EMID-700119

N3B – Los Alamos
600 6th Street
Los Alamos, New Mexico 87544
(303) 489-2471

Environmental Management
Los Alamos Field Office
P.O. Box 1663, MS M984
Los Alamos, New Mexico 87545
(505) 665-5658/FAX (505) 606-2132

Date: NOV 0 6 2018
Refer To: N3B-18-0306

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 from the First Measurable Storm Event Following Certification of Enhanced Control Measures at Site Monitoring Areas A-SMA-3, PJ-SMA-3.05, PJ-SMA-5, and STRM-SMA-1.5

Dear Mr. Herrera:

This letter and enclosures are being submitted in accordance with the requirements of the U.S. Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) Permit No. NM0030759 for discharges of storm water at Los Alamos National Laboratory. The permit was issued to Los Alamos National Security, LLC (LANS) and the U.S. Department of Energy, effective November 1, 2010, and on April 30, 2018, responsibilities, coverage, and liability transferred from LANS to Newport Nuclear News BWXT – Los Alamos, LLC (N3B). 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 four site monitoring areas (A-SMA-3, PJ-SMA-3.05, PJ-SMA-5, and STRM-SMA-1.5) in the last 30 days are enclosed. The reports provide references to the certificates of completion of the installation of the control measures. Table 1 includes information about the confirmation samples collected at the site monitoring areas. The enclosed certified documents can also be accessed at the following website: https://www.eprr.lanl.gov/.

Table 1
Confirmation Samples Collected at A-SMA-3, PJ-SMA-3.05, PJ-SMA-5, and STRM-SMA-1.5 from the First Measurable Storm Event after Certification of Installation of Enhanced Controls

Watershed	Priority	Site Number	SMA Number	Permitted Feature	Sample Collection Date	Final Validation Date
Ancho	Moderate	39-002(b) 39-004(c)	A-SMA-3	A006	8/10/2018	10/9/2018
Pajarito	Moderate	09-004(o)	PJ-SMA-3.05	J003	9/3/2018	10/9/2018
Pajarito	Moderate	22-015(c)	PJ-SMA-5	J005	9/3/2018	10/9/2018
Pajarito	Moderate	08-009(d)	STRM-SMA-1.5	J029	9/3/2018	10/9/2018

If you have any questions, please contact Steve Veenis at (505) 309-1362 (steve.veenis@em-la.doe.gov) or David Rhodes at (505) 665-5325 (david.rhodes@em.doe.gov).

Sincerely,

Frazer Lockhart
Program Manager
Regulatory and Stakeholder Interface
N3B – Los Alamos

Sincerely,

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

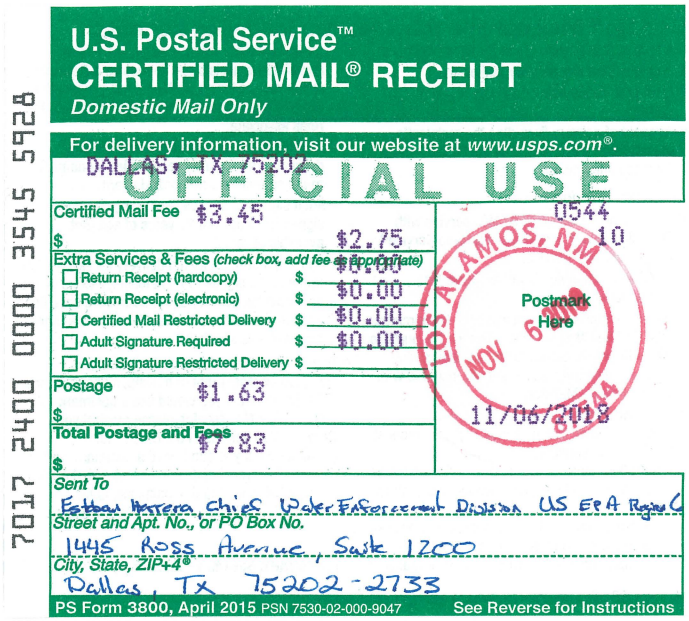
FL/DR/SV

Enclosure(s): One hard copy with electronic files –
1. Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at A-SMA-3 (EM2018-0089)
2. Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at PJ-SMA-3.05 (EM2018-0090)
3. Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at PJ-SMA-5 (EM2018-0091)
4. Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at STRM-SMA-1.5 (EM2018-0092)

