Note ¹ F = Field (≥30 cm) C = Contact (≤1 cm)									Background cpm		Direct Gross cpm/PA		Total dpm/100 cm ²		Removable dpm/100 cm ²	
		Dist. (cm) Note 1	WO mR/hr	WC mR/hr	CF β	CF γ	Neutron Dose mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr	βy	α	βy	α	βy	α	βy	α	
1	Soil, Gravel, Vegetation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A	100	N/A	<5K	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

- Verification survey α = <D NA in/s N/A inches away. NA count time (seconds), N/A% of items surveyed or swiped, N/A # of static counts, N/A sq. feet. Area Swiped. No Audible counts above background.
- Verification survey βγ = <D NA in/s N/A inches away. NA count time (seconds), N/A% of items surveyed or swiped, N/A # of static counts, N/A sq. feet. Area Swiped. No Audible counts above background.

Map/Sketch

SEE ATTACHED

Legend:	<input checked="" type="checkbox"/> Direct Measurement	<input type="checkbox"/> Air Sample	<input type="checkbox"/> Smear	<input type="checkbox"/> LAW	<input type="checkbox"/> Neutron	T = Transferability	Field Dose Rate * Contact Dose Rate	Note: Dose Rates in mrem/hr unless otherwise noted.
	----- (designation inside) ----- Radiological Area Boundary							

Air Sample Log Number		Instruments						
1	N/A	Instrument/Probe Model	GM Model g-m Probe	PAM Probe	N/A	N/A	N/A	N/A
2	N/A	Serial No.	CMEBB-0087	N/A	N/A	N/A	N/A	N/A
3	N/A		DTHNC-1114	N/A	N/A	N/A	N/A	N/A
4	N/A	Efficiency (used)	10%	N/A	N/A	N/A	N/A	N/A
5	N/A	Smear Log Number	HPT: Date: 08/23/2010	Payroll No:	(b)(6)	Review Date: 8-27-10	Payroll No:	(b)(6)
6	N/A	N/A	HPT Name (Print): S. Cuevas			Reviewer Name (Print): S. M. Demiter		
7	N/A	N/A	Signature: 			Signature: 		



Alarm >10000 dpm beta/gamma (refer to survey report # RC-06509)

All alarms shown in this area <5000 dpm beta/gamma with two exceptions as indicated

Reading offscale beta/gamma (refer to survey report #Rc-06498)



Survey: RC-06528
Page 3 of 4

UPR-200-W-104

UPR-200-W-105

GPS lost in this area, Detectors working and no alarms

UPR-200-W-106

216-S-4

UPR-200-W-107

Unknown

Unknown

Day

Unknown

Unknown

Unknown

Unknown

2425

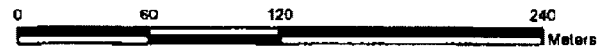
272S

2746S

Chaparral Avenue

C.P.S. x	Summary Information
	< 750 Date of Survey: 08/23/2010
	750 - 1000 Project File: R216U10_10.mxd
	1001 - 1250
	1251 - 1500
	> 1500

MSCM-II RC Radiological Survey Survey of 216-U-10



MSCM II Mobile Surface Contamination Monitor

U.S. DEPARTMENT OF ENERGY
Office of Environmental Management
Environmental Sciences Division
Health, Safety, and Environment
216-U-10
August 23, 2010

ENVIRONMENTAL SURVEILLANCE DATA FORM

(Circle or Fill in Data as Applicable)

Site: 216-U-10

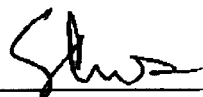
Survey #: ^{Obs 29} Rc-06592-50 9-27-10

Page 4 of 4

Cave-In or Depressions?	Yes	<input checked="" type="radio"/> No			
Animal or Insect Intrusion?	Yes	<input checked="" type="radio"/> No			
Tumbleweeds/ Sagebrush?	None	<input checked="" type="radio"/> Live	Dead	Blown-In	
Current Radiological Posting	CA	<input checked="" type="radio"/> URMA	Soil	RA	Other _____
Steel Posts?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	N/A		
Wells/ Riser/ Vents		<input checked="" type="radio"/> Capped or Sealed	Intact	Open	N/A
Chain?	Yes	<input checked="" type="radio"/> No	N/A		
Concrete Marker Posts?		<input checked="" type="radio"/> Surround Site	Single		None
		<input checked="" type="radio"/> In Place Upright	Leaning/ Down		N/A
Signs?		<input checked="" type="radio"/> In Place	Missing/ Down		Faded
Unidentified Containers?	Yes	<input checked="" type="radio"/> No			
Abandon Equipment/ Material?	Yes	<input checked="" type="radio"/> No			

Comments: There are lots of live T-Weeds on the South and West edge and in the middle. The site is also surrounded by T-Post that could be removed.

Surveillant's Signature:



Date:

8/23/10

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT**

RSR No.
RC-06630

Page 1 of 2

Date 10/07/10	Start/Stop Time 0730 / 1530	Area/Location 200W 218-W-4A, 216-U-10, 207-U	RWP/Rev. RC-10-007
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Purpose of Survey <input type="checkbox"/> Material Release	Description of Work/Comments: PERFORMED BACKFILL ON SOIL CONTAMINATION AREAS AND HIGH BACKGROUND WITHIN WASTE INFORMATION DATA SYSTEMS (WIDS SITES) 218-W-4A, 216-U-10, 207-U. ALL AREAS WERE COVERED WITH GRAVEL. NO ACTION LEVELS EXCEEDED. NO BIOLOGICAL HAZARDS ENCOUNTERED. REMEDIATED AREAS WERE REPOSTED AS UNDERGROUND RADIOACTIVE MATERIAL AREA.
Release Survey Plan #: N/A	
Released to: N/A	
<input type="checkbox"/> RAM Shipment: N/A	
<input type="checkbox"/> Required Task: N/A	
<input checked="" type="checkbox"/> Job Coverage:	
<input type="checkbox"/> Other: N/A	

No.	Description	Dose Rate Measurements								Contamination Measurements							
		Note ¹ F = Field (≥30 cm) C = Contact (≤1 cm)								Background cpm		Direct Gross cpm/PA		Total dpm/100 cm ²		Removable dpm/100 cm ²	
		Dist (cm) Note 1	WO mR/hr	WC mR/hr	CF β	CF γ	Neutron mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr	βγ	α	βγ	α	βγ	α	βγ	α
1	GRAVEL, SOIL, VEGETATION	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A	100	N/A	<5000	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Verification survey α < D in/s inches away, count time (seconds), % of items surveyed or swiped, # of static counts, sq. feet. Area Swiped. No Audible counts above background.

Verification survey βγ < D in/s inches away, count time (seconds), % of items surveyed or swiped, # of static counts, sq. feet. Area Swiped. No Audible counts above background.

Map/Sketch

N/A

Legend:

Direct Measurement

Air Sample

Smear

LAW

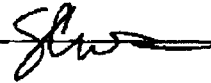
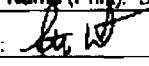
Neutron

T = Transferability

Field Dose Rate
* Contact Dose Rate

Note: Dose Rates in mrem/hr unless otherwise noted.

----- (designation inside) ----- Radiological Area Boundary

Air Sample Log Number		Instruments						
1	N/A	Instrument/Probe Model	GM Model g-m Probe	PAM Probe	N/A	N/A	N/A	N/A
2	N/A	Serial No.	CMFB-0087	N/A	N/A	N/A	N/A	N/A
3	N/A		DCHNC-1114	N/A	N/A	N/A	N/A	N/A
4	N/A	Efficiency (used)	10%	N/A	N/A	N/A	N/A	N/A
5	N/A	Smear Log Number	HPT: Date: 10/07/10	Payroll No: (b)(6)	Review Date: 10-7-10	Payroll No: (b)(6)		
6	N/A	N/A	HPT Name (Print): S. Cuevas		Reviewer Name (Print): S. M. DEMETER			
7	N/A	N/A	Signature: 		Signature: 			

