

Sampling Implementation Plan Process Overview and Update

Process for Individual Permit Sampling Locations

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December 21, 2017



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Sampling Implementation Plan (SIP) Process: Background



- Implemented per the draft language in EPA's March 2014 draft Individual Permit (IP). This language was agreed upon by Los Alamos National Security, LLC, and the U.S. Department of Energy (the Permittees) and NMED's Surface Water Quality Bureau (NMED-SWQB).
- Developed jointly by the Permittees and NMED-SWQB
- Evaluates existing storm water and sediment data for each Site Monitoring Area (SMA)/Site combination (450+ total combinations) to
 - evaluate storm water monitoring lists and
 - evaluate storm water monitoring locations.



Documentation for Review



- Per the IP, monitor runoff from regulated Sites made up of solid waste management units (SWMUs) and areas of concern (AOCs)
- Review Site histories to determine Site-related potential pollutants of concern. We review
 - historical information,
 - environmental investigation reports, and
 - soil and storm water sampling data.



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Current and Future Work



- To date, LANL has completed 406 SMA/Site combination site visits.
- As a result, we have completed the following:
 - Over 84% of current monitoring locations have been determined to be representative of Site discharge.
 - This year, 25 samplers have been moved. Monitoring at these new locations was completed. Seven of these sites had detections above the target action level (TAL). Fieldwork is being planned for next year.
 - This year, 14 investigative samplers have been installed. All of these sites collected samples. Six of the sites had detections above the TAL. Fieldwork is being planned for next year.
- Approximately 50 more SMA/Site visits are planned, and field visits will continue until all SMA/Site combinations have been reviewed.
- To date, there are 14 additional sampler moves planned for next year, and 6 more investigative samplers to be added.



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No Exposure Site, S-SMA-3.52





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Direct Flow to the Sampler S-SMA-3.51







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Waste Water Treatment Plant



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Run-on and Runoff Sampling as Part of the SIP



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Results from Samples Collected • Los Alamo from the Same Storm at T-SMA-6.8

- Aluminum at 2640 μg/L (vs. 750 μg/L TAL) in the run-on sample
- Aluminum at 99 μg/L (below TAL) in the runoff sample
- Copper at 5.51 μg/L (vs. 4.3 μg/L TAL) in the run-on sample
- Copper at 4.95 µg/L (vs. 4.3 µg/L TAL) in the runoff sample



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Run-on and Runoff at 2M-SMA-1.43



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2M-SMA-1.43 Sample Results from Multiple Storms



- 241 µg/L in run-on (below TAL)
- 516 µg/L in runoff (below TAL)
- Aluminum, Second Storm
 - 602 μ g/L in run-on (below TAL)
 - 810 μ g/L in runoff (above TAL of 750 μ g/L)

Copper, First Storm

- 3.48 μ g/L in run-on (below TAL)
- 4.8 μ g/L in runoff (above TAL of 4.3 μ g/L)
- Copper, Second Storm
 - 1.74 μg/L in run-on (below TAL)
 - 2.91 µg/L in runoff (below TAL)



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Monitoring Location Added as a Result of the SIP Process



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Monitoring Results



Results from this year's sampling:

- Aluminum exceeded the TAL and background values.
- The Site is a potential source of the exceedance.
- We are working to determine additional controls to be installed at this Site.



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Moved Sampler to Address Chromium Contamination in Soil

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Monitoring Results



Results from this year's sampling:

- Chromium was not detected above TAL.
- However, aluminum, copper, and polychlorinated biphenyls (PCBs) were detected above TAL but within background.



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Summary



Overall, the SIP process consists of the following:

- Refining the sampling at the IP sites
- Identifying new areas for monitoring based on Site histories
- Demonstrating the majority of the IP Sites have been monitored using the correct locations over the last 7 years
- Increasing confidence in the IP monitoring program



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