

Upper Sandia Canyon AOC 01-007(k)

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From: Cobrain, Dave, NMENV
Sent: Wednesday, October 15, 2014 9:07 AM
To: Roberts, Kathryn M (kroberts@lanl.gov)
Cc: Dhawan, Neelam, NMENV
Subject: AOC 01-007(k) draft NOD response input
Attachments: AOC 01-007(k) guidance on LANL draft PAH NOD responses 10-15-14.pdf



Katie,

The attached if for your use and includes NMED's feedback on the draft comments responses to NOD comments 3 and 9 that you sent about three weeks ago. The intent is to provide some issues to consider when addressing PAHs and potentially other contaminants during site assessments. It's not exhaustive but it identifies issues that we noted for AOC 01-007(k) that will likely apply to other sites even though the existing analytical data for AOC 01-007(k) don't indicate an exceedence of residential risk levels with all constituents included in the risk assessment. NMED is not requiring additional sampling at AOC 01-007(k) and, if PAHs are carried forward in the risk assessment, we anticipate that it will not change the conclusions but we won't know for sure until it's done. Hopefully this will provide some clarification with regard to our previous discussions.

Dave

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Review of LANL's Draft Response to NOD comments for AOC 01-007(k) (dated 9-24-14)

In a meeting between NMED and LANL on July 31, 2014 regarding the NOD for AOC 01-007(k), NMED agreed to send the final NOD to the Permittees, which would allow the Permittees to see the complete comments rather than the summary provided in the emailed correspondence notification that precipitated the meeting. The Permittees committed to sending a draft response to NMED's NOD comments for Investigation Report for AOC 01-007(k) so that NMED could provide input on the adequacy of the response as it relates to the defensibility of NMED's approval. The Permittees' draft response consisted of two documents that appear to support the Permittees' position that poly aromatic hydrocarbons (PAHs) should not be considered contaminants of potential concern (COPCs) at sites subject to corrective action including AOC 01-007(k). The documents address comments 3 and 9 of the NOD. Both comments relate to PAH contamination at the site.

NMED recognizes that PAHs are not a human health risk at AOC 01-007(k), NMED provides the following input that will likely be relevant, in whole or in part, at other sites listed on the LANL RCRA Permit as requiring corrective action with the intent of providing information for the Permittee to consider when making the case for the ubiquitous presence of PAHs in an area that includes a SWMU/AOC. **The following comments are related to the issues addressed at AOC 01-007(k) and are not all-inclusive with regard to site assessments and potential site-specific issues at other SWMUs/AOCs at other locations.**

1. The NMED's *Risk Assessment Guidance for Site Investigations and Remediation* (2012) allows the use of additional lines of evidence including site history to justify exclusion of a COPC from further consideration. The Permittees state that PAHs were never used at these physics laboratories housed in buildings U and W where only radiological experiments were conducted. In general, laboratories utilize various chemicals to conduct experiments in addition to the identified radionuclides.
2. No documentation is provided to support the claim that no chemicals other than radiological chemicals were used. The Permittees could provide laboratory chemical inventory records which could be used to establish the chemicals (e.g., solvents, degreasers) that were used during these experiments. The Laboratory's standard operating procedures could shed a light on how the waste generated at the laboratories was handled. Generally, laboratories and other industrial building use chemicals for maintenance purposes. Provide information on the cleaning agents, degreasers, and lubricants that were used at that time and any available documentation on how these were managed and discuss how the chemicals were used. Include a discussion of any accidental spills of these chemicals, if documented. It is likely that these chemicals were disposed of in laboratory sinks or drains (e.g., floor drains) which was a common practice in the past. Discuss whether any investigation of soil or drain lines/sumps was conducted

at the time of demolition of the former Laboratory buildings or subsequent structures. It is possible that the buildings had backup generators or heating systems that used diesel fuel/heating oil that could have contributed to site contamination. A review of available building plans or aerial photographs could provide information related to building systems.

3. The Permittees state that the presence of an asphalt parking lot is the source of the detections of PAHs at the site. The Permittees provided several statements that fill containing asphalt is considered "clean fill" by the New Mexico Solid Waste Act and by the State of Colorado. The New Mexico Solid Waste Act definition of construction and demolition debris cited at 73-9-3(D) makes no mention of asphalt pavement. It's unlikely that asphalt roofing materials would be in fill used for construction of roadways and parking lots. Also the definition of "clean fill at 20.9.2.7.C(4) NMAC as stated in the response cannot include solid waste that contains radioactive waste. Radionuclides were detected in samples of the fill from AOC 01-007(k). Part of the definition of "clean fill" states that "...the fill has not been subjected to any spill or release". For example, the presence of radionuclides in the fill indicates that there was a release(s) that affected the fill; therefore it would not be considered "clean fill."