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT (Submitted)**

RSR No.
RC-1100388

Date 7/14/2011	Start/Stop Time 0800 / 1530	Area/Location West / N/A / N/A / 216-U-10	RWP/Rev. RC-11-005
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<p>Purpose of Survey:</p> <p><input type="checkbox"/> Material Release Number: N/A Released to: N/A</p> <p><input checked="" type="checkbox"/> Ram Shipment: Site-03-Excopted#84</p> <p><input checked="" type="checkbox"/> Required Task: RC-A020</p> <p><input type="checkbox"/> Job Coverage: N/A</p> <p><input type="checkbox"/> Verification survey $\alpha = <D$ <D=No increase in audible count rate</p> <table border="1"> <tr><td>N/A</td><td>Inches/Sec.</td><td>N/A</td><td>Inches Away</td></tr> <tr><td>N/A</td><td>Count Time (Sec.)</td><td>N/A</td><td>% Surveyed</td></tr> <tr><td>N/A</td><td># of Static Counts</td><td>N/A</td><td>Square Feet</td></tr> </table> <p><input type="checkbox"/> Verification survey $\beta\gamma = <D$ <D=No increase in audible count rate</p> <table border="1"> <tr><td>N/A</td><td>Inches/Sec.</td><td>N/A</td><td>Inches Away</td></tr> <tr><td>N/A</td><td>Count Time (Sec.)</td><td>N/A</td><td>% Surveyed</td></tr> <tr><td>N/A</td><td># of Static Counts</td><td>N/A</td><td>Square Feet</td></tr> </table> <p><input type="checkbox"/> Other: N/A</p>	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	<p>Description of Work / Comments:</p> <p>216-U-10 Annual Rad Tractor</p> <p>Comments: Survey of WIDS (Waste Information Data System) Site #216-U-10 and associated UPR's and pipelines. Survey performed using MSCM II with a tractor speed of 2mph or less and average detector height of 6 inches. Survey was performed on July 11,12,13,14 and 18. The same instruments and source was used on all days. All postings and boundaries checked and verified. No biological hazards encountered. This area is posted CRMA.</p>
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						

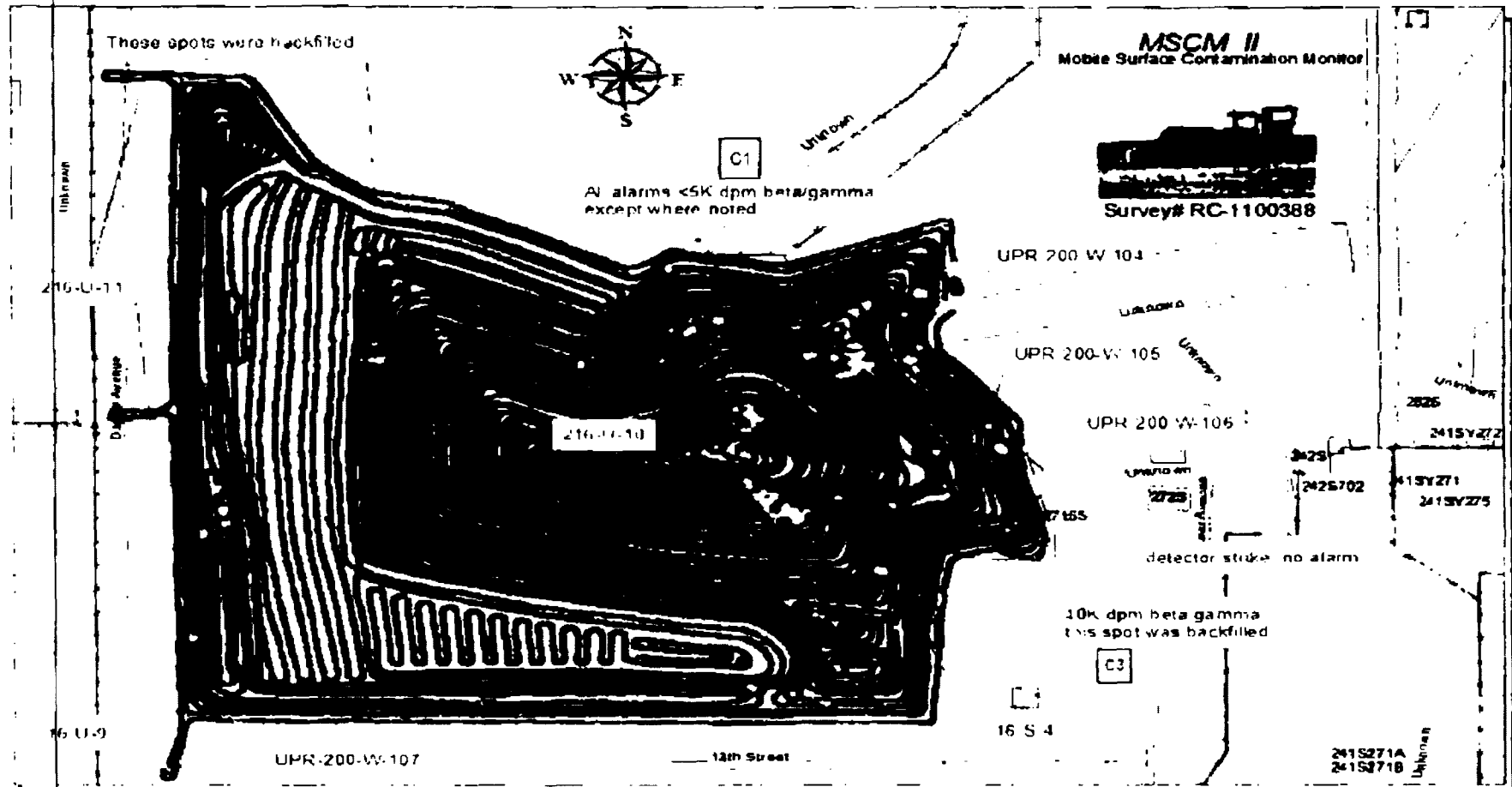
Dose Rate Measurements

No.	Description	Note ¹ : F = Field (≥ 30 cm) C = Contact (≤ 1 cm)							
		Dist. (cm) Note ¹	WO mR/hr	WC mR/hr	CF Non- Penetrating	CF Penetrating	Neutron Dose mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr
D1	Source 06-185	C	<0.5	<0.5	2	1	N/A	<0.5	<0.5

Contamination Measurements

No.	Description	† Manually Calculated by RCT													
		Background		Direct Gross cpm/PA		Total dpm/100 cm ²		Correction Factor		Removable					
		$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$	α	Type	Gross (cpm)		dpm/100 cm ²		
C1	Soil, Gravel, Vegetation	100	N/A	100	N/A	<5000 ⁺	N/A ⁺	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C2	Source 06-185	100	0	N/A	N/A	N/A [†]	N/A ⁺	10	6	Smear	N/A	N/A	<1000 ⁺	<20 [†]	
C3	Soil	100	0	4000	0	40000 ⁺	40000 ⁺	10	6	N/A	N/A	N/A	N/A	N/A	

Map/Sketch



CPS	Summary Information
< 750	Date of Survey 07/11/2011
750 - 1000	Project File R216U10-11.mxd
1001 - 1250	
1251 - 1500	
> 1500	

MSCM-II Radiological Survey of
216-U-10 Pond



Map - Prepared by PARC Group
 Project ID: 216-U-10
 Revision: 01
 Date: 07/11/2011
 Author: [illegible]
 Title: MSCM-II Radiological Survey of 216-U-10 Pond

Map Name: Annual Rad Tractor	Map Description: 216-U-10										
Legend	<table border="1"> <tr> <td># Direct Measurement</td> <td>▲ Air Sample</td> <td>⊕ Smear</td> <td># LAW</td> <td>◆ Neutron Dose Rate</td> <td>T# Transferability</td> <td>F# Field</td> <td>C# Contact</td> <td>D# Other Distance</td> <td>⊖ Other Measurement</td> </tr> </table>	# Direct Measurement	▲ Air Sample	⊕ Smear	# LAW	◆ Neutron Dose Rate	T# Transferability	F# Field	C# Contact	D# Other Distance	⊖ Other Measurement
# Direct Measurement	▲ Air Sample	⊕ Smear	# LAW	◆ Neutron Dose Rate	T# Transferability	F# Field	C# Contact	D# Other Distance	⊖ Other Measurement		
----- (designation inside) ----- Radiological Area Boundary					Note: Dose Rates in mrem/hr unless otherwise noted						

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT (Submitted)**

RSR No.
RC-1100388

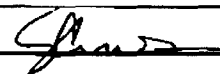
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Instruments

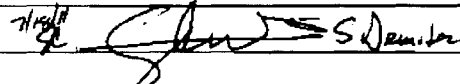
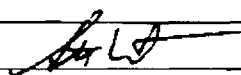
Instrument Type	Bar Code No.	Probe Bar Code No.	Efficiency (Used)
GM / P-11	• CMFR3-0220	DTHNC-0288	0.1
PAM	• ACBC1-0075	DTHN3-0837	0.18
RO20	• ICEB4-1595	N/A	N/A
MSCM II	HO-60-05509	N/A	N/A

Unless stated otherwise in the "Comments" section, contamination levels for C-14, Fe-55, Ni-59, Ni-63, Se-79, Tc-99, Pd-107, and Eu-155 are ≤ 10 times the b-g contamination levels shown above (see CHPRC-00073, Table 2-2).

