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NATIONAL LABORATORY
EST.1943

9/28/17

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Los Alamos Field Office
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Date: SEP 28 2017
Refer To: ADESH-17-071
LAUR: 17-28499; 17-28500

Esteban Herrera, Chief
Water Enforcement Branch (6EN-WS)
Compliance Assurance and Enforcement Division
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Subject: NPDES Permit No. NM0030759 – Analytical Results for Site Monitoring Area(s) 3M-SMA-4 and ACID-SMA-2 from the First Measurable Storm Event Following Certification of Enhanced Control Measures

Dear Mr. Herrera:

These documents are being submitted in accordance with the requirements of the National Pollutant Discharge Elimination System Permit No. NM0030759 for Los Alamos National Laboratory, issued to Los Alamos National Security, LLC, and the U.S. Department of Energy, effective November 1, 2010. As specified in Part I, Section E.l(c):

> Permittees shall certify completion of installation of control measures under this subsection to EPA within 30 days of completion of all such measures at the Site and, where applicable shall provide sampling results within 30 days of receipt of analytical results from the first measurable storm event after completion of such measures....

Accordingly, the analytical results from samples collected during the first measurable storm event received at two site monitoring areas (3M-SMA-4 and ACID-SMA-2) in the last 30 days are enclosed. Each attached certified document provides references to the certificates of completion of the installation of the control measures. These documents can be accessed at the following website: http://www.lanl.gov and searching under the key words "Individual Permit."

Table 1
Confirmation Samples Collected from the First Measurable Storm Event Following Certification of Installation of Enhanced Controls

Watershed	Priority	Site Number	SMA Number	Permitted Feature	Sample Collection Date	Final Validation Date
Pajarito	**Moderate**	**18-002(b) 18-003(c) 18-010(f)**	**3M-SMA-4**	**H006**	**07/08/2017**	**8/29/2017**
Los Alamos/ Pueblo	**Moderate**	**01-002(b)-00 45-001 45-002 45-004**	**ACID-SMA-2**	**P002**	**07/08/2017**	**8/30/2017**

If you have any questions, please contact Terrill Lemke at (505) 665-2397 (tlemke@lanl.gov) or David Rhodes at (505) 665-5325 (david.rhodes@em.doe.gov).

Sincerely,

John C. Bretzke, Division Leader
Environmental Protection & Compliance
Los Alamos National Laboratory

Sincerely,

David S. Rhodes, Director
Office of Quality and Regulatory Compliance
Environmental Management
Los Alamos Field Office

JB/DR/BR/SV:sm

Attachments: One hard copy with electronic files – Analytical results from the first measurable storm event following installation of control measures at two site monitoring areas (see individual document for LA-UR number)

Cy: (w/att.)
Sarah Holcomb, NMED-SWQB, P.O. Box 5469, Santa Fe, NM 87502

Cy: (date-stamped letter and attachment emailed)
Robert Houston, EPA Region 6
Brent Larsen, EPA Region 6
Laurie King, EPA Region 6
Steve Yanicak, NMED-DOE-OB, MS M894
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Terrill Lemke, ADESH-EPC-CP
Don Carlson, ADEM ER Program
Public Reading Room (EPRR)
ADESH Records
PRS Database

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Peter Maggiore, DOE-NA-LA
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John Bretzke, ADESH-EPC-DO
Michael Brandt, ADESH
William Mairson, PADOPS
Craig Leasure, PADOPS

Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at 3M-SMA-4

September 28, 2017

NPDES PERMIT NO. NM0030759

LA-UR-17-28499

NPDES PERMIT NO. NM0030759 **LA-UR-17-28499**

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: H006 **3M-SMA-4** **Site: 18-002(b)**
18-003(c)
18-010(f)

The following certification of analytical results received from the confirmation monitoring samples collected after the completion of the installation of enhanced controls was performed in accordance with NPDES Permit No.NM0030759, Part I.E.1.

