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State of New Mexico  
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**DOE OVERSIGHT BUREAU**  
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May 29, 1997

Mat Johansen, DOE AIP POC  
U. S. Department of Energy  
Los Alamos Area Office, MS A316  
Los Alamos, New Mexico 87544

**SUBJECT: LANL Review of DOE Oversight Bureau 1996 data for  
sediment, soil and foodstuff**

Dear Mr. Johansen:

Mr. Philip Fresquez, Ph.D. provided comments on DOE Oversight Bureau split sample data submitted May 1, 1997. He correctly noted that radiochemical and trace metal analytical results for soils (Table 2) are reported as dry weight content. He also requested that the units be defined for Aroclors and mercury in fish and insects (Table 4). The results are reported on a wet weight basis. In response to his comment on the Arochlor 1260 result in Table 4, it is correct as reported as 100 ug/kg. The omissions have been corrected and resubmitted as attachments to this letter.

Mr. Fresquez reported in his letter that the soil and foodstuffs split samples collected by ESH-20 and the DOE OB compare very well with each other. Is the 1996 LANL data used for the comparison available for review at this time? If so, with this letter, we are requesting the data so that we may conduct our own data comparisons.



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LANL / EB / M.M.

Mr. Mat Johansen  
May 29, 1997

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Please thank Mr. Fresquez for bringing these omissions to our attention. If you have any questions, please contact David Englert at 827-1536.

Sincerely,



Steve Yanicak, LANL POC  
DOE Oversight Bureau

SY:DEE:dee  
Attachments

cc: John Parker, Chief, NMED DOE Oversight Bureau  
Philip Fresquez, LANL, EHS-20, MS M887  
Santa Fe File

**DOE OB SPLIT  
LANL SOIL ANALYSIS  
Radiochemical and Trace Metals  
1996**

**Analysis Requested**

<b>LOCATION</b>	<b>Date Collected</b>	<b>Arsenic (mg/kg)</b>	<b>Beryllium (mg/kg)</b>	<b>Lead (mg/kg)</b>	<b>Pu-239/240 (pCi/g)</b>	<b>Pu-238 (pCi/g)</b>	<b>U 234 (pCi/g)</b>	<b>U-235 (pCi/g)</b>	<b>U-238 (pCi/g)</b>
<b>REGIONAL</b>									
Near Cochiti	03/25/96	NA	0.5	9.0	0.01 +/- 0.01	0.00 +/- 0.01	0.44 +/- 0.08	0.03 +/- 0.02	0.44 +/- 0.08
Bernalillo	03/25/96	NA	NA	NA	0.01 +/- 0.01	0.00 +/- 0.01	0.56 +/- 0.09	0.03 +/- 0.02	0.67 +/- 0.10
Jemez	03/25/96	NA	0.6	7.5	0.01 +/- 0.01	0.00 +/- 0.01	NA	NA	NA
<b>PERIMETER</b>									
North Mesa	03/20/96	NA	0.7	13	NA	NA	0.95 +/- 0.14	0.03 +/- 0.02	1.04 +/- 0.15
Near TA-8 (GT Site)	03/21/96	NA	<0.5	10	0.01 +/- 0.01	0.00 +/- 0.01	NA	NA	NA
Near TA-49	03/21/96	NA	0.7	14	0.02 +/- 0.01	0.00 +/- 0.01	NA	NA	NA
White Rock (East)	03/20/96	NA	NA	18	NA	NA	0.87 +/- 0.37	0.05 +/- 0.02	0.82 +/- 0.12
Tsankawi	03/20/96	NA	0.9	17	NA	NA	1.37 +/- 0.19	0.06 +/- 0.03	1.49 +/- 0.20
<b>ON-SITE</b>									
TA-21 (DP Site)	03/20/96	NA	0.7	25	0.01 +/- 0.01	0.00 +/- 0.02	NA	NA	NA
East of TA-53	03/20/96	NA	0.5	11	0.02 +/- 0.01	0.00 +/- 0.02	0.68 +/- 0.11	0.03 +/- 0.02	0.80 +/- 0.12
West of TA-53	03/20/96	3	0.7	12	0.02 +/- 0.01	0.00 +/- 0.02	NA	NA	NA
Two Mile Mesa	03/21/96	NA	0.6	14	0.01 +/- 0.01	0.00 +/- 0.05	0.91 +/- 0.14	0.04 +/- 0.02	0.95 +/- 0.14
R Site Rd. (East)	03/21/96	NA	0.9	17	0.02 +/- 0.01	0.01 +/- 0.01	1.39 +/- 0.19	0.07 +/- 0.03	1.50 +/- 0.21
Portrillo Drive	3/96	NA	<0.5	11	0.02 +/- 0.01	0.01 +/- 0.01	0.68 +/- 0.11	0.03 +/- 0.02	0.65 +/- 0.10
S-Site (TA-16)	03/21/96	NA	0.8	10	0.02 +/- 0.01	0.01 +/- 0.01	1.40 +/- 0.20	0.07 +/- 0.03	1.45 +/- 0.20
Near Test Well DT-9	03/21/96	NA	0.8	9.6	0.03 +/- 0.01	0.00 +/- 0.02	NA	NA	NA