Contributors

Name	HID	Date	Signature
Cuevas, Sandra	(b)(6)	7/18/11	

Reviewers

Name	HID	Date	Signature
 S. Demeter	(b)(6)	7-19-11	

History

2011-07-18 15:28:53 - Submitted

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT (Submitted for Approval)**

RSR No.
RC-1200370

Date 7/26/2012	Start/Stop Time 0830 / 1530	Area/Location 200W / N/A / N/A / 216-J-10	RWP/Rev. RC-12-004 Rev.001
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Purpose of Survey:

Material Release
Number: N/A
Released to: N/A

✓ **Ram Shipment:** Site-03-Excepted#15

✓ **Required Task:** RC-A020
Job Coverage: N/A
Verification survey $\alpha = <D$
<D=No increase in audible count rate

N/A	Inches/Sec.	N/A	Inches Away
N/A	Count Time (Sec.)	N/A	% Surveyed
N/A	# of Static Counts	N/A	Square Feet

Verification survey $\beta\gamma = <D$
<D=No increase in audible count rate

N/A	Inches/Sec.	N/A	Inches Away
N/A	Count Time (Sec.)	N/A	% Surveyed
N/A	# of Static Counts	N/A	Square Feet

Other:
N/A

Description of Work / Comments:
Annual survey of WIDS site 216-J-10.

Comments:
Survey of WIDS (Waste Information Data System) Site 216-U10.
Survey performed using MSCM II with a tractor speed of 2mph or less and average detector height of 6 inches.
All Alarms <5000dpm beta/gamma by direct frisk.
All postings and boundaries checked and verified. No action levels exceeded.
Survey performed from July 13th thru July 25th. Survey completed on July 26th with approval of RCS.
No biological hazards encountered. Area posted 'URMA'.

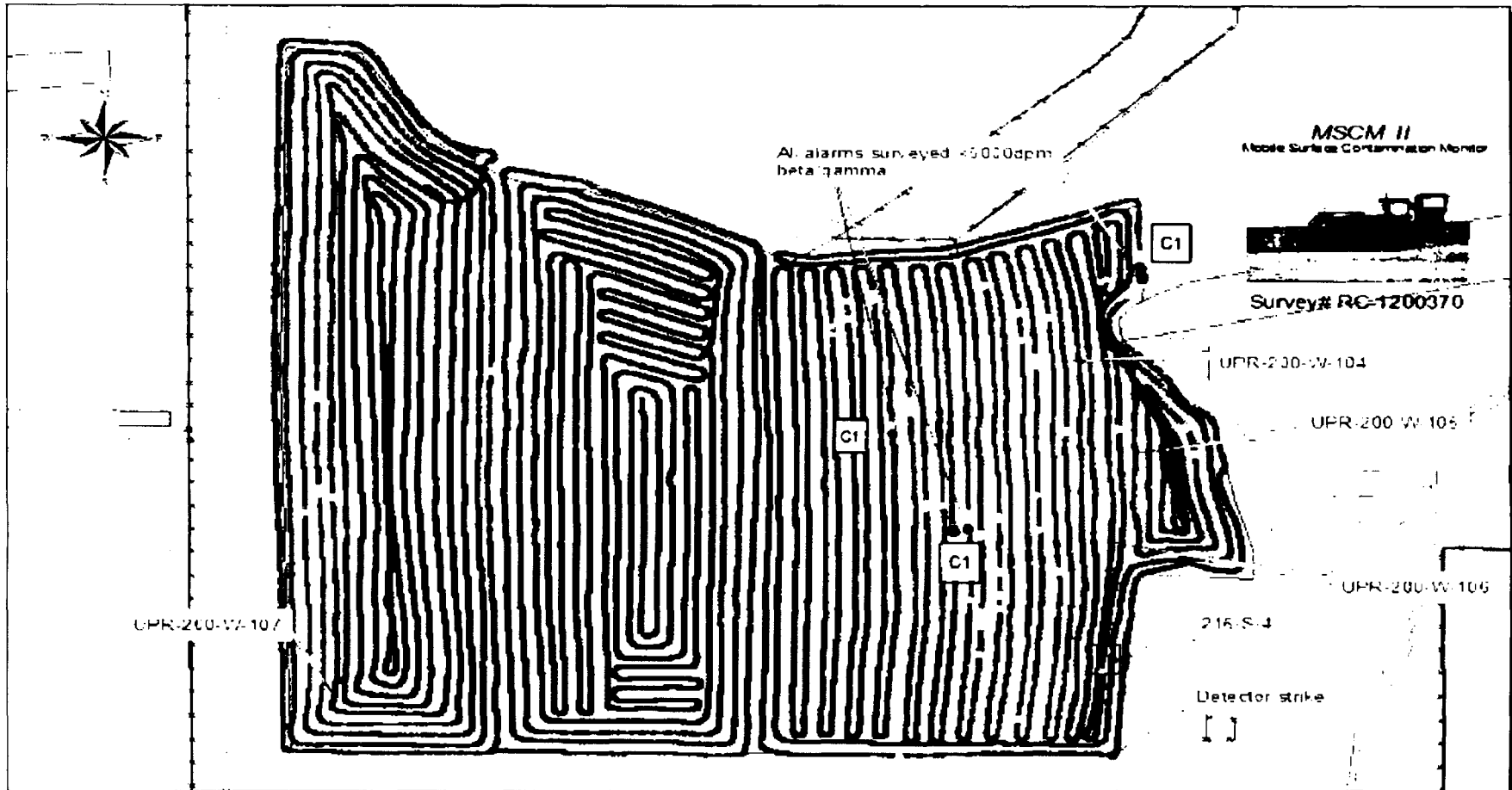
Dose Rate Measurements

No.	Description	Note: F = Field (≥ 30 cm) C = Contact (≤ 1 cm)							
		Dist. (cm) Note ¹	WO mR/hr	WC mR/hr	CF Non- Penetrating	CF Penetrating	Neutron Dose mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr
D1	Source D6-185	C	<0.1	<0.1	3	1	N/A	<0.1	<0.1

Contamination Measurements

No.	Description	† Manually Calculated by RCT													
		Background cpm		Direct Gross cpm/100 cm ²		Total dpm/100 cm ²		Correction Factor		Removable					
		$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$	α	Type	Gross (cpm)		dpm/100 cm ²		
										$\beta\gamma$	α	$\beta\gamma$	α		
C1	Soil, Gravel, Vegetation	100	N/A	100	N/A	<5000†	N/A†	10	N/A	N/A	N/A	N/A	N/A	N/A	
C2	Source D6-185 / Case	100	0	100	0	<5000	<500	10	6	Smear	100	0	<1000	<20	

Map/Sketch



CPS	Summary Information
1750	Date of Survey
100 - 1000	07/26/2012
1001 - 1250	Project File
1251 - 1500	RD16_U-10.mxd
1501 - 1750	

MSCM-II Radiological Survey of 216-U-10	

Modified: Published by: 6/26/2012 Author: [unclear] Date: 07/26/2012 Project File: RD16_U-10.mxd Project Path: [unclear] Project Name: 216-U-10 Project Description: Annual survey of WIDS site Project Status: [unclear] Project Manager: [unclear]
--

Map Name: 216-U-10

Map Description: Annual survey of WIDS site

Legend	# Direct Measurement	▲ Air Sample	⊕ Smear	# LAW	◆ Neutron Dose Rate	T# Transferability	F# Field	C# Contact	D# Other Distance	O# Other Measurement
----- (designation inside) ----- Radiological Area Boundary								Note: Dose Rates in mrem/hr unless otherwise noted.		

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT (Submitted for Approval)**

RSR No.
RC-1200370

Page 3 of 3

Instruments

Instrument Type	Bar Code No.	Probe Bar Code No.	Efficiency (Used)
CP	ICEB3-0332	N/A	N/A
MSCM II	EO-60-05509	N/A	N/A
PAM	ACBC1-0141	DTHN3-0573	0.16
GM/P-11	CMEBB-0263	DTHNC-0986	0.1

Unless stated otherwise in the "Comments" section, contamination levels for C-14, Fe-55, Ni-59, Ni-63, Se-79, Tc-99, Pd-107, and Eu-155 are ≤ 10 times the b-g contamination levels shown above (see CHPRC-00073, Table 2-2).