CERTIFICATION STATEMENT OF AUTHORIZATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Environmental Programs
Environmental Remediation Program
Los Alamos National Laboratory

9/20/2017
Date

Environmental Management Los Alamos Field Office
U.S. Department of Energy

9-28-2017
Date

NPDES PERMIT NO. NM0030759 **LA-UR-17-28499**

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: H006 **3M-SMA-4** **Site: 18-002(b)**
18-003(c)
18-010(f)

Tables 1 and 2 present the analytical results received from confirmation monitoring samples collected from the first measurable storm event following the installation and subsequent certification of enhanced controls at site monitoring area 3M-SMA-4. Final analytical results were received and validated on August 29, 2017. The descriptions and photographs of each enhanced control installed at 3M-SMA-4 were provided to the U.S. Environmental Protection Agency on October 30, 2015 (ADESH-15-158/ LA-UR-15-27834). Table 3 presents applicable target action levels (TALs) for the analytes monitored.

Table 1
Radiochemical Analytical Results from the First Measurable Storm Event
Collected on July 8, 2017, Following Installation of Enhanced Controls at ACID-SMA-2

Sample ID	Analyte	Field Preparation	Detect Status	Result (pCi/L)	TAL Exceedance Ratio	Minimum Detectable Activity (pCi/L)	Uncertainty (pCi/L)	Qualifier*	Data Validation Date
WT_IPC-17-135472	Gross alpha	Unfiltered	Detect	9.4	0.63	3.3	1.27	NQ	08/29/2017

Note: TAL exceedance ratio is the analytical result divided by the applicable average ATAL.
* Qualifier: NQ = Result is not qualified.

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: H006 **3M-SMA-4** **Site: 18-002(b)**
18-003(c)
18-010(f)

Table 2
Metals and Organic Analytical Results from the First Measurable Storm Event
Collected on July 26, 2017, Following the Installation of Enhanced Controls at 3M-SMA-4

Sample ID	Analyte	Field Preparation	Detect Status	Result (µg/L)	TAL Exceedance Ratio	Report Method Detection Limit (µg/L)	Report Quantitation Limit (µg/L)	Validation Qualifier[a]	Notification of Data Validation Date
WT_IPC-17-135374	Copper	Filtered	Detect	8.11	1.9	0.3	1	NQ	08/29/2017
WT_IPC-17-135472	RDX[b]	Unfiltered	Nondetect	0.0952	n/a[c]	0.0952	0.298	U	08/29/2017
WT_IPC-17-135472	Trinitrotoluene[2,4,6-]	Unfiltered	Nondetect	0.0952	n/a	0.0952	0.298	U	08/29/2017

Note: TAL exceedance ratio is the result divided by the smallest applicable TAL. Applicable TALs are the larger of the maximum TAL and minimum quantification level (MQL) or the larger of the average TAL or MQL.

[a] Qualifier: NQ = Result is not qualified; U -= Result is not detected.

[b] RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

[c] n/a = Not applicable.

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: H006 **3M-SMA-4** **Site: 18-002(b)**
18-003(c)
18-010(f)

Table 3
Applicable TALs

Analyte	Units	CAS No.	MQL	ATAL	MTAL
Gross alpha	pCi/L	n/a*	n/a	15	n/a
Copper	µg/L	7440-50-8	0.5	n/a	4.3
RDX	µg/L	121-82-4	n/a	200	n/a
Trinitrotoluene[2,4,6-]	µg/L	118-96-7	n/a	20	n/a

Notes: CAS = Chemical Abstracts Service; MQL = minimum quantification level; ATAL = average TAL; MTAL = maximum TAL. As allowed by Part I.D. of the Individual Permit, analytical results are compared with either the corresponding MTAL/ATAL (as applicable) or the MQL, whichever value is greater, for the purpose of determining the effectiveness of storm water control measures.

* n/a = Not applicable.