Cy: (letter with enclosure[s])
Sarah Holcomb, NMED-SWQB

Cy: (letter and enclosure[s] emailed)
Robert Houston, EPA Region 6
Brent Larsen, EPA Region 6
Laurie King, EPA Region 6

Steve Yanicak, NMED-DOE-OB
David Rhodes, DOE EM-LA
David Nickless, DOE EM-LA
Nick Lombardo, N3B
Joe Legare, N3B
Frazer Lockhart, N3B
Erich Evered, N3B
Bruce Robinson, N3B
Emily Day, N3B
Steve Veenis, N3B
Karen Velarde-Lashley, N3B
Don Carlson, N3B
Amanda White, N3B
emla.docs@em.doe.gov
N3B Records
Public Reading Room (EPRR)
PRS Database



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Esteban Herrera, Chief, Water Enforcement Division, US EPA Region 6
Street and Apt. No., or PO Box No.
1445 Ross Avenue, Suite 1200
City, State, ZIP+4®
Dallas, TX 75202-2733

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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

November 6, 2018

NPDES PERMIT NO. NM0030759

EM2018-0089

NPDES PERMIT NO. NM0030759 **EM2018-0089**

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: A006 **A-SMA-3** **Sites: 39-002(b)**
39-004(c)

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."

Frazer Lockhart, Program Manager
Regulatory and Stakeholder Interface
Newport News Nuclear BWXT – Los Alamos, LLC

11/1/18
Date

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

11-6-2018
Date

NPDES PERMIT NO. NM0030759 **EM2018-0089**

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: A006 **A-SMA-3** **Sites: 39-002(b)**
39-004(c)

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 A-SMA-3. Final analytical results were received and validated on October 9, 2018. The descriptions and photographs of each enhanced control installed at A-SMA-3 were provided to the U.S. Environmental Protection Agency on September 10, 2015 (ESHID-600909/ LA-UR-15-24160). Table 3 presents each applicable target action level (TAL) for the analytes monitored.

Table 1
Radiochemical Analytical Results from the First Measurable Storm Event
Collected on August 10, 2018, Following Installation of Enhanced Controls at A-SMA-3

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-18-154586	Gross alpha	Unfiltered	Detect	90.8	6.1	4.74	3.5	NQ	10/9/2018

Note: TAL exceedance ratio is the analytical result divided by the applicable average TAL (ATAL).

* NQ = Result is not qualified.

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: A006 **A-SMA-3** **Sites: 39-002(b)**
39-004(c)

Table 2
Metals, Inorganic, and Organic Analytical Results from the First Measurable Storm Event Collected on August 10, 2018, Following the Installation of Enhanced Controls at A-SMA-3

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-18-154571	Aluminum	Filtered	Detect	564	0.75	68	200	NQ	10/9/2018
WT_IPC-18-154574	Aluminum	Filtered	Detect	532	0.71	68	200	NQ	10/9/2018
WT_IPC-18-154571	Copper	Filtered	Detect	50.2	12	0.3	1	NQ	10/9/2018
WT_IPC-18-154574	Copper	Filtered	Detect	48.3	11	0.3	1	NQ	10/9/2018
WT_IPC-18-154586	Mercury	Unfiltered	Nondetect	0.067	0.087	0.067	0.2	U	10/9/2018
WT_IPC-18-154586	Selenium	Unfiltered	Nondetect	2	0.4	2	5	U	10/9/2018
WT_IPC-18-154586	Total PCB[b]	Unfiltered	Detect	3.4	5300	n/a[c]	n/a	NQ	10/9/2018

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

[a] NQ = Result is not qualified; U = result is not detected.

[b] PCB = Polychlorinated biphenyl.

[c] n/a = Not applicable.

Table 3
Applicable TALs

Analyte	Field Preparation	Unit	CAS No.	MQL	ATAL	MTAL
Gross alpha	Unfiltered	pCi/L	n/a[a]	n/a	15	n/a
Aluminum	Filtered	µg/L	7429-90-5	2.5	n/a	750
Copper	Filtered	µg/L	7440-50-8	0.5	n/a	4.3
Mercury	Unfiltered	µg/L	7439-97-6	0.005	0.77	1.4
Selenium	Unfiltered	µg/L	7782-49-2	5	5	20
Total PCB[b]	Unfiltered	µg/L	1336-36-3	n/a	0.00064	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.

Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at PJ-SMA-3.05

November 6, 2018

NPDES PERMIT NO. NM0030759

EM2018-0090

NPDES PERMIT NO. NM0030759 **EM2018-0090**

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J003 **PJ-SMA-3.05** **Site: 09-004(o)**

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."

Frazer Lockhart, Program Manager
Regulatory and Stakeholder Interface
Newport News Nuclear BWXT – Los Alamos, LLC

11/1/18
Date

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

11-6-2018
Date

NPDES PERMIT NO. NM0030759 **EM2018-0090**

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J003 **PJ-SMA-3.05** **Site: 09-004(o)**

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 PJ-SMA-3.05. Final analytical results were received and validated on October 9, 2018. The descriptions and photographs of each enhanced control installed at PJ-SMA-3.05 were provided to the U.S. Environmental Protection Agency on July 25, 2012 (ESHID-221595/ LA-UR-12-22529). Table 3 presents each applicable target action level (TAL) for the analytes monitored.

Table 1
Radiochemical Analytical Results from the First Measurable Storm Event
Collected on September 3, 2018, Following Installation of Enhanced Controls at PJ-SMA-3.05

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-18-154595	Radium-226 and Radium-228	Unfiltered	Detect	2.54	0.085	1.49	n/a[b]	NQ	10/9/2018
WT_IPC-18-154595	Gross alpha	Unfiltered	Detect	40.8	2.7	2.97	2.54	NQ	10/9/2018

Note: TAL exceedance ratio is the analytical result divided by the applicable average TAL (ATAL).

[a] NQ = Result is not qualified.

[b] n/a = Not applicable.

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J003 **PJ-SMA-3.05** **Site: 09-004(o)**

Table 2
Metals, Inorganic, and Organic Analytical Results from the First Measurable Storm Event Collected on September 3, 2018, Following the Installation of Enhanced Controls at PJ-SMA-3.05

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*	Notification of Data Validation Date
WT_IPC-18-154522	Aluminum	Filtered	Detect	193	0.26	19.3	50	NQ	10/9/2018
WT_IPC-18-154522	Antimony	Filtered	Nondetect	1	0.0016	1	3	U	10/9/2018
WT_IPC-18-154522	Arsenic	Filtered	Nondetect	2	0.22	2	5	U	10/9/2018
WT_IPC-18-154522	Boron	Filtered	Nondetect	15	0.003	15	50	U	10/9/2018
WT_IPC-18-154522	Cadmium	Filtered	Nondetect	0.3	0.3	0.3	1	U	10/9/2018
WT_IPC-18-154522	Chromium	Filtered	Nondetect	3	0.014	3	10	U	10/9/2018
WT_IPC-18-154522	Cobalt	Filtered	Nondetect	1	0.001	1	5	U	10/9/2018
WT_IPC-18-154522	Copper	Filtered	Detect	2.06	0.48	0.3	1	NQ	10/9/2018
WT_IPC-18-154522	Lead	Filtered	Nondetect	0.5	0.029	0.5	2	U	10/9/2018
WT_IPC-18-154595	Mercury	Unfiltered	Nondetect	0.067	0.087	0.067	0.2	U	10/9/2018
WT_IPC-18-154522	Nickel	Filtered	Nondetect	0.6	0.0035	0.6	2	U	10/9/2018
WT_IPC-18-154595	Selenium	Unfiltered	Nondetect	2	0.4	2	5	U	10/9/2018
WT_IPC-18-154522	Silver	Filtered	Nondetect	0.3	0.6	0.3	1	U	10/9/2018
WT_IPC-18-154522	Thallium	Filtered	Nondetect	0.6	0.095	0.6	2	U	10/9/2018
WT_IPC-18-154522	Vanadium	Filtered	Detect	1.16	0.012	1	5	J	10/9/2018
WT_IPC-18-154522	Zinc	Filtered	Detect	4.3	0.1	3.3	10	J	10/9/2018
WT_IPC-18-154595	Cyanide, weak acid dissociable	Unfiltered	Nondetect	1.67	0.17	1.67	5	U	10/9/2018

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

* NQ = Result is not qualified; J = result is estimated; U = result is not detected.

