Title: Understanding Analytical Results Plots for the Individual Permit, Poster, Individual Permit for Storm Water, NPDES Permit No. NM0030759

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Intended for: Public

Purpose: This poster was prepared for the June 2013 Individual Permit for Storm Water (IP) public meeting. The purpose of the meeting was to update the public on implementation of the permit as required under Part 1.I (7) of the IP (National Pollutant Discharge Elimination System Permit No. NM0030759). The poster will be available on Los Alamos National Laboratory’s (LANL’s) public website.
Understanding Analytical Results Plots for the Individual Permit

Analytical results plots graphically present storm water data in a way that is easy to understand. Analytical plots show results in a manner that allows direct comparison with the target action levels (TALs) as defined in the Individual Permit (IP) for Los Alamos National Laboratory (the Laboratory). Each element of the plot is explained in detail in the text boxes surrounding the plot and in the text to the left. Analytical results plots for each site monitoring area (SMA) are included in the annual Site Discharge Pollution Prevention Plan (SDPPP).

Analytical results for each analyte presented on the plots are normalized by calculating an exceedance ratio. This ratio is defined as the analytical result divided by the applicable TAL. Thus, results exceeding the TAL will be greater than an exceedance ratio of 1.0. The exceedance ratios are plotted on a log scale to allow the viewing of a larger range of values. A solid symbol on the plot represents a result that is detected above the practical quantitation limit (PQL), while an empty symbol represents a value that is considered a nondetect. In a few instances, an empty symbol is plotted above an exceedance ratio of 1.0. In these cases, the value is nondetect and is represented graphically by the PQL. The PQL is normally 3 to 6 times the method detection limit (MDL) and is considered the lowest concentration that can be accurately quantified rather than simply detected.

Background storm water values for some metals, gross alpha, and polychlorinated biphenyls (PCBs), where available, are also plotted to provide additional points of reference when evaluating the significance of the analytical result. The process for determining background storm water values for PCBs is presented in "Polychlorinated Biphenyls in Precipitation and Stormwater within the Upper Rio Grande Watershed." The process for determining background storm water values for metals and selected radionuclides is presented in "Background Metal Concentrations and Radioactivity in Storm Water on the Pajarito Plateau, Northern New Mexico."