NPDES PERMIT NO. NM0030759 **LA-UR-17-28499**

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: H006 **3M-SMA-4** **Site: 18-002(b)**
18-003(c)
18-010(f)

Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at ACID-SMA-2

September 28, 2017

NPDES PERMIT NO. NM0030759

LA-UR-17-28500

NPDES PERMIT NO. NM0030759 **LA-UR-17-28500**

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: P002 **ACID-SMA-2** **Site: 01-002(b)-00**
45-001
45-002
45-004

The following certification of analytical results received from the confirmation monitoring samples collected after the completion of the installation of enhanced controls was performed in accordance with NPDES Permit No.NM0030759, Part I.E.1.

CERTIFICATION STATEMENT OF AUTHORIZATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Environmental Programs
Environmental Remediation Program
Los Alamos National Laboratory

9/20/2017
Date

Environmental Management Los Alamos Field Office
U.S. Department of Energy

9-28-2017
Date

NPDES PERMIT NO. NM0030759 **LA-UR-17-28500**

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: P002 **ACID-SMA-2** **Site: 01-002(b)-00**
45-001
45-002
45-004

Tables 1 and 2 present the analytical results received from confirmation monitoring samples collected from the first measurable storm event following the installation and subsequent certification of enhanced controls at site monitoring area ACID-SMA-2. Final analytical results were received and validated on August 30, 2017. The descriptions and photographs of each enhanced control installed at ACID-SMA-2 were provided to the U.S. Environmental Protection Agency on October 14, 2016 (ADESH-16-127/ LA-UR-16-27055). Table 3 presents applicable target action levels (TALs) for the analytes monitored.

Table 1
Radiochemical Analytical Results from the First Measurable Storm Event
Collected on July 8, 2017, Following Installation of Enhanced Controls at ACID-SMA-2

Sample ID	Analyte	Field Preparation	Detect Status	Result (pCi/L)	TAL Exceedance Ratio	Minimum Detectable Activity (pCi/L)	Uncertainty (pCi/L)	Qualifier[a]	Data Validation Date
WT_IPC-17-135520	Radium-226 and Radium-228	Unfiltered	Detect	2.5	0.083	0.769	n/a[b]	NQ	08/14/2017
WT_IPC-17-135520	Gross alpha	Unfiltered	Detect	236	16	5.15	5.72	NQ	08/14/2017

Note: TAL exceedance ratio is the analytical result divided by the applicable average TAL.
[a] Qualifier: NQ = Result is not qualified.
[b] n/a = Not applicable.

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: P002 **ACID-SMA-2** **Site: 01-002(b)-00**
45-001
45-002
45-004

Table 2
Metals, Inorganic, and Organic Analytical Results from the First Measurable Storm Event Collected on July 8, 2017, Following the Installation of Enhanced Controls at ACID-SMA-2

Sample ID	Analyte	Field Preparation	Detect Status	Result (µg/L)	TAL Exceedance Ratio	Report Method Detection Limit (µg/L)	Report Quantitation Limit (µg/L)	Validation Qualifier[a]	Notification of Data Validation Date
WT_IPC-17-135396	Aluminum	Filtered	Detect	139	0.19	19.3	50	NQ	08/14/2017
WT_IPC-17-135396	Antimony	Filtered	Nondetect	1	n/a[b]	1	3	U	08/14/2017
WT_IPC-17-135396	Arsenic	Filtered	Nondetect	2	n/a	2	5	U	08/14/2017
WT_IPC-17-135396	Boron	Filtered	Nondetect	15	n/a	15	50	U	08/14/2017
WT_IPC-17-135396	Cadmium	Filtered	Nondetect	0.3	n/a	0.3	1	U	08/14/2017
WT_IPC-17-135396	Chromium	Filtered	Nondetect	3	n/a	3	10	U	08/14/2017
WT_IPC-17-135396	Cobalt	Filtered	Nondetect	1	n/a	1	5	U	08/14/2017
WT_IPC-17-135396	Copper	Filtered	Detect	3.14	0.73	0.3	1	NQ	08/14/2017
WT_IPC-17-135396	Lead	Filtered	Detect	0.782	0.046	0.5	2	J	08/14/2017
WT_IPC-17-135520	Mercury	Unfiltered	Detect	0.262	0.34	0.067	0.2	NQ	08/14/2017
WT_IPC-17-135396	Nickel	Filtered	Detect	1.25	0.0074	0.6	2	J	08/14/2017
WT_IPC-17-135520	Selenium	Unfiltered	Nondetect	2	n/a	2	5	U	08/14/2017
WT_IPC-17-135396	Silver	Filtered	Nondetect	0.3	n/a	0.3	1	U	08/14/2017
WT_IPC-17-135396	Thallium	Filtered	Nondetect	0.6	n/a	0.6	2	U	08/14/2017
WT_IPC-17-135396	Vanadium	Filtered	Nondetect	1	n/a	1	5	U	08/14/2017
WT_IPC-17-135396	Zinc	Filtered	Detect	8.55	0.2	3.3	10	J	08/14/2017
WT_IPC-17-135520	Cyanide, weak acid dissociable	Unfiltered	Nondetect	1.67	n/a	1.67	5	U	08/14/2017
WT_IPC-17-135520	Total PCB[c]	Unfiltered	Detect	0.0573	90	n/a	n/a	NQ	08/30/2017

