

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

September 5, 2014

NPDES PERMIT NO. NM0030759

LA-UR-14-26800

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

PF: I002

PT-SMA-1

Sites: 15-004(f)
15-008(a)

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) PT-SMA-1. The descriptions and photographs of each enhanced control installed at PT-SMA-1 were provided to the U.S. Environmental Protection Agency on August 27, 2012 (EP2012-0199/LA-UR-12-22530). 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 July 9, 2014, Following Installation of Enhanced Controls, SMA PT-SMA-1**

Sample ID	Analyte	Field Prep	Detect Status	Result (pCi/L)	TAL Exceedance Ratio	Minimum Detectable Activity (pCi/L)	Uncertainty (pCi/L)	Qualifier ^a	Data Receipt Date
WT_IPC-14-55973	Radium-226 and Radium-228	Unfiltered	Nondetect	3.85	n/a ^b	1.37	1.38	U	11-Aug-14
WT_IPC-14-55973	Gross alpha	Unfiltered	Detect	650	43.333	9.73	11.5	NQ	11-Aug-14

Note: TAL exceedance ratio is a preliminary average from the first of at least two confirmation samples.

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

^b 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 July 9, 2014, Following Installation of Enhanced Controls, SMA PT-SMA-1**

Sample ID	Analyte	Field Prep	Detect Status	Result (µg/L)	TAL Exceedance Ratio	Method Detection Limit	Quantitation Limit	Qualifier ^a	Data Receipt Date
WT_IPC-14-55973	Cyanide, Weak acid dissociable	Unfiltered	Nondetect	0.005	n/a ^b	0.00167	0.005	U	11-Aug-14
WT_IPC-14-55946	Aluminum	Filtered	Detect	494	0.659	15	50	NQ	11-Aug-14
WT_IPC-14-55946	Antimony	Filtered	Nondetect	3	n/a	1	3	U	11-Aug-14
WT_IPC-14-55946	Arsenic	Filtered	Nondetect	5	n/a	1.7	5	U	11-Aug-14
WT_IPC-14-55946	Boron	Filtered	Detect	17.1	0.003	15	50	J	11-Aug-14
WT_IPC-14-55946	Cadmium	Filtered	Nondetect	1	n/a	0.11	1	U	11-Aug-14
WT_IPC-14-55946	Chromium	Filtered	Nondetect	10	n/a	2	10	U	11-Aug-14
WT_IPC-14-55946	Cobalt	Filtered	Detect	1.04	0.001	1	5	J	11-Aug-14
WT_IPC-14-55946	Copper	Filtered	Detect	45.5	10.581	0.35	1	NQ	11-Aug-14
WT_IPC-14-55946	Lead	Filtered	Detect	0.849	0.050	0.5	2	J	11-Aug-14
WT_IPC-14-55973	Mercury	Unfiltered	Detect	0.145	0.188	0.067	0.2	J	11-Aug-14
WT_IPC-14-55946	Nickel	Filtered	Detect	1.1	0.006	0.5	2	J	11-Aug-14
WT_IPC-14-55973	Selenium	Unfiltered	Nondetect	5	n/a	1.5	5	U	11-Aug-14
WT_IPC-14-55946	Silver	Filtered	Nondetect	1	n/a	0.2	1	U	11-Aug-14
WT_IPC-14-55946	Thallium	Filtered	Nondetect	2	n/a	0.45	2	U	11-Aug-14
WT_IPC-14-55946	Vanadium	Filtered	Detect	3.56	0.036	1	5	J	11-Aug-14
WT_IPC-14-55946	Zinc	Filtered	Detect	4.59	0.109	3.3	10	J	11-Aug-14
WT_IPC-14-55973	RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	Unfiltered	Nondetect	0.313	n/a	0.1	0.313	U	11-Aug-14
WT_IPC-14-55973	TNT (Trinitrotoluene[2,4,6-])	Unfiltered	Nondetect	0.313	n/a	0.1	0.313	U	11-Aug-14

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Table 2 (continued)

Sample ID	Analyte	Field Prep	Detect Status	Result (µg/L)	TAL Exceedance Ratio	Method Detection Limit	Quantitation Limit	Qualifier ^a	Data Receipt Date
WT_IPC-14-55973	Benzo(a)pyrene	Unfiltered	Nondetect	0.962	n/a	0.288	0.962	UJ	11-Aug-14
WT_IPC-14-55973	Hexachlorobenzene	Unfiltered	Nondetect	9.62	n/a	2.88	9.62	UJ	11-Aug-14
WT_IPC-14-55973	Pentachlorophenol	Unfiltered	Nondetect	9.62	n/a	2.88	9.62	UJ	11-Aug-14

Note: TAL Exceedance Ratio is a preliminary average from the first of at least two confirmation samples.

^a Qualifier: U = Result is not detected; NQ = result is not qualified; J = result is estimated; UJ = result is not detected and the detection limit is estimated.

^b n/a – Value is not applicable.

**Table 3
Applicable TALs**

Analyte	Units	CAS No.	MQL	ATAL	MTAL
Total Polychlorinated biphenyl	µg/L	1336-36-3	n/a*	0.00064	n/a
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

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Table 3 (continued)

Analyte	Units	CAS No.	MQL	ATAL	MTAL
Zinc, Dissolved	µg/L	7440-66-6	20	n/a	42
Pentachlorophenol	µg/L	87-86-5	5	n/a	19
Benzo(a)pyrene	µg/L	50-32.8	5	0.18	n/a
Hexachlorobenzene	µg/L	118-74-1	5	0.0029	n/a
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;
ATAL = average TAL; MTAL = maximum TAL.

* n/a = Value is not applicable.