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Mr. David Cobrain
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Dr. East
Building One
Santa Fe, NM 87505

RE: Draft Technical Review Comments on the Development of a 95% Upper Confidence Limit, Solid Waste Management Units 48A and 49 (ST-26), Cannon Air Force Base, New Mexico, July 2014

Dear Mr. Cobrain:

This letter addresses the technical review of the "Development of a 95% Upper Confidence Limit, Solid Waste Management Units 48A and 49 (ST-26)", Cannon Air Force Base (CAFB), New Mexico, July 2014.

As noted in the above-referenced report, Solid Waste Management Units (SWMUs) 48A and 49 have a long history of past evaluations/corrective action. However, it appears that NMED has previously issued corrective action complete (CAC) (2010 approval letter). Regardless, CAFB provided additional evaluation of the soil data due to the presence of total petroleum hydrocarbon (TPH). TPH concentrations were assumed to be representative of unknown oil.

The historical maximum site concentration post removal of the bulk of contaminated soil slightly exceeded the TPH screening level for unknown oil [NMED Soil Screening Guidance (SSG) value of 1,000 milligrams per kilogram (mg/kg)]. In accordance with NMED SSG, CAFB derived 95% upper confidence levels of the mean (95% UCL) for three data sets: 0-10 feet (ft) below ground surface (bgs), 0-10 ft bgs for soil including excavation walls, and all soil data (including depths to 30 ft bgs). The 95% UCLs were derived using appropriate methods (ProUCL) and assumptions. The resulting 95% UCLs for each of the three scenarios were all below the NMED SSG for unknown oil (residential and industrial) level of 1,000 mg/kg.

Following NMED SSG, if unknown oil is suspected, soil analyses must also include individual components to include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs). These analytical suites were included in the 2007 corrective action sampling with all results being below residential soil screening levels.

The TPH screening levels for unknown oil contained within the NMED SSG based on "GW-1" are designed to be protective of groundwater and are not necessarily purely risk-based values but

may be based on a ceiling level (This is why the SSG requires if soil contains oil from unknown sources, the soil must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present.). Corrective actions have included source removal. Depth to groundwater is noted as being an average of 330 feet below ground surface. The site is now covered with pavement which prevents infiltration of water that could push residual contamination to groundwater. Even though site maximum soil concentrations slightly exceed the TPH screening value for unknown oil, the maximum concentrations represent a very small area and the 95% UCLs are below the screening levels. It is unlikely that residual contamination in soil poses a threat to groundwater.

There have been historical detections of VOCs in SWMU 48A as noted in the site history summary. However, as noted in our technical review comments dated February 19, 2008 generated on the "Corrective Measures Study at SWMUs 31, 48A, 77 and 127" vapor intrusion was not evaluated for SWMU 48A but because of the low level and sporadic detections of VOCs, the vapor intrusion pathway was not deemed a significant pathway. In looking at the current 2014 version of the NMED Soil Screening Guidance, inclusion of the vapor intrusion scenario is not quantitatively required if VOCs are sporadically detected and below risk levels. The 2008 conclusion concerning vapor intrusion is supported by current guidance and vapor intrusion is not required for this site (SWMUs 48A and 49).

The only concern with SWMUs 48A and 49 is that the maximum detections are elevated above TPH screening levels for unknown oil and these exceedances are from the two samples collected directly in the area of known impact. All the other results are from outside of the areas where the former storage tanks were located (Figure 5-1). It is possible that if additional samples were taken in the footprint of the former tanks (the red and red/blue hatched rectangles on Figure 5-1), data could show that there is not small localized hot spot but rather a larger area of slightly elevated contamination. However, given the total area represented by the former tanks is relatively small, sampling around the removals do not show elevated concentrations, 95% UCLs are below screening levels, current use of the sites is industrial, and these sites are covered in asphalt, it is agreed that the risk is low at these sites and additional corrective action is not warranted.

The previous conclusion that SWMUs 48A and 49 meet the requirements for CAC is confirmed with this additional 95% UCL analysis.

If you or any of your staff have questions, please contact me at (801) 451-2864 or via email at paigewalton@msn.com.

Thank you,

Paige Walton

Paige Walton
AQS Senior Scientist and Program Manager

cc: Dan Comeau, NMED (electronic)
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