Note: TAL exceedance ratio is the result divided by the smallest applicable TAL. Applicable TALs are the larger of the maximum TAL and minimum quantification level (MQL) or the larger of the average TAL or MQL.

[a] Qualifier: NQ = Result is not qualified; J = result is estimated; U = Result is not detected.

[b] n/a = Not applicable.

[c] PCB = Polychlorinated biphenyl.

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: P002 **ACID-SMA-2** **Site: 01-002(b)-00**
45-001
45-002
45-004

Table 3
Applicable TALs

Analyte	Units	CAS No.	MQL	ATAL	MTAL
Radium-226 and Radium-228	pCi/L	n/a[a]	n/a	30	n/a
Gross alpha	pCi/L	n/a	n/a	15	n/a
Aluminum	µg/L	7429-90-5	2.5	n/a	750
Antimony	µg/L	7440-36-0	60	640	n/a
Arsenic	µg/L	7440-38-2	0.5	9	340
Boron	µg/L	7440-42-8	100	5000	n/a
Cadmium	µg/L	7440-43-9	1	n/a	0.6
Chromium	µg/L	7440-47-3	10	n/a	210
Cobalt	µg/L	7440-48-4	50	1000	n/a
Copper	µg/L	7440-50-8	0.5	n/a	4.3
Lead	µg/L	7439-92-1	0.5	n/a	17
Mercury	µg/L	7439-97-6	0.005	0.77	1.4
Nickel	µg/L	7440-02-0	0.5	n/a	170
Selenium	µg/L	7782-49-2	5	5	20
Silver	µg/L	7440-22-4	0.5	n/a	0.4
Thallium	µg/L	7440-28-0	0.5	6.3	n/a
Vanadium	µg/L	7440-62-2	50	100	n/a
Zinc	µg/L	7440-66-6	20	n/a	42
Cyanide, weak acid dissociable	µg/L	57-12-5	10	5.2	22
Total PCB[b]	µg/L	1336-36-3	n/a	0.00064	n/a
Trinitrotoluene[2,4,6-]	µg/L	118-96-7	n/a	20	n/a

Notes: CAS = Chemical Abstracts Service; MQL = minimum quantification level; ATAL = average TAL; MTAL = maximum TAL. As allowed by Part I.D. of the Individual Permit, analytical results are compared with either the corresponding MTAL/ATAL (as applicable) or the MQL, whichever value is greater, for the purpose of determining the effectiveness of storm water control measures.

[a] n/a = Not applicable.

[b] PCB = Polychlorinated biphenyl.

LOS ALAMOS NATIONAL LABORATORY
CERTIFICATION OF ANALYTICAL RESULTS

PF: P002 **ACID-SMA-2** **Site: 01-002(b)-00**
45-001
45-002
45-004