

**Analytical Results from the First Measurable
Storm Event Following Installation of Control
Measures at W-SMA-1**

November 19, 2013

NPDES PERMIT NO. NM0030759

LA-UR-13-28739

**LOS ALAMOS NATIONAL LABORATORY
ANALYTICAL RESULTS FROM THE FIRST MEASURABLE STORM EVENT**

PF: W001

W-SMA-1

Sites: 16-017(j)-99
16-026(c2)
16-026(v)

Tables 1 and 2 present the analytical results received from the confirmation monitoring samples collected from the first measurable storm event following the installation of enhanced controls at site monitoring area (SMA) W-SMA-1. The descriptions and photographs of each enhanced control installed at W-SMA-1 were provided to the U.S. Environmental Protection Agency on June 4, 2013 (EP2013-0104/LA-UR-13-22917). 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 12, 2013, Following Installation of Enhanced Controls, SMA W-SMA-1**

Sample ID	Analyte	Field Prep	Detect Status	Result (pCi/L)	TAL Exceedance Ratio ^a	Minimum Detectable Activity (pCi/L)	Uncertainty (pCi/L)	Qualifier ^b	Data Receipt Date
WT_IPC-13-32167	Gross alpha	Unfiltered	Detect	314	20.933	14.6	11.5	NQ	10/28/13
WT_IPC-13-32167	Radium-226 and Radium-228	Unfiltered	Nondetect	0.953	n/a ^c	1.02	0.349	U	10/28/13

^a Preliminary average TAL (ATAL) exceedance ratio from first of two possible samples.

^b Qualifier: NQ = Result is not qualified; U = result is not detected.

^c n/a = Value is not applicable.

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**Table 2
Metals and Organic Analytical Results from the First Measurable Storm Event
Collected on September 12, 2013, Following Installation of Enhanced Controls, SMA W-SMA-1**

Sample ID	Analyte	Field Prep	Detect Status	Result	Units	TAL Exceedance Ratio ^a	Method Detection Limit	Quantitation Limit	Qualifier ^b	Data Receipt Date
WT_IPC-13-32167	Cyanide, weak acid dissociable	Unfiltered	Nondetect	0.005	mg/L	n/a ^c	0.00167	0.005	U	10/24/13
WT_IPC-13-32495	Aluminum	Filtered	Detect	1010	µg/L	1.347	15	50	NQ	10/25/13
WT_IPC-13-32495	Antimony	Filtered	Nondetect	3	µg/L	n/a	1	3	U	10/25/13
WT_IPC-13-32495	Arsenic	Filtered	Nondetect	5	µg/L	n/a	1.7	5	U	10/25/13
WT_IPC-13-32495	Boron	Filtered	Detect	18.8	µg/L	0.004	15	50	J	10/25/13
WT_IPC-13-32495	Cadmium	Filtered	Nondetect	1	µg/L	n/a	0.11	1	U	10/25/13
WT_IPC-13-32495	Chromium	Filtered	Nondetect	10	µg/L	n/a	2	10	U	10/25/13
WT_IPC-13-32495	Cobalt	Filtered	Detect	1.45	µg/L	0.001	1	5	J	10/25/13
WT_IPC-13-32495	Copper	Filtered	Detect	4.01	µg/L	0.933	0.35	1	NQ	10/25/13
WT_IPC-13-32495	Lead	Filtered	Detect	0.806	µg/L	0.047	0.5	2	J	10/25/13
WT_IPC-13-32167	Mercury	Unfiltered	Detect	0.124	µg/L	0.161	0.067	0.2	J	10/28/13
WT_IPC-13-32495	Nickel	Filtered	Detect	2.28	µg/L	0.013	0.5	2	NQ	10/25/13
WT_IPC-13-32167	Selenium	Unfiltered	Nondetect	5	µg/L	n/a	1.5	5	U	10/28/13
WT_IPC-13-32495	Silver	Filtered	Nondetect	1	µg/L	n/a	0.2	1	U	10/25/13
WT_IPC-13-32495	Thallium	Filtered	Nondetect	2	µg/L	n/a	0.45	2	U	10/25/13
WT_IPC-13-32495	Vanadium	Filtered	Detect	5.01	µg/L	0.050	1	5	NQ	10/25/13
WT_IPC-13-32495	Zinc	Filtered	Detect	12.8	µg/L	0.305	3.3	10	NQ	10/25/13

^a Preliminary ATAL exceedance ratio from first of two possible samples.

^b Qualifier: U = Result is not detected; NQ = result is not qualified; J = result is estimated.

^c n/a = Value is not applicable.

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**Table 3
Applicable TALs**

Analyte	Units	CAS No.	MQL	ATAL	MTAL
Aluminum, Dissolved	µg/L	7429-90-5	2.5	n/a*	750
Antimony, Dissolved	µg/L	7440-36-0	60	640	n/a
Arsenic, Dissolved	µg/L	7440-38-2	0.5	9	340
Boron, Dissolved	µg/L	7440-72-8	100	5000	n/a
Cadmium, Dissolved	µg/L	7440-43-9	1	n/a	0.6
Chromium, Dissolved	µg/L	7440-47-3	10	n/a	210
Cobalt, Dissolved	µg/L	7440-48-4	50	1000	n/a
Copper, Dissolved	µg/L	7440-40-8	0.5	n/a	4.3
Cyanide, weak acid dissociable	µg/L	57-12-5	10	5.2	22
Lead, Dissolved	µg/L	7439-92-1	0.5	n/a	17
Mercury	µg/L	7439-97-6	0.005	0.77	1.4
Nickel, Dissolved	µg/L	7440-02-0	0.5	n/a	170
Selenium	µg/L	7782-49-2	5	5	20
Silver, Dissolved	µg/L	7440-22-4	0.5	n/a	0.4
Thallium, Dissolved	µg/L	7440-28-0	0.5	6.3	n/a
Vanadium, Dissolved	µg/L	7440-62-2	50	100	n/a
Zinc, Dissolved	µg/L	7440-66-6	20	n/a	42
Gross alpha	pCi/L	n/a	n/a	15	n/a
Radium-226 and Radium-228	pCi/L	n/a	n/a	30	n/a

Notes: CAS = Chemical Abstracts Service; MQL = minimum quantification level;
MTAL = maximum TAL.

*n/a = Value is not applicable.