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**NPDES INDIVIDUAL PERMIT FOR STORMWATER DISCHARGES FROM LEGACY CONTAMINATION
SITES AT LOS ALAMOS NATIONAL LABORATORY**

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ABSTRACT: Historical practices at Los Alamos National Laboratory (LANL) have resulted in contamination at many sites, referred to as solid waste management units (SWMUs) and areas of concern (AOCs). Given this legacy contamination, the EPA, under the NPDES program, issued an Individual Permit (IP) to LANL in 2010. The sites listed in the IP are associated with historical operations dating back to the Manhattan Project era. Under the IP, 405 permitted sites must be managed to prevent transport of contaminants off-site via storm water runoff. Potential contaminants of concern include metals, organics, high explosives, and radionuclides present near the top of the soil profile and are susceptible to storm event-driven transport in run-off. Managing these sites is challenging at LANL because of its location on the Pajarito Plateau, a unique mesa-top canyon environment. Many of the canyons are over 500 feet deep, while the mountains draining into LANL property are over 9000 feet in elevation. The IP relies on nonnumeric technology-based effluent limits in conjunction with a monitoring program using site-specific control measures that reflect best industry practices. Additional corrective actions are required when New Mexico water-quality standards are exceeded. Complying with the IP consists of five phases: (1) installing and maintaining baseline controls; (2) confirmation sampling to support baseline controls; (3) corrective actions when standards are exceeded; (4) confirmation sampling; and (5) closeout or alternative compliance. The purpose of this paper is to (1) outline the requirements of the IP; (2) describe the assessment and monitoring programs LANL has developed to meet the requirements of the IP; (3) describe the different levels of storm water controls and corrective actions LANL has completed and is currently planning; and (4) outline future work that may take place to support the IP and watershed management at LANL.

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