

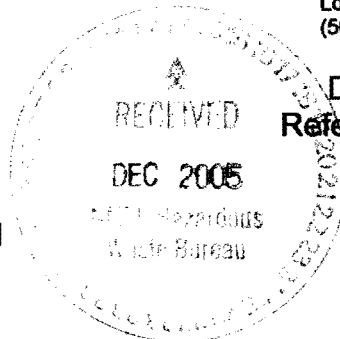


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Date: December 8, 2005
Refer to: ER2005-0905

Mr. James Bearzi
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

SUBJECT: RESPONSE TO NMED APPROVAL WITH MODIFICATIONS, SOLID WASTE MANAGEMENT UNIT ASSESSMENT REPORT FOR SOLID WASTE MANAGEMENT UNIT 03-013(i)

Dear Mr. Bearzi:

Attached is the Los Alamos National Laboratory Environmental Stewardship– Environmental Remediation and Surveillance response to the New Mexico Environment Department (NMED) “Approval with Modifications, Solid Waste Management Unit (SWMU) Assessment Report for SWMU 03-013(i), Los Alamos National Laboratory, EPA ID#NM0890010515, HWB-LANL-05-017,” in a letter dated November 9, 2005.

As requested, this response presents the results of the human health risk assessment revised to include the construction worker scenario for SWMU 03-013(i) SWMU assessment report.

If you have any questions about this response, please contact Roy Bohn at (505) 665-5138 (royb@lanl.gov) or David Gregory at (505) 667-5808 (dgregory@doeal.gov).

Sincerely,

David McInroy, Deputy Program Director
Environmental Remediation & Surveillance
Los Alamos National Laboratory

Sincerely,

David Gregory, Federal Project Director
Department of Energy
Los Alamos Site Office



RB/jk

Enclosures: 1) Response to NMED Approval with Modifications, Solid
Waste Management Unit (SWMU) Assessment Report
for SWMU 03-013(i)

Cy:(w/enc)

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IM-9, MS A150

ENV-ECR File, MS M992

RPF, MS M707

ATTACHMENT

The following is a screening risk assessment for a construction worker at Solid Waste Management Unit (SWMU) 03-013(i). Comparisons to the New Mexico Environment Department (NMED) soil screening levels (NMED 2004, 85615) or the Environmental Protection Agency (EPA) Region 6 values (EPA 2004, 87478) were made using the maximum detected concentration of each chemical of potential concern (COPC) as the exposure point concentration. The total excess cancer risk is approximately 7.0E-06, which is less than NMED's target cancer risk of 1.0E-05 (Table 1). The noncancer hazard index is approximately 0.6, which is below NMED's target of a hazard index of 1.0 (Table 2). Based on this evaluation, there is no potential risk to a construction worker at SWMU 03-013(i).

Table 1
Comparison of Carcinogenic COPCs to Construction Worker SSLs at SWMU 03-013(i)

COPC	Exposure Point Concentration (mg/kg)	Construction Worker SSL (mg/kg)	Cancer Risk
Aroclor-1254	2.81	4.28	6.57E-06
Aroclor-1260	2.26	76.1	2.97E-07
Bis(2-ethylhexyl)phthalate	2.38	4660	5.11E-09
Total Risk			7.0E-06

Table 2
Comparison of Noncarcinogenic COPCs to Construction Worker SSLs at SWMU 03-013(i)

COPC	Exposure Point Concentration (mg/kg)	Construction Worker SSL (mg/kg)	Hazard Quotient
Antimony	1.71	124	0.014
Barium	302	1440	0.21
Cadmium	5.58	144 ^a	0.0388
Copper	21.8	12400	0.0018
Lead	238	750	0.32
Nickel	16.3	561	0.03
Zinc	482	92900	0.0052
Acenaphthene	0.0923	14400	0.0000064
Acenaphthylene	0.0421	9050 ^b	0.0000047
Anthracene	0.095	85300	0.0000011
Benzoic Acid	0.689	100000 ^c	0.0000069
Fluoranthene	1.32	8730	0.0002
Fluorene	0.0947	10600	0.0000089
Methylnaphthalene[2-]	0.0275	98.3 ^d	0.0003
Phenanthrene	1.09	6990	0.0002
Pyrene	1.36	9050	0.0002
Hazard Index			0.6

^a Recalculated using NMED guidance (NMED 2004, 85615) and EPA toxicity factors.

^b Pyrene used as a surrogate based on structural similarity.

^c EPA Region 6 screening values for residential and industrial are maximums (EPA 2004, 87478).

^d Naphthalene used as a surrogate based on structural similarity.

REFERENCES

EPA (U.S. Environmental Protection Agency), November 2004. "EPA Region 6 Human Health Medium-Specific Levels, November 2004," U.S. Environmental Protection Agency report, Dallas, Texas. (EPA 2004, 87478)

NMED (New Mexico Environment Department), February 2004. "Technical Background Document for Development of Soil Screening Levels, Revision 2, February 2004," New Mexico Environment Department–Ground Water Quality Bureau and Voluntary Remediation Program document, Santa Fe, New Mexico. (NMED 2004, 85615)