History

2012-07-26 14:59:28 - Rascon, Paul - Submitted

RC-1200370 Electronically Approved On 7/26/2012 By:

User: RASCON, PAUL (b)(6)
Title: Contributor
Date: Thursday, July 26, 2012, 2:59 PM Pacific Standard Time

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User: WILLIAMS, RAYMOND (b)(6)
Title: Reviewer
Date: Thursday, July 26, 2012, 3:54 PM Pacific Standard Time

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CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)	RSR No. RC-1300439	Page 1 of 3
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Date 7/17/2013	Start/Stop Time 0800 / 1530	Area/Location 200W / N/A / N/A / 216-J-10	RWP/Rev. N/A
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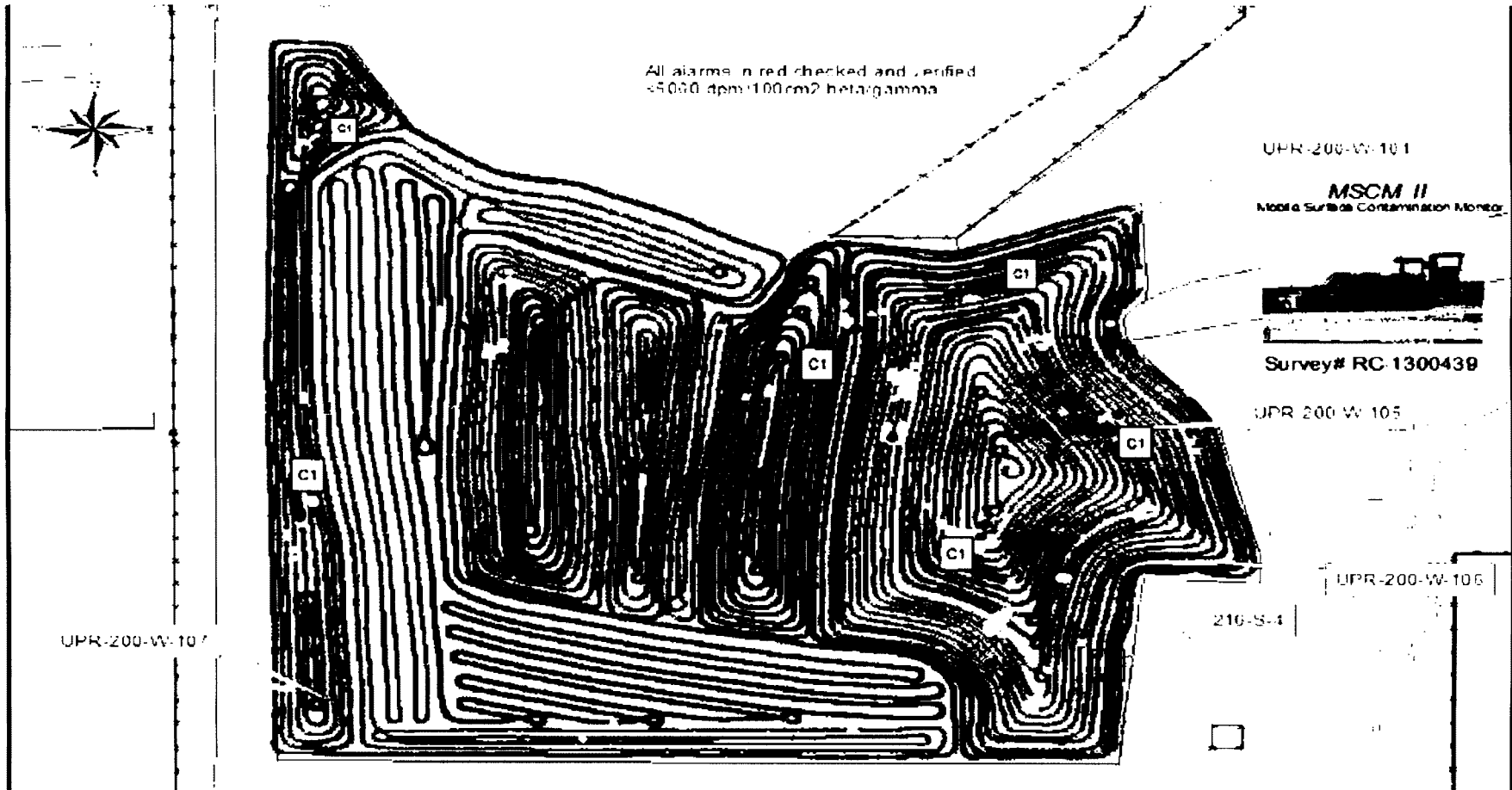
<p>Purpose of Survey:</p> <p>Material Release Number: N/A Released to: N/A Ram Shipment: N/A</p> <p>✓ Required Task: RC-A020 Job Coverage: N/A Verification survey $\alpha = <D$ <D=No increase in audible count rate</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">N/A</td> <td style="width:15%;">Inches/Sec.</td> <td style="width:15%;">N/A</td> <td style="width:15%;">Inches Away</td> </tr> <tr> <td>N/A</td> <td>Count Time (Sec.)</td> <td>N/A</td> <td>% Surveyed</td> </tr> <tr> <td>N/A</td> <td># of Static Counts</td> <td>N/A</td> <td>Square Feet</td> </tr> </table> <p>Verification survey $\beta\gamma = <D$ <D=No increase in audible count rate</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">N/A</td> <td style="width:15%;">Inches/Sec.</td> <td style="width:15%;">N/A</td> <td style="width:15%;">Inches Away</td> </tr> <tr> <td>N/A</td> <td>Count Time (Sec.)</td> <td>N/A</td> <td>% Surveyed</td> </tr> <tr> <td>N/A</td> <td># of Static Counts</td> <td>N/A</td> <td>Square Feet</td> </tr> </table> <p>Other: N/A</p>	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	<p>Description of Work / Comments:</p> <p>Annual MSCM II survey of WIDS Site 216-J-10 and Associated areas.</p> <p>Comments: Survey of WIDS (Waste Information Data System) Sites, see map for all areas surveyed.</p> <p>All postings and boundaries checked and verified.</p> <p>Survey performed using MSCM II with a tractor speed of 2mph or less and average detector height of 6 inches.</p> <p>Survey performed on July 7,8,9,10,11,15, and 16.</p> <p>Area posted URMA. No action levels exceeded.</p> <p>No biological hazards were encountered.</p>
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						

Contamination Measurements														
		† Manually Calculated by RCT												
No.	Description	Background cpm		Direct Gross cpm/100 cm ²		Total dpm/100 cm ²		Correction Factor		Removable				
		$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$	α	Type	Gross (cpm)		dpm/100 cm ²	
											$\beta\gamma$	α	$\beta\gamma$	α
C1	Soil, Gravel, Vegetation	100	N/A	100	N/A	<5000	N/A	10	N/A	N/A	N/A	N/A	N/A	N/A

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT (Submitted for Approval)**

RSR No.
RC-1300439

Map/Sketch



CPS	Summary Information
750	Work Order #
100 - 1000	07/16/2013
1001 - 1250	Project File
1251 - 1500	RC-1300439
> 1500	

**MSCM-II Radiological Survey of
216-U-10 and Associated Areas**

0 50 100 200 Feet

Method: Approved by EPA Group
Inspector: [Name]
Survey Date: [Date]
Survey Time: [Time]
Equipment: [Details]
Remarks: [Notes]

Map Name: Annual Rad Tractor of URMA		Map Description: 216-U-10 and Associated Areas								
Legend	# Direct Measurement	▲ Air Sample	⊕ Smear	# LAW	◆ Neutron Dose Rate	T# Transferability	F# Field	C# Contact	D# Other Distance	O# Other Measurement
	----- (designation inside) ----- Radiological Area Boundary							Note: Dose Rates in mrem/hr unless otherwise noted.		

CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)		RSR No. RC-1300439	Page 3 of 3
Instruments			
Instrument Type	Bar Code No.	Probe Bar Code No.	Efficiency (Used)
MSCM II	EO-62-05248	N/A	N/A
GM/P-11	CMEBB-0323	DTHNC-1254	0.1
GM/P-11	CMEB3-0141	DTHNC-0291	0.1
Unless stated otherwise in the "Comments" section, contamination levels for C-14, Fe-55, Ni-59, Ni-63, Se-79, Tc-99, Pd-107, and Eu-155 are ≤ 10 times the b-g contamination levels shown above (see CHPRC-00073, Table 2-2).			
History			
2013-07-17 10:59:32 - Rascon, Paul - Submitted			

User: RASCON, PAUL (b)(6)
Title: Contributor
Date: Wednesday, July 17, 2013, 10:59 AM Pacific Standard Time
=====

User: CUEVAS, SANDRA (b)(6)
Title: Contributor
Date: Thursday, July 18, 2013, 12:36 PM Pacific Standard Time
=====

User: WILLIAMS, RAYMOND (b)(6)
Title: Reviewer
Date: Monday, July 29, 2013, 4:45 PM Pacific Standard Time
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CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)	RSR No. RC-1400695	Page 1 of 4
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Date 11/11/2014	Start/Stop Time 0830 / 1530	Area/Location 200W / N/A / N/A / 216-J-10 Pond	RWP/Rev. RC-004
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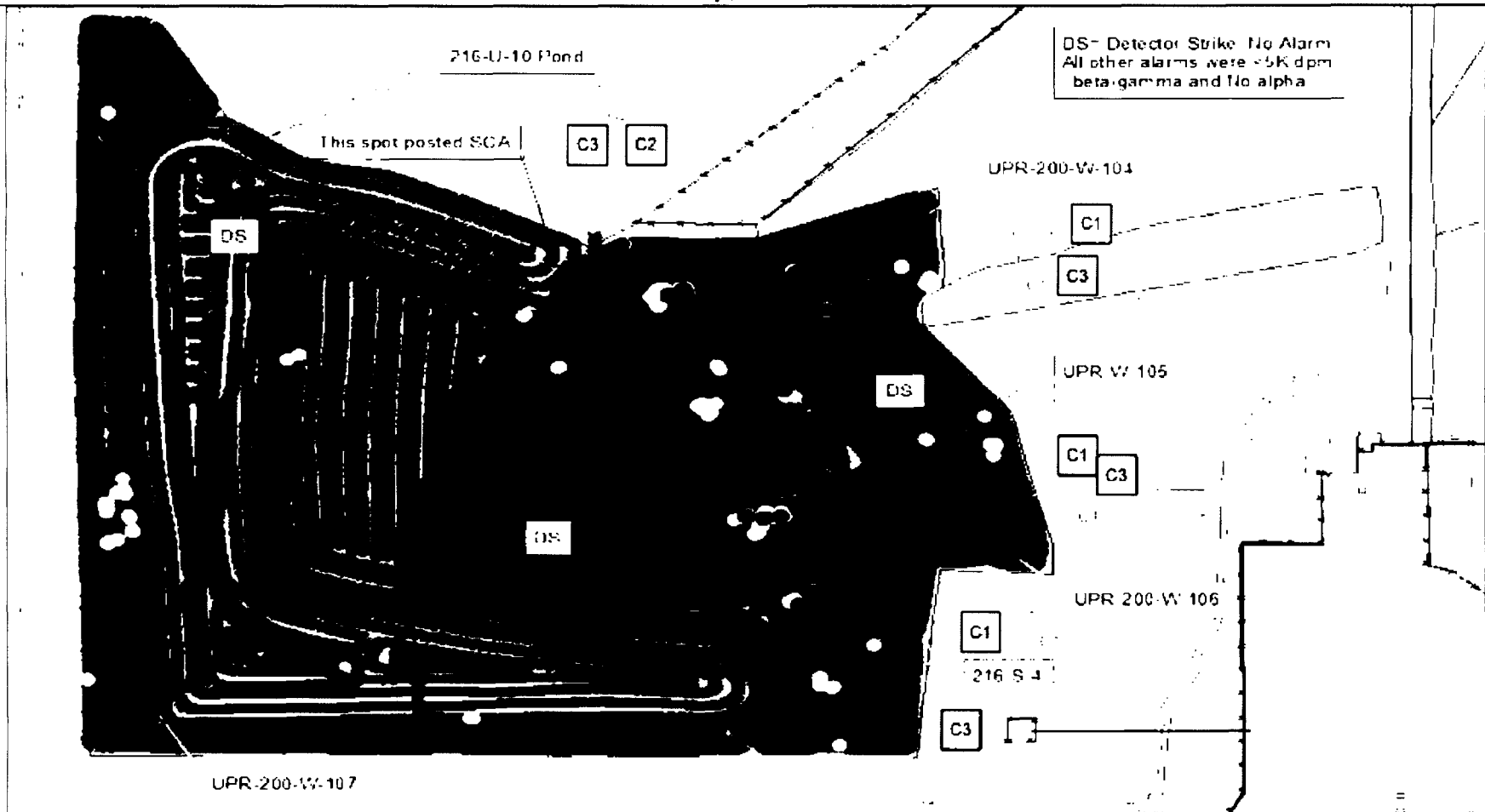
<p>Purpose of Survey:</p> <p>Material Clearance Number: N/A Cleared to: N/A Ram Shipment: N/A</p> <p>✓ Required Task: RC-A020 Job Coverage: N/A Verification survey $\alpha = <D$ $<D = \text{No increase in audible count rate}$</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">N/A</td> <td style="width:20%;">Inches/Sec.</td> <td style="width:10%; text-align: center;">N/A</td> <td style="width:20%;">Inches Away</td> </tr> <tr> <td style="text-align: center;">N/A</td> <td>Count Time (Sec.)</td> <td style="text-align: center;">N/A</td> <td>% Surveyed</td> </tr> <tr> <td style="text-align: center;">N/A</td> <td># of Static Counts</td> <td style="text-align: center;">N/A</td> <td>Square Feet</td> </tr> </table> <p>Verification survey $\beta \gamma = <D$ $<D = \text{No increase in audible count rate}$</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">N/A</td> <td style="width:20%;">Inches/Sec.</td> <td style="width:10%; text-align: center;">N/A</td> <td style="width:20%;">Inches Away</td> </tr> <tr> <td style="text-align: center;">N/A</td> <td>Count Time (Sec.)</td> <td style="text-align: center;">N/A</td> <td>% Surveyed</td> </tr> <tr> <td style="text-align: center;">N/A</td> <td># of Static Counts</td> <td style="text-align: center;">N/A</td> <td>Square Feet</td> </tr> </table> <p>Other: N/A</p>	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	<p>Description of Work / Comments:</p> <p>216-J-10 Pond Annual Rad Tractor</p> <p>Comments: Survey of WIDS (Waste Information Data System) Sites listed in description and/or on map. This survey was performed on Nov 5,10,11. Survey performed using MSCM II with a tractor speed of 2mph or less and average detector height of 6 inches. Area that was posted SCA is going to be backfilled.</p> <p>Surveys were also performed manually by following the tractor and surveying random spots (approx every .1 miles), by direct frisk and the transferability survey process. This manual process revealed no contamination that was not detected by the tractor.</p> <p>These areas are posted URMA. No biological hazards were encountered. Action levels were exceeded and all notifications were made.</p>
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						

Dose Rate Measurements

No.	Description	Note ¹ : F = Field (≥ 30 cm) C = Contact (≤ 1 cm)							
		Dist. (cm) Note ¹	WO mR/hr	WC mR/hr	CF Non- Penetrating	CF Penetrating	Neutron Dose mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr
D1	General area (approx every .1 mile)	F	<0.1	<0.1	2	1	N/A	<0.1	<0.1

CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)										RSR No. RC-1400695		Page 2 of 4			
Contamination Measurements															
† Manually Calculated by RCT															
No.	Description	Background cpm		Direct Gross cpm/100 cm ²		Total dpm/100 cm ²		Correction Factor		Type	Removable Gross (cpm)		dpm/100 cm ²		
		βγ	α	βγ	α	βγ	α	βγ	α		βγ	α	βγ	α	
C1	Random spots behind tractor (taken approx every 0.1 mile) Soil, Gravel, Bunch Grass.	200	3	200	3	<5000	<500	10	10	Trans.	200	3	<1000	<20	
C2	soil in SCA	200	3	5000	3	48000	<500	10	10	Trans.	200	3	<1000	<20	
C3	T-Weeds	100	N/A	100	N/A	<5000	N/A	10	N/A	N/A	N/A	N/A	N/A	N/A	

Map/Sketch



C# 15 1-750 200-1-1000 1001-1250 1251-1500 1-1500	Date of Survey 11/11/2014 Project File R-1400695_14
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**MSCM-II Radiological Survey of
 216-U-10 Pond**

0 170 340 680
 Feet

MSCM II
 Mobile Surface Contamination Monitor

RC-1400695

Map Name: Annual Rad Tractor Map Description: 216-U-10 Pond

Legend	# Direct Measurement	▲ Air Sample	⊕ Smear	# LAW	◆ Neutron Dose Rate	T# Transferability	F# Field	C# Contact	D# Other Distance	0# Other Measurement
----- (designation inside) ----- Radiological Area Boundary								Note: Dose Rates in mrem/hr unless otherwise noted.		

CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)		RSR No. RC-1400695	Page 4 of 4
Instruments			
Instrument Type	Bar Code No.	Probe Bar Code No.	Efficiency (Used)
RC-20	ICEB4-1430	N/A	N/A
MSCM II	EO-60-05248	N/A	N/A
GM/P-11	CMEBC-0059	DTHNC-0667	0.1
Ludlum 2360/43-93	SCLL8-0253	DTLLP-0359	0.1
Unless stated otherwise in the "Comments" section, contamination levels for C-14, Fe-55, Ni-59, Ni-63, Se-79, Tc-99, Pd-107, and Eu-155 are ≤ 10 times the b-g contamination levels shown above (see CHPRC-00073, Table 2-2).			
History			
2014-11-13 14:34:58 - Cuevas, Sandra - Submitted			

User: CUEVAS, SANDRA (b)(6)

Title: Contributor

Date: Thursday, November 13, 2014, 2:35 PM Pacific Standard Time

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User: Kostoff, Boyd (b)(6)

Title: Reviewer

Date: Tuesday, November 18, 2014, 5:12 AM Pacific Standard Time

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CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)	RSR No. RC-1500611	Page 1 of 4
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Date 9/16/2015	Start/Stop Time 1330 / 1500	Area/Location 200W / N/A / N/A / J-POND	RWP/Rev. RC-004/06
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<p>Purpose of Survey:</p> <p>Material Clearance Number: N/A Cleared to: N/A</p> <p>✓ Ram Shipment: SITE-03-EXCEPTED VEGETATION #2</p> <p>✓ Required Task: RC-VAR009</p> <p>Job Coverage: N/A</p> <p>Verification survey $\alpha = <D$ $<D = \text{No increase in audible count rate}$</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">N/A</td> <td style="width: 15%;">Inches/Sec.</td> <td style="width: 15%;">N/A</td> <td style="width: 15%;">Inches Away</td> </tr> <tr> <td>N/A</td> <td>Count Time (Sec.)</td> <td>N/A</td> <td>% Surveyed</td> </tr> <tr> <td>N/A</td> <td># of Static Counts</td> <td>N/A</td> <td>Square Feet</td> </tr> </table> <p>Verification survey $\beta\gamma = <D$ $<D = \text{No increase in audible count rate}$</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">N/A</td> <td style="width: 15%;">Inches/Sec.</td> <td style="width: 15%;">N/A</td> <td style="width: 15%;">Inches Away</td> </tr> <tr> <td>N/A</td> <td>Count Time (Sec.)</td> <td>N/A</td> <td>% Surveyed</td> </tr> <tr> <td>N/A</td> <td># of Static Counts</td> <td>N/A</td> <td>Square Feet</td> </tr> </table> <p>Other: N/A</p>	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	<p>Description of Work / Comments:</p> <p>Tumbleweed blue card survey for contaminated tumbleweed found at 216-C-10.</p> <p>Comments: PERFORMED SURVEYS IAW THE TASK DESCRIPTION. A CONTAMINATED TUMBLEWEED (DEAD) WAS DISCOVERED IN THE SE PART OF THIS WIDS SITE. LOCATION SURVEYED WAS ADJACENT TO PREVIOUS PROBLEM AREAS THAT HAVE BEEN COVERED WITH BACKFILL. CONTAMINATION LEVELS WERE BELOW LEVELS REQUIRING NOTIFICATION TO MSA ENVIRONMENTAL BUT NOTIFICATIONS WERE MADE TO THE RCS AND FWS. TUMBLEWEED WAS REMOVED, BAGGED, TAGGED, AND SHIPPED TO RMA #224-T-001.</p>
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						

Dose Rate Measurements

No.	Description	Note ¹ : F = Field ($\geq 30\text{cm}$) C = Contact ($\leq 1\text{cm}$)							
		Dist. (cm) Note ¹	WO mR/hr	WC mR/hr	CF Non- Penetrating	CF Penetrating	Neutron Dose mrem/hr	Shallow Dose mrem/hr	Deep Dose mrem/hr
D1	CONTAMINATED TUMBLEWEEDS	3	<0.5	<0.5	2	1	N/A	<0.5	<0.5
D2	BAG OF VEGETATION/DIRT	30	N/A	<0.5	N/A	1	N/A	N/A	<0.5
D3	BAG OF VEGETATION/DIRT	3	<0.5	<0.5	2	1	N/A	<0.5	<0.5

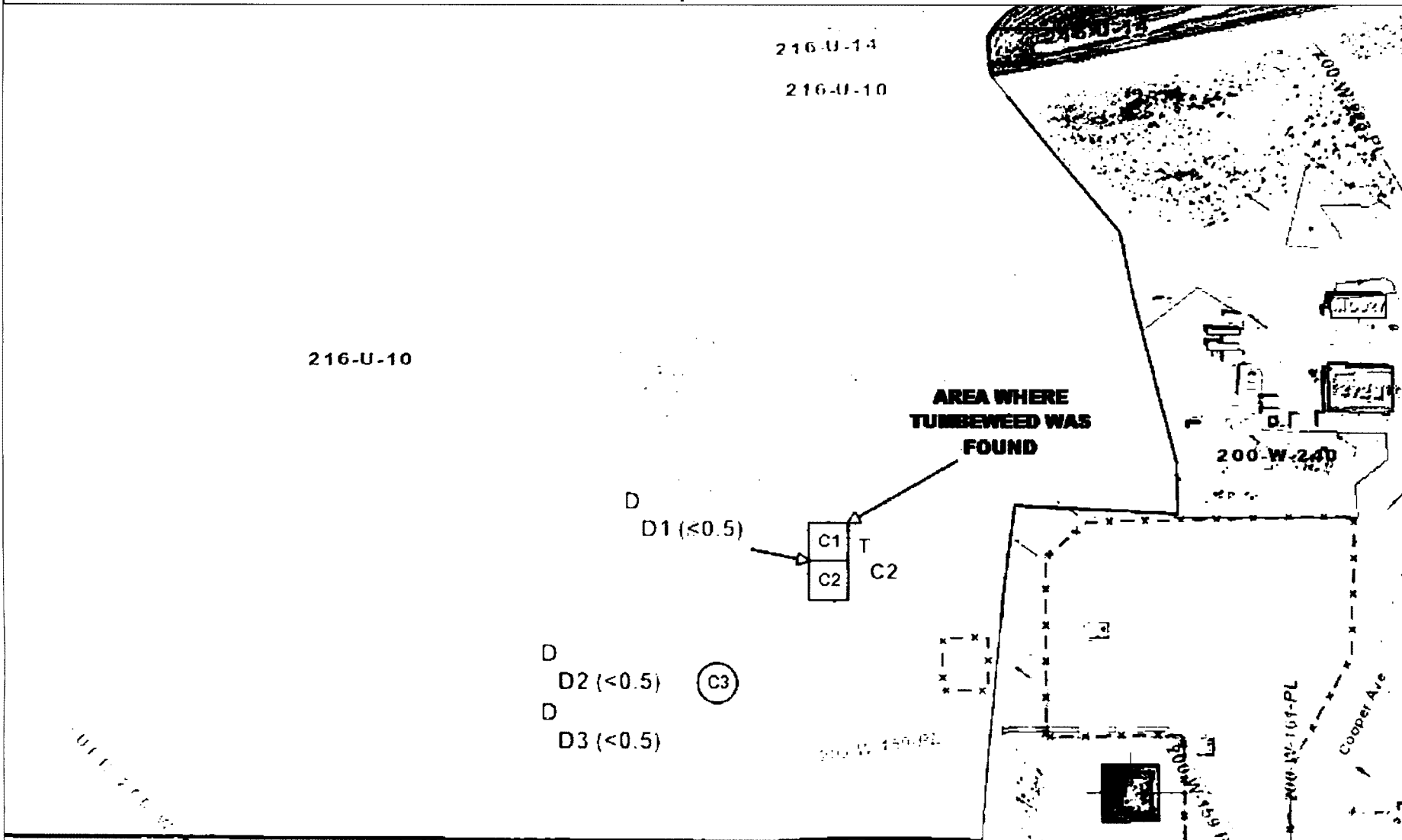
Contamination Measurements

No.	Description	† Manually Calculated by RCT												
		Background cpm		Direct Gross cpm/100 cm ²		Total dpm/100 cm ²		Correction Factor		Removable				
		$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$	α	Type	$\beta\gamma$	α	$\beta\gamma$	α
C1	TUMBLEWEED/ FRAGMENTS AS REMOVED	400	N/A	2400	N/A	20000	N/A	10	N/A	N/A	N/A	N/A	N/A	N/A

CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)	RSR No. RC-1500611	Page 2 of 4
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Contamination Measurements (Continued)														
† Manually Calculated by RCT														
No.	Description	Background cpm		Direct Gross cpm/100 cm ²		Total dpm/100 cm ²		Correction Factor		Type	Removable Gross (cpm)		dpm/100 cm ²	
		βγ	α	βγ	α	βγ	α	βγ	α		βγ	α	βγ	α
C2	SOIL AROUND AND UNDER TUMBLEWEED	400	1	400	1	<5000	<500	10	10	Trans.	240	1	<1000	<20
C3	EXTERIOR OF BAG WITH TUMBLEWEED	240	1	N/A	N/A	N/A	N/A	10	10	Smear	240	1	<1000	<20

Map/Sketch



Map Name: 216-U-10 | Map Description: Hot tumblewood

Legend	# Direct Measurement	▲ Air Sample	⊕ Smear	# LAW	◆ Neutron Dose Rate	T# Transferability	F# Field	C# Contact	D# Other Distance	○# Other Measurement
----- (designation inside) ----- Radiological Area Boundary							Note: Dose Rates in mrem/hr unless otherwise noted.			

CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)		RSR No. RC-1500611	Page 4 of 4
Instruments			
Instrument Type	Bar Code No.	Probe Bar Code No.	Efficiency (Used)
2360 / 43-93	SCLL8-0327	DTLLP-0433	β0.1α0.1
RC-20	ICEB9-0099	N/A	N/A
Ludlum Model 3	CMLL2-0229	DTHNC-0987	0.1
2360 / 43-93	SCLL8-0269	DTLLP-0375	β0.1α0.1
Unless stated otherwise in the "Comments" section, contamination levels for C-14, Fe-55, Ni-59, Ni-63, Se-79, Tc-99, Pd-107, and Eu-155 are ≤ 10 times the b-g contamination levels shown above (see CEPRC-00073, Table 2-2).			
History			
2015-09-17 08:16:47 - Regev, Shir - Submitted			

User: REGEV, SHIR (b)(6)
Title: Contributor
Date: Thursday, September 17, 2015, 8:16 AM Pacific Standard Time
=====

User: LARSON, KENNETH (b)(6)
Title: Contributor
Date: Thursday, September 17, 2015, 9:00 AM Pacific Standard Time
=====

User: BIGGS, DANIEL (b)(6)
Title: Reviewer
Date: Saturday, September 26, 2015, 11:54 AM Pacific Standard Time
=====

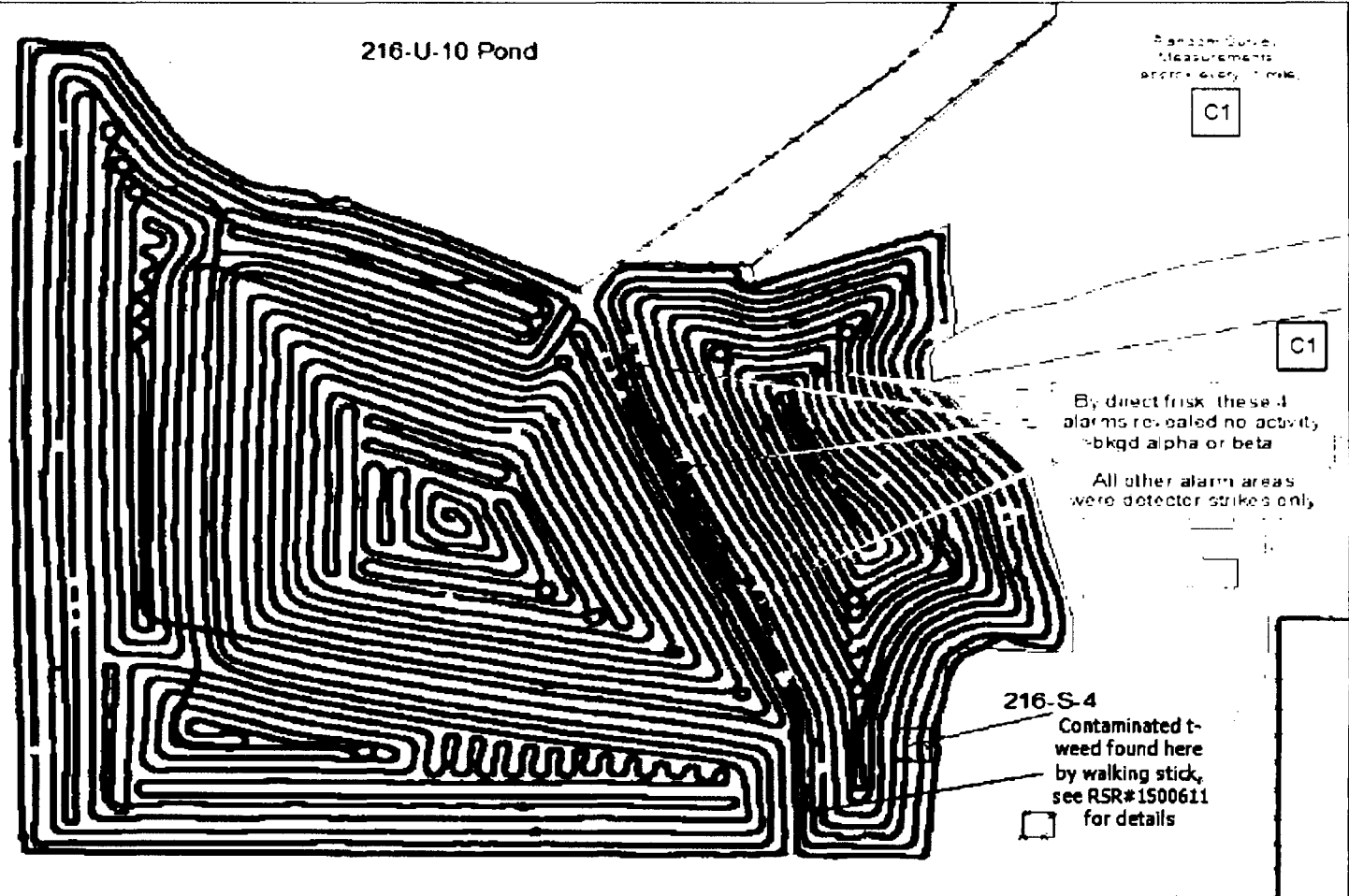
CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)	RSR No. RC-1500618	Page 1 of 3
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Date 9/17/2015	Start/Stop Time 0800 / 1530	Area/Location 200W / N/A / N/A / 216-J-10 Pond	RWP/Rev. RC-004 Rev.006
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<p>Purpose of Survey:</p> <p>Material Clearance Number: N/A Cleared to: N/A Ram Shipment: N/A</p> <p>✓ Required Task: RC-A020 Job Coverage: N/A Verification survey α = <D <D=No increase in audible count rate</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%; text-align: center;">N/A</td> <td style="width:15%;">Inches/Sec.</td> <td style="width:15%; text-align: center;">N/A</td> <td style="width:15%;">Inches Away</td> </tr> <tr> <td style="text-align: center;">N/A</td> <td>Count Time (Sec.)</td> <td style="text-align: center;">N/A</td> <td>% Surveyed</td> </tr> <tr> <td style="text-align: center;">N/A</td> <td># of Static Counts</td> <td style="text-align: center;">N/A</td> <td>Square Feet</td> </tr> </table> <p>Verification survey βγ = <D <D=No increase in audible count rate</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%; text-align: center;">N/A</td> <td style="width:15%;">Inches/Sec.</td> <td style="width:15%; text-align: center;">N/A</td> <td style="width:15%;">Inches Away</td> </tr> <tr> <td style="text-align: center;">N/A</td> <td>Count Time (Sec.)</td> <td style="text-align: center;">N/A</td> <td>% Surveyed</td> </tr> <tr> <td style="text-align: center;">N/A</td> <td># of Static Counts</td> <td style="text-align: center;">N/A</td> <td>Square Feet</td> </tr> </table> <p>Other: N/A</p>	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	N/A	Inches/Sec.	N/A	Inches Away	N/A	Count Time (Sec.)	N/A	% Surveyed	N/A	# of Static Counts	N/A	Square Feet	<p>Description of Work / Comments:</p> <p>216-J-10 Pond and 216-S-4 Annual Rad Tractor</p> <p>Comments: Survey of WIDS (Waste Information Data System) Sites listed in description and/or on map. This survey was performed on Sept 15, 16 and 17. Survey performed using MSCMII with a tractor speed of 2mph or less. Surveys were also performed manually by following the tractor and surveying random spots (approx every .1 miles), by direct frisk. No action levels exceeded and No environmental hazards noted. These areas are posted URMA.</p>
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						
N/A	Inches/Sec.	N/A	Inches Away																						
N/A	Count Time (Sec.)	N/A	% Surveyed																						
N/A	# of Static Counts	N/A	Square Feet																						

