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Date: OCT 21 2014
Refer To: ADESH-14-101

John Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Request for Certificate of Completion for One Solid Waste Management Unit in the Pueblo Canyon Aggregate Area – SWMU 00-018(a)

Dear Mr. Kieling:

In accordance with Section VII.E.6.b of the Compliance Order on Consent (the Consent Order), the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) request a certificate of completion without controls for the following solid waste management unit (SWMU) within the Pueblo Canyon Aggregate Area:

- SWMU 00-018(a), Former Sludge Bed Wastewater Treatment Plant

SWMU 00-018(a) was recommended for corrective action complete without controls in the report titled Phase II Investigation Report for Pueblo Canyon Aggregate Area (LA-UR-10-6411/ EP2010-0384) (hereafter, the Phase II IR). The Phase II IR concluded the nature and extent of contamination are defined at SWMU 00-018(a), and the site poses no potential unacceptable risk or dose to human health under the recreational and residential scenarios and poses no potential risk to ecological receptors.

The Phase II IR was approved in the New Mexico Environment Department's (NMED's) Approval with Modification [for the] Pueblo Canyon Aggregate Area Phase II Investigation Report (HWB-LANL-10-076), dated December 23, 2010. The approval with modifications for the Phase II IR contained several comments specifically related to SWMU 00-018(a), but these comments did not require any additional actions on the part of DOE/LANS. The comments for SWMU 00-018(a) were related to the human health risk-screening evaluation, but indicated that they did not affect the overall results of the risk evaluation. Therefore, the risk results and conclusions pertaining to SWMU 00-018(a) in the Phase II IR remain valid. The approval with modifications does, however, instruct DOE/LANS to evaluate the vapor-intrusion pathway as part of the residential scenario to

request corrective action complete without controls. In response to this comment, DOE/LANS have evaluated the vapor-intrusion pathway for SWMU 00-018(a).

The results of the vapor-intrusion evaluation are presented in Attachment 1. Based on this evaluation, the hazard index (HI) from vapor intrusion is 0.000001 (Attachment 1, Table 1) and the excess cancer risk is 3×10^{-10} (Attachment 1, Table 2). The Johnson and Ettinger model spreadsheets used to calculate soil screening levels for the vapor-intrusion evaluation are presented in Attachment 2 (on CD).

The HI and cancer risk for the residential scenario, excluding vapor intrusion, were evaluated and presented in Appendix I of the Phase II IR. The HI was 0.2 (Phase II IR, Table I-4.2-5) and the cancer risk was 4×10^{-6} (Phase II IR, Table I-4.2-4). Combining these previous results with the vapor-intrusion results does not change the previous HI (0.2) and cancer risk (4×10^{-6}), both of which are below NMED's target levels of 1 and 1×10^{-5}, respectively. Therefore, evaluation of the vapor-intrusion scenario does not alter the conclusions presented in the Phase II IR, and neither site controls nor additional future actions under the Consent Order are necessary at this site.

If you have any questions, please contact Todd Haagenstad at (505) 665-2936 (hth@lanl.gov) or Cheryl Rodriguez at (505) 665-5330 (cheryl.rodriguez@nnsa.doe.gov).

Sincerely,

Michael T. Brandt, DrPH, CIH, Associate Director
Environment, Safety, and Health
Los Alamos National Laboratory

Sincerely,

Peter Maggiore, Assistant Manager
Environmental Projects Office
Los Alamos Field Office

MB/PM/DM/TH:sm

Attachments: (1) Results of the Residential Vapor-Intrusion Evaluation for SWMU 00-018(a) (LA-UR-14-27810)
(2) Johnson and Ettinger Model Spreadsheets (on CD)

Cy: (w/att.)
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Cheryl Rodriguez, DOE-NA-LA, MS A316
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Results of the Residential Vapor-Intrusion Evaluation for SWMU 00-018(a)

Table 1
Residential Noncarcinogenic Screening of Vapor Intrusion for SWMU 00-018(a)

COPC	EPC[a] (mg/kg)	Vapor Intrusion Risk-Based Concentration[b] (mg/kg)	HQ
Acetone	0.222	1060000	0.00000021
Butanone[2-]	0.0041	1560000	0.0000000026
Dichloroethene[1,1-]	0.0016	145000	0.000000011
Isopropyltoluene[4-]	0.00874	26800[c]	0.00000033
Methylene chloride	0.00484	40200	0.00000012
Styrene	0.000484	227000	0.0000000021
Tetrachloroethene	0.000385	28900	0.000000013
Toluene	0.0133	335000	0.00000004
Trimethylbenzene[1,2,4-]	0.000245	4400	0.000000056
Xylene[1,2-]	0.00121	6690	0.00000018
Xylene[1,3-]+1,4-Xylene	0.00286	6690[d]	0.00000043
		HI	**0.000001**

[a] Maximum detected concentration.

[b] Vapor intrusion risk values generated by the Johnson and Ettinger advanced soil model.

[c] Isopropylbenzene used as a surrogate based on structural similarity.

[d] Xylene[1,4-] used as a surrogate based on structural similarity.

Table 2
Residential Carcinogenic Screening of Vapor Intrusion for SWMU 00-018(a)

COPC	EPC[a] (mg/kg)	Vapor Intrusion Risk-Based Concentration[b] (mg/kg)	Cancer Risk
Chloroform	0.000231	734	3.15E-12
Dichlorobenzene[1,4-]	0.000266	1330	2.00E-12
Ethylbenzene	0.00106	625	1.70E-11
Naphthalene	0.0305	1170	2.61E-10
		Total Excess Cancer Risk	**3E-10**

[a] Maximum detected concentration.

[b] Vapor intrusion risk values generated by the Johnson and Ettinger advanced soil model.