CAFB 2008

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February 19, 2008

FEB 22 2008

DCN: NMED-2008-02

Mr. David Cobrain
Hazardous Waste Bureau
2905 Rodeo Park Dr. E/Bldg 1
Santa Fe, NM 87505

RE: Response to Comments on Previous Responses to Comments Notice of Disapproval (NPD) for the *Corrective Measures Study at SWMUs 31, 48A, 77, and 127* Cannon Air Force Base, New Mexico

Dear Mr. Cobrain:

This letter serves as a deliverable for work regarding Cannon Air Force Base (AFB) and addresses our evaluation of the second set of response to technical review comments on the *Corrective Measures Study at SWMUs 31, 48A, 77, and 127* (herein referred to as the CMS) Cannon AFB, New Mexico. As part of our evaluation, the initial State of New Mexico comments (December 2006) and Cannon AFB responses (April 2007), as well as the second set of responses by Cannon AFB dated October 2007 were reviewed. As noted in the second set of responses, all comments had been adequately addressed with the exception of Specific Comments 10, 13, 15, 18, 19 and General Comment Number 3. A discussion of our evaluation of the additional data provided for these comments follows.

Specific Comments 10 and 19

These two comments indicated that the CMS (and subsequent revisions) did not include the most recent toxicological data. In the second set of the response to comments, Cannon AFB provided a discussion of the Region 6 media-specific screening levels (MSSL) that have been modified since the CMS was initially drafted. Data from the 2007 MSSL tables were applied. It has been determined that only detected concentrations of benzo(k)fluorantene will now exceed the MSSL and that the CMS should be revised to include benzo(k)fluorantene as a constituent of potential concern. An evaluation of site-specific target levels (SSTL), using toxicity equivalency factors was also presented and the results indicated that the detected site concentrations for benzo(k)fluorantene would be below this target level. While not directly addressed in the response, it should be noted that the MSSL for benzo(k)fluorantene of 1.5 mg/kg is based upon a target risk level of 1E-06. Using the State of New Mexico target risk level of 1E-05, the MSSL would be 15 mg/kg, which is above the detected concentrations of benzo(k)fluorantene at the site.

As both the calculated SSTL and a MSSL based upon a risk factor of 1E-05 indicate that there is elevated risk due to detections of benzo(k)fluorantene, we concur that Specific Comments 10 and 19 have been adequately addressed and that incorporation of more recent MSSLs and toxicological data will not impact the overall results of the CMS.

Specific Comments 13 15, 18, and General Comment 3

These comments addressed the detections of volatile organic compounds (VOCs) in soil and the lack of an evaluation of the vapor intrusion pathway in the risk assessment. As part of the first evaluation of response to comments, the State of New Mexico ran the Johnson and Ettinger model to evaluate whether the detected VOCs would result in risks that exceeded target risk values via inhalation of indoor air. It appears that this analysis included BTEX (benzene, toluene, xylene, and ethylbenzene) and tetrachloroethene. In the second set of responses, Cannon AFB indicated that BTEX concentrations from only soil boring 12719 exceeded the target levels and that as BTEX was only detected in shallow soil (immediately below the concrete slab) and not in deeper samples, there is not a significant source for BTEX in subsurface samples. In addition, Cannon AFB indicated that additional characterization of Solid Waste Management Unit (SWMU) 127 and potentially a removal action is planned.

First, the Region 6 MMSLs do not address the intrusion of volatiles into indoor air. As several VOCs were detected at each of the SWMUs, the vapor intrusion pathway should be evaluated. While an analysis of the Johnson and Ettinger model does provide an indication of whether some VOCs may exceed a target level, evaluation of the model alone does not provide an understanding of cumulative risk to potential receptors at each SWMU. In order to assess whether the inhalation of VOCs in indoor air is of concern, the risks to this pathway must be combined with the overall risks calculated by the comparison of site concentrations to the MSSLs. As VOCs have been detected sporadically in low concentrations at most sites, with the exception of higher a frequency and concentration at SWMU 127, it is unlikely that evaluation of indoor air will change the conclusions for SWMUs 31, 48A, and 77 in the CMS. However, SWMU 127 has detections of several VOCs (see Table 7-6) and while most of the concentrations are low, it can not be determined if overall risk would be impacted by including an analysis of exposure to indoor air.

While it is noted in the second set of responses that additional characterization and potentially removal of soil may occur at SWMU 127, the exclusion of the indoor air pathway is not acceptable. It is unclear how the facility will determine whether additional characterization and removal of soil is needed, if the cumulative risk is unknown.

We do not concur that Specific Comments 13, 15, 18, and General Comment 3 have been adequately addressed. It is our position that an evaluation of the vapor intrusion pathway must be included in the risk screening for each of the SWMUs addressed under this CMS. In the event that Cannon AFB does remove soil at SWMU 127, confirmation samples should also be collected and the risk assessment (including indoor air) be revised accordingly.

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 Project Lead

cc: Cheryl Frischkorn, NMED (electronic)
Joel Workman, AQS (electronic)