Radiochemical and Trace Metal Analysis reported on a dry weight basis (i.e. pCi/g dry or mg/kg dry)

Metals were digested following SW-846 Method 3050A and analyzed following Method 6010A

NA indicates analysis not requested

< indicates not detected at or above the reporting limit

**Table 2. Selected Radiochemical and Trace Metal Analysis of Soils from LANL during 1996**

**DOE OB INDEPENDENT  
Cochiti Fish 1996  
PCBs and Mercury**

**Fish from Cochiti Reservoir  
Collected 8/08/96**

	PCBs							Mercury Concentration mg/kg
	Aroclor 1016 (ug/kg)	Aroclor 1221 (ug/kg)	Aroclor 1232 (ug/kg)	Aroclor 1242 (ug/kg)	Aroclor 1248 (ug/kg)	Aroclor 1254 (ug/kg)	Aroclor 1260 (ug/kg)	
Pike (skinned)	<100	<100	<100	<100	<100	<100	46 J	0.1
Pike (with skin)	<100	<100	<100	<100	<100	<100	<100	0.1
Bass	<100	<100	<100	<100	<100	<100	<100	0.7
Large Catfish (3 lbs.)	<100	<100	<100	<100	<100	<100	<100	0.2
Small Catfish	<100	<100	<100	<100	<100	<100	100	<0.1
Carp (4 lbs.)	<100	<100	<100	<100	<100	<100	<100	0.4

Nine pound Pike filleted; one fillet submitted with skin on, one fillet submitted skinless

Four bass, weighing from 1/4 to 1/2 pound, filleted and commingled

Extraction methods for PCB analysis were based on EPA Method 3540, cleanup by Method 3650 and Analytical Method 8081

Protocols for digestion and analysis of Mercury were based on Method 7471 (CVAA)

< Indicates not detected at or above reporting limits

J indicates value detected below normal reporting limits but above instrument detection limits. The value has a higher degree of uncertainty than normal reporting limits.

PCBs and mercury results reported on a wet weight basis

**Fish and Insect Samples**

**Collected June and July 1996**

	PCBs						
	Aroclor 1016 (ug/kg)	Aroclor 1221 (ug/kg)	Aroclor 1232 (ug/kg)	Aroclor 1242 (ug/kg)	Aroclor 1248 (ug/kg)	Aroclor 1254 (ug/kg)	Aroclor 1260 (ug/kg)
<b>Sandia Canyon (Insects)</b>							
SA01 Damsal Fly (2.55 gm)	<390	<390	<390	<390	<390	<390	<390
SA02 Dragon Fly (4.87gm)	<210	<210	<210	<210	<210	<210	<210
<b>Cochiti Lake (Fish)</b>							
Crappie	<100	<100	<100	<100	<100	<100	<100
Bluegill	<100	<100	<100	<100	<100	<100	<100

Extraction methods for PCB analysis were based on EPA Method 3540, cleanup by Method 3650 and Analytical Method 8081

< Indicates not detected at or above reporting limits

PCBs results reported on a wet weight basis

**Table 4. Mercury and PCB Analysis of Fish and Insects during 1996**