In addition, the source of the fill is not identified. The Permittees state that 20.9.2.11(C) NMAC exempts the fill but the exemption only applies to fill that was generated on the subject property. There is no way for the Permittees to verify where the fill present on the site originated; therefore, the exemption would not apply. More importantly, this site is regulated under the New Mexico Hazardous Waste Act not the Solid Waste Act.

Finally, the information provided is irrelevant to this site. The solid waste rules related to fill do not address site investigation and related human health and ecological risk, which is the purpose of investigations being conducted under the Consent Order (i.e., RCRA corrective action). The Permittee would need to present evidence that this site was used as a disposal site for solid waste. AOC 01-007(k) does not meet the definition of a solid waste disposal area or solid waste facility as defined at 20.9.2.7.S (10) and (11), respectively. The definition of a solid waste facility at 20.9.2.7(11)(b) specifically excludes "a facility that is permitted pursuant to the provisions of the Hazardous Waste Act, NMSA 1978, Sections 74-4-1 through 74-4-14, as amended;" therefore, references to the Solid Waste Regulations do not apply at this site.

4. The Permittees assume that a piece of asphalt in the soil samples could be responsible for positive detections of PAHs at this site. The sample that had detected concentrations of PAHs at AOC 01-007(k) was not soil but rather a sample collected from the Qbt3 tuff. The site data should be reviewed to ensure that native materials do not also contain

PAHs. Provide a convincing argument that the PAHs detected in a sample collected from tuff is from a paved asphalt parking lot. The text of the response states that “PAHs do not easily dissolve in water”. The statement does not support a position that the PAHs migrated from asphalt in the fill.

5. The Permittees could cite and provide the chromatographs obtained from the EPA Method 8015M analytical results to demonstrate that detected semi volatile compounds are related to asphalt. For AOC 01-007(k), the Permittees have not made the case that the PAHs are from asphalt, exclusively or otherwise, as opposed to another source containing PAHs such as fuels or lubricants.
6. The Permittees think it is likely that Los Alamos County used fill that contained reclaimed asphalt pavement, but no documentation is provided to support this conclusion. Assumptions are not considered to be defensible site history. A total of 48 samples were collected at the site, out of that 11 samples were collected from fill/soil and 37 samples were collected from tuff. The only sample that had detected concentration of PAHs was a sample collected from tuff, none of the soil/fill samples had detections of PAHs which does not support the assumption that PAHs are from “clean fill”. Ensure that the site-specific data rather than general assumptions support the conclusions.
7. The Permittees noted a “slight discrepancy” between comments 3 and 9. To clarify, the NMED may not require site specific background samples, if the Permittees are able to demonstrate that PAH contamination is not site related by providing sufficient documentation of the site history and the history of surrounding sites. It is not possible to provide a universal definition of what constitutes adequate site history. NMED will make the determination with regard to requiring site specific background samples on a case by case basis. The Permittees should consider obtaining samples to demonstrate alternate sources of PAHs that could support a position related to the ubiquity of PAHs during future site investigations, if it is suspected that PAHs are ubiquitous in the vicinity of a SWMU/AOC.
8. The Permittees state that “[a]ttempting to remediate soil with PAHs above residential screening levels in this circumstance would essentially create a ‘clean island’ in the middle of an area paved with asphalt”. The Permittees would have to collect samples from areas not impacted by site activities to demonstrate that PAH contamination above residential soil screening levels exists in the general vicinity of the site to support the position that site remediation would create a “clean island”.
9. NMED notes that the detected concentrations of PAHs at AOC 01-007(k), if included in the risk assessment, would not pose a threat to human health or the environment. This

issue is being discussed because the Permittees feel that “[t]he hazardous Waste Bureau’s treatment of PAH compounds from asphalt as COPCs will continue to present problems in the future unless resolved.”

10. The Permittees have not been able to demonstrate that PAH contamination is not site-related at AOC 01-007(k); therefore, revise the risk screening to include PAHs for this site as part of the response to the NOD. The revised risk screening will likely demonstrate that the site qualifies for corrective action complete without controls status.