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J003 **PJ-SMA-3.05** **Site: 09-004(o)**

Table 3
Applicable TALs

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

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.

Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at PJ-SMA-5

November 6, 2018

NPDES PERMIT NO. NM0030759

EM2018-0091

NPDES PERMIT NO. NM0030759 **EM2018-0091**

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J005 **PJ-SMA-5** **Site: 22-015(c)**

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."

Frazer Lockhart, Program Manager
Regulatory and Stakeholder Interface
Newport News Nuclear BWXT – Los Alamos, LLC

11/1/18
Date

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

11-6-2018
Date

NPDES PERMIT NO. NM0030759 **EM2018-0091**

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J005 **PJ-SMA-5** **Site: 22-015(c)**

Table 1 presents 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 PJ-SMA-5. Final analytical results were received and validated on October 9, 2018. The descriptions and photographs of each enhanced control installed at PJ-SMA-5 were provided to the U.S. Environmental Protection Agency on August 17, 2015 (ESHID-600776/LA-UR-15-21501). Table 2 presents each applicable target action level (TAL) for the analytes monitored.

Table 1
Metals, Inorganic, and Organic Analytical Results from the First Measurable Storm Event Collected on September 3, 2018, Following the Installation of Enhanced Controls at PJ-SMA-5

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*	Notification of Data Validation Date
WT_IPC-18-154204	Copper	Filtered	Detect	651	150	3	10	NQ	10/9/2018

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

* NQ = Result is not qualified.

Table 2
Applicable TALs

Analyte	Field Preparation	Unit	CAS No.	MQL	ATAL	MTAL
Copper	Filtered	µg/L	7440-50-8	0.5	n/a*	4.3

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.

Analytical Results from the First Measurable Storm Event Following Certification of Enhanced Control Measures at STRM-SMA-1.5

November 6, 2018

NPDES PERMIT NO. NM0030759

EM2018-0092

NPDES PERMIT NO. NM0030759 **EM2018-0092**

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J029 **STRM-SMA-1.5** **Site: 08-009(d)**

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.

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Frazer Lockhart, Program Manager
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11/1/18
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David S. Rhodes, Director
Office of Quality and Regulatory Compliance
Environmental Management
Los Alamos Field Office

11-6-2018
Date

NPDES PERMIT NO. NM0030759 **EM2018-0092**

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J029 **STRM-SMA-1.5** **Site: 08-009(d)**

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 STRM-SMA-1.5. Final analytical results were received and validated on October 9, 2018. The descriptions and photographs of each enhanced control installed at STRM-SMA-1.5 were provided to the U.S. Environmental Protection Agency on September 10, 2015 (ESHID-600911/ LA-UR-15-26165). Table 3 presents each applicable target action level (TAL) for the analytes monitored.

Table 1
Radiochemical Analytical Results from the First Measurable Storm Event
Collected on September 3, 2018, Following Installation of Enhanced Controls at STRM-SMA-1.5

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-18-154710	Radium-226 and radium-228	Unfiltered	Detect	4.8	0.16	1.374	n/a[b]	NQ	10/09/2018
WT_IPC-18-154710	Gross alpha	Unfiltered	Detect	81.3	5.4	3.62	3.52	NQ	10/09/2018

Note: TAL exceedance ratio is the analytical result divided by the applicable average TAL (ATAL).

[a] NQ = Result is not qualified.

[b] n/a = Not applicable.

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J029 **STRM-SMA-1.5** **Site: 08-009(d)**

Table 2
Metals, Inorganic, and Organic Analytical Results
from the First Measurable Storm Event Collected on
September 3, 2018, Following the Installation of Enhanced Controls at STRM-SMA-1.5