Contamination Measurements														
† Manually Calculated by RCT														
No.	Description	Background cpm		Direct Gross cpm/100 cm ²		Total dpm/100 cm ²		Correction Factor		Type	Removable			
		βγ	α	βγ	α	βγ	α	βγ	α		βγ	α		
C1	2360 Random Survey Measurements (approx every .1 mile) Soil, Gravel and Alarm areas	200	3	200	3	<5000	<500	10	10	N/A	N/A	N/A	N/A	N/A

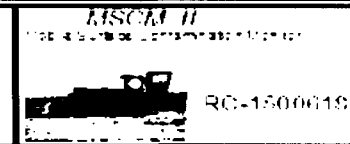
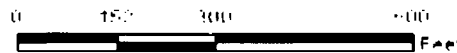
Map/Sketch



C.F.S.
1250
750
1000
1250
1500

Date of Survey
9/22/2015
Project #
RC-1500618

MSCM II Radiological Survey of
216-U-10 Pond



Map Name: Annual Rad Tractor

Map Description: 216-U-10 Pond

Legend	Direct Measurement	Air Sample	Smear	LAW	Neutron Dose Rate	Transferability	Field	Contact	Other Distance	Other Measurement
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----- (designation inside) ----- Radiological Area Boundary

Note: Dose Rates in mrem/hr unless otherwise noted.

CH2M HILL PLATEAU REMEDIATION COMPANY RADIOLOGICAL SURVEY REPORT (Submitted for Approval)		RSR No. RC-1500618	Page 3 of 3
Instruments			
Instrument Type	Bar Code No.	Probe Bar Code No.	Efficiency (Used)
MSCM II	EO-60-05248	N/A	N/A
Ludlum 2360/43-93	SCLL8-0250	DTLLP-0356	0.1
Ludlum 2360/43-93	SCLL8-0269	DTLLP-0375	0.1
GM/P-11	CMLL2-0207	DTHNC-0810	0.1
GM/P-11	CMLL2-0229	DTHNC-0987	0.1
<p>Unless stated otherwise in the "Comments" section, contamination levels for C-14, Fe-55, Ni-59, Ni-63, Se-79, Tc-99, Pd-107, and Eu-155 are ≤ 10 times the b-g contamination levels shown above (see CHPRC-00073, Table 2-2).</p>			
History			
2015-09-22 07:38:29 - Cuevas, Sandra - Submitted 2015-09-22 07:46:46 - Cuevas, Sandra - UnSubmitted: Add data 2015-09-22 07:58:46 - Cuevas, Sandra - Submitted: Add Data			

User: CUEVAS, SANDRA (b)(6)
Title: Contributor
Date: Tuesday, September 22, 2015, 7:58 AM Pacific Standard Time
=====

User: REGEV, SHIR (b)(6)
Title: Contributor
Date: Tuesday, September 22, 2015, 8:04 AM Pacific Standard Time
=====

User: BIGGS, DANIEL (b)(6)
Title: Reviewer
Date: Saturday, September 26, 2015, 11:51 AM Pacific Standard Time
=====

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT (Submitted for Approval)**

RSR No.
RC-1601238

Date 10/04/2016	Start/Stop Time 1500/1545	Area/Location 200W / WIDS / 216-U-10	RWP/Rev. rc-004 / 7
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<p>Purpose of Survey:</p> <p><input type="checkbox"/> Material Clearance Number: N/A Cleared to: N/A</p> <p><input type="checkbox"/> Ram Shipment: N/A</p> <p><input type="checkbox"/> Required Task: N/A</p> <p><input type="checkbox"/> Job Coverage: N/A</p> <p><input type="checkbox"/> Verification survey $\alpha = <D$ <D=No increase in audible count rate N/A Inches/Sec. N/A Inches Away N/A Count Time (Sec.) N/A % Surveyed N/A # of Static Counts N/A Square Feet</p> <p><input type="checkbox"/> Verification survey $\beta\gamma = <D$ <D=No increase in audible count rate N/A Inches/Sec. N/A Inches Away N/A Count Time (Sec.) N/A % Surveyed N/A # of Static Counts N/A Square Feet</p> <p><input checked="" type="checkbox"/> Other: Good Radiological Practice survey.</p>	<p>Description of Work:</p> <p>WIDS 216-U-10 Mower Tractor survey, after mowing, prior to leaving URMA. on tractor HO-62-3505.</p> <p>Comments:</p> <p>Mower surveyed, after mowing vegetation was completed, prior to exiting URMA as a good radiological work practice.</p>
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**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT (Submitted for Approval)**

**RSR No.
RC-1601238**

Contamination Measurements

* Manually Calculated by RCT

No.	Description	Background cpm		Direct Gross cpm/100 cm ²		Total dpm/100 cm ²		Correction Factor		Removable				
		βγ	α	βγ	α	βγ	α	βγ	α	Type	Gross (cpm)		dpm/100 cm ²	
											βγ	α	βγ	α
C1	2360 survey, on tire cab, cab access, and engine housing.	180	2	180	2	<5000	<500	10	10	N/A	N/A	N/A	N/A	N/A
C2	GM survey, on mower assy and the vegetation debris.	100	N/A	100	N/A	<5000	N/A	10	N/A	N/A	N/A	N/A	N/A	N/A

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT (Submitted for Approval)**

**RSR No.
RC-1601238**

Map/Sketch



Map Name: N/A

Map Description: Pictures are representative

Legend	Direct Measurement #	Air Sample ▲	Smear #	LAW L#	Neutron Dose Rate ◆	Transferability T#	Field F#	Contact C#	Other Distance D#	Other Measurement O#
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----- (designation inside) ----- Radiological Area Boundary Note: Dose Rates in mrem/hr unless otherwise noted.

Instruments

Instrument Type	Bar Code No.	Probe Bar Code No.	Efficiency (Used)	Due Date
LUDLUM 2360 / 43-93	SCLL8-0259	DTLLP-0365	0.1	01/05/2017
GM	CMEB3-0172	N/A	N/A	02/01/2017

**CH2M HILL PLATEAU REMEDIATION COMPANY
RADIOLOGICAL SURVEY REPORT(Submitted for Approval)**

RSR No.
RC-1601238

HP-210	N/A	DTHNC-0770	0.1	02/01/2017
Unless stated otherwise in the "Comments" section, contamination levels for C-14, Fe-55, Ni-59, Ni-63, Se-79, Tc-99, Pd-107, and Eu-155 are <= 10 times the b-g contamination levels shown above (see CHPRC-00073, Table 2-2).				

History

10/5/2016 8:11:53 AM - Miller , John E - Submitted:
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**** Electronically Approved – RC-1601238 on 10/27/2016 **:**

User: Miller, John E (b)(6)
Title: Owner
Date: Wednesday, October 05, 2016, 8:11 AM Pacific Standard Time
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User: Regev, Shir (b)(6)
Title: Contributor
Date: Thursday, October 27, 2016, 2:14 PM Pacific Standard Time
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User: Grieder, Randall (b)(6)
Title: Reviewer
Date: 10/27/2016 3:20:48 PM Pacific Standard Time
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