

**Analytical Results from the First Measurable  
Storm Event Following Installation of Control  
Measures at A-SMA-2.7**

**November 19, 2013**

**NPDES PERMIT NO. NM0030759**

**LA-UR-13-28729**



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

PF: A004

A-SMA-2.7

Sites: 39-002(c)  
39-008

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) A-SMA-2.7. The descriptions and photographs of each enhanced control installed at A-SMA-2.7 were provided to the U.S. Environmental Protection Agency on September 20, 2012 (EP2012-0216/LA-UR-12-23185). 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 13, 2013, Following Installation of Enhanced Controls, SMA A-SMA-2.7**

Sample ID	Analyte	Field Prep	Detect Status	Result (pCi/L)	TAL Exceedance Ratio <sup>a</sup>	Minimum Detectable Activity (pCi/L)	Uncertainty (pCi/L)	Qualifier <sup>b</sup>	Data Receipt Date
WT_IPC-13-32036	Radium-226 and Radium-228	Unfiltered	Detect	5.24	0.175	1.1	0.606	NQ	10/21/13
WT_IPC-13-32036	Gross alpha	Unfiltered	Detect	175	11.667	5.82	5.38	NQ	10/21/13

<sup>a</sup> Preliminary average TAL (ATAL) exceedance ratio from first of two possible samples.

<sup>b</sup> Qualifier: NQ = Result is not qualified.

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**Table 2  
Metals and Organic Analytical Results from the First Measurable Storm Event  
Collected on September 13, 2013, Following Installation of Enhanced Controls, SMA A-SMA-2.7**

Sample ID	Analyte	Field Prep	Detect Status	Result	Units	TAL Exceedance Ratio <sup>a</sup>	Method Detection Limit	Quantitation Limit	Qualifier <sup>b</sup>	Data Receipt Date
WT_IPC-13-32036	Cyanide, weak acid dissociable	Unfiltered	Nondetect	0.005	mg/L	n/a <sup>c</sup>	0.00167	0.005	U	10/21/13
WT_IPC-13-32490	Aluminum	Filtered	Detect	185	µg/L	0.247	15	50	NQ	10/21/13
WT_IPC-13-32490	Antimony	Filtered	Nondetect	3	µg/L	n/a	1	3	U	10/21/13
WT_IPC-13-32490	Arsenic	Filtered	Nondetect	5	µg/L	n/a	1.7	5	U	10/21/13
WT_IPC-13-32490	Boron	Filtered	Detect	19.5	µg/L	0.004	15	50	J	10/21/13
WT_IPC-13-32490	Cadmium	Filtered	Nondetect	1	µg/L	n/a	0.11	1	U	10/21/13
WT_IPC-13-32490	Chromium	Filtered	Nondetect	10	µg/L	n/a	2	10	U	10/21/13
WT_IPC-13-32490	Cobalt	Filtered	Nondetect	5	µg/L	n/a	1	5	U	10/21/13
WT_IPC-13-32490	Copper	Filtered	Detect	2.88	µg/L	0.670	0.35	1	NQ	10/21/13
WT_IPC-13-32490	Lead	Filtered	Nondetect	2	µg/L	n/a	0.5	2	U	10/21/13
WT_IPC-13-32036	Mercury	Unfiltered	Detect	0.162	µg/L	0.210	0.067	0.2	J	10/21/13
WT_IPC-13-32490	Nickel	Filtered	Detect	1.02	µg/L	0.006	0.5	2	J	10/21/13
WT_IPC-13-32036	Selenium	Unfiltered	Detect	1.6	µg/L	0.320	1.5	5	J	10/21/13
WT_IPC-13-32490	Silver	Filtered	Nondetect	1	µg/L	n/a	0.2	1	U	10/21/13
WT_IPC-13-32490	Thallium	Filtered	Nondetect	2	µg/L	n/a	0.45	2	U	10/21/13
WT_IPC-13-32490	Vanadium	Filtered	Detect	1.32	µg/L	0.013	1	5	J	10/21/13
WT_IPC-13-32490	Zinc	Filtered	Nondetect	10	µg/L	n/a	3.3	10	U	10/21/13
WT_IPC-13-32036	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	Unfiltered	Nondetect	0.267	µg/L	n/a	0.0856	0.267	U	10/17/13
WT_IPC-13-32036	Trinitrotoluene [2,4,6-] (TNT)	Unfiltered	Nondetect	0.267	µg/L	n/a	0.0856	0.267	U	10/17/13

<sup>a</sup> Preliminary average TAL (ATAL) exceedance ratio from first of two possible samples.

<sup>b</sup> Qualifier: U = Result is not detected; NQ = result is not qualified; J = Result is estimated.

<sup>c</sup> 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
RDX	µg/L	121-32-4	n/a	200	n/a
TNT	µg/L	118-96-7	n/a	20	n/a
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.