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*	Notification of Data Validation Date
WT_IPC-18-154698	Aluminum	Filtered	Detect	697	0.93	19.3	50	NQ	10/09/2018
WT_IPC-18-154698	Antimony	Filtered	Nondetect	1	0.0016	1	3	U	10/09/2018
WT_IPC-18-154698	Arsenic	Filtered	Nondetect	2	0.22	2	5	U	10/09/2018
WT_IPC-18-154698	Boron	Filtered	Nondetect	15	0.003	15	50	U	10/09/2018
WT_IPC-18-154698	Cadmium	Filtered	Nondetect	0.3	0.3	0.3	1	U	10/09/2018
WT_IPC-18-154698	Chromium	Filtered	Nondetect	3	0.014	3	10	U	10/09/2018
WT_IPC-18-154698	Cobalt	Filtered	Nondetect	1	0.001	1	5	U	10/09/2018
WT_IPC-18-154698	Copper	Filtered	Detect	2.4	0.56	0.3	1	NQ	10/09/2018
WT_IPC-18-154698	Lead	Filtered	Nondetect	0.5	0.029	0.5	2	U	10/09/2018
WT_IPC-18-154710	Mercury	Unfiltered	Detect	0.164	0.21	0.067	0.2	J	10/09/2018
WT_IPC-18-154698	Nickel	Filtered	Detect	0.881	0.0052	0.6	2	J	10/09/2018
WT_IPC-18-154710	Selenium	Unfiltered	Nondetect	2	0.4	2	5	U	10/09/2018
WT_IPC-18-154698	Silver	Filtered	Detect	1.21	2.4	0.3	1	NQ	10/09/2018
WT_IPC-18-154698	Thallium	Filtered	Nondetect	0.6	0.095	0.6	2	U	10/09/2018
WT_IPC-18-154698	Vanadium	Filtered	Detect	1.25	0.012	1	5	J	10/09/2018
WT_IPC-18-154698	Zinc	Filtered	Detect	4.93	0.12	3.3	10	J	10/09/2018
WT_IPC-18-154710	Cyanide, weak acid dissociable	Unfiltered	Nondetect	1.67	0.17	1.67	5	U	10/09/2018
WT_IPC-18-154710	Pentachlorophenol	Unfiltered	Nondetect	3.33	0.18	3.33	11.1	U	10/09/2018
WT_IPC-18-154710	Benzo(a)pyrene	Unfiltered	Nondetect	0.0333	0.0067	0.0333	0.111	U	10/09/2018
WT_IPC-18-154710	Hexachlorobenzene	Unfiltered	Nondetect	0.00702	0.0014	0.00702	0.0225	U	10/09/2018

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

* NQ = Result is not qualified; J = result is estimated; U = result is not detected.

NEWPORT NEWS NUCLEAR BWXT – LOS ALAMOS, LLC
CERTIFICATION OF ANALYTICAL RESULTS

PF: J029 **STRM-SMA-1.5** **Site: 08-009(d)**

Table 3
Applicable TALs

Analyte	Field Preparation	Unit	CAS No.	MQL	ATAL	MTAL
Radium-226 and radium-228	Unfiltered	pCi/L	n/a*	n/a	30	n/a
Gross alpha	Unfiltered	pCi/L	n/a	n/a	15	n/a
Aluminum	Filtered	µg/L	7429-90-5	2.5	n/a	750
Antimony	Filtered	µg/L	7440-36-0	60	640	n/a
Arsenic	Filtered	µg/L	7440-38-2	0.5	9	340
Boron	Filtered	µg/L	7440-42-8	100	5000	n/a
Cadmium	Filtered	µg/L	7440-43-9	1	n/a	0.6
Chromium	Filtered	µg/L	7440-47-3	10	n/a	210
Cobalt	Filtered	µg/L	7440-48-4	50	1000	n/a
Copper	Filtered	µg/L	7440-50-8	0.5	n/a	4.3
Lead	Filtered	µg/L	7439-92-1	0.5	n/a	17
Mercury	Unfiltered	µg/L	7439-97-6	0.005	0.77	1.4
Nickel	Filtered	µg/L	7440-02-0	0.5	n/a	170
Selenium	Unfiltered	µg/L	7782-49-2	5	5	20
Silver	Filtered	µg/L	7440-22-4	0.5	n/a	0.4
Thallium	Filtered	µg/L	7440-28-0	0.5	6.3	n/a
Vanadium	Filtered	µg/L	7440-62-2	50	100	n/a
Zinc	Filtered	µg/L	7440-66-6	20	n/a	42
Cyanide, weak acid dissociable	Unfiltered	µg/L	57-12-5	10	5.2	22
Pentachlorophenol	Unfiltered	µg/L	87-86-5	5	n/a	19
Benzo(a)pyrene	Unfiltered	µg/L	50-32-8	5	0.18	n/a
Hexachlorobenzene	Unfiltered	µg/L	118-74-1	5	0.0029	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.