TA-50

Los Alamos
NATIONAL LABORATORY

Solid Waste Regulatory Compliance
P.O. Box 1663, Mail Stop K490
Los Alamos, New Mexico 87545   Date: January 27, 2003
(505) 667-0666/Fax (505) 667-5224   Refer To: SWRC:03-004

Mr. Carl Will
RCRA Permits Management Program
Hazardous & Radioactive Materials Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
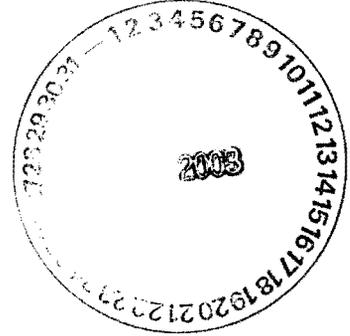
Dear Mr. Will:

Subject: Request to Complete Closure of the Los Alamos National Laboratory TA-50, Room 59 and TA-50-114 Container Storage Units Using Risk Assessment

The purpose of this letter is to request approval from the New Mexico Environment Department (NMED) to complete closure of the Los Alamos National Laboratory (LANL) Technical Area (TA) 50, Building 1 (TA-50-1), Room 59 and TA-50-114 Container Storage Units (CSU) using risk assessment and administrative controls. The walls and floor of each room were washed and rinsed as per the closure plan. The storage area was divided into cells. The rinse water from each cell was collected and analyzed for constituents that could be present given the waste stored in each location.

Three constituents were detected in the rinse water above the U.S. Environmental Protection Agency (EPA) Human Health Medium-Specific Screening Levels, identified as the screening criteria for clean closure in the "Los Alamos National Laboratory Technical Area 50 Closure Plan for Container Storage Units TA-50-1, Room 59; TA-50-37; and TA-50-114," hereinafter referred to as the TA-50 Closure Plan, and provided to the NMED in July 2002. Table 1 provides information regarding the constituents under consideration for risk assessment. All other constituents detected at the CSUs were screened out when compared to blank analyses, baseline levels, and/or the EPA Human Health Medium-Specific Screening Levels.

Table 1
TA-50 CSU Sample Locations, Constituents, Detected Levels, and EPA Human Health Medium-Specific Screening Levels

CSU	Sample Location	Constituent	Detected Level (µg/L) [a]	EPA Region 6 Human Health Medium Specific Level (µg/L)
TA-50-1, Room 59	North Wall (Roll-Up Door)	Lead	70.0	15
TA-50-114	Cell #1 South Wall	Bis(2-ethylhexyl) phthalate	72 [b]	4.8
TA-50-114	Cell #2 North Wall	Naphthalene	7.8	6.2

a   Section 9.0 of the TA-50 Closure Plan describes the proposed alternative demonstrations of closure including comparison of the verification analytical data to the EPA Region 9 Human Health Medium-Specific Screening Levels for drinking water. LANL is located in EPA Region 6, which has recently adopted the Region 9 screening levels as its own risk based screening levels for drinking water. The table provides a comparison of the detected constituents and compares them to the Region 6 levels.

b   The constituent was also detected in the baseline samples for Cell #1 at TA-50-114. The baseline levels were 49, 16, and 47, which are below the detected level reported during verification.

To conservatively screen human health risk, exposure point concentrations were compared to the residential risk based levels using the Human Health Medium Specific Screening Levels for drinking water (Table 1). An individual health based level represents the groundwater concentration below which no significant adverse health effects are expected to occur from the assumed exposure pathways. The screening levels are fixed to conservative levels of risk (i.e., a cancer risk of 1×10^{-6} or a hazard quotient of 1.0) and use the following three exposure pathways in the risk calculations:

- Ingestion of groundwater,
- Dermal contact with groundwater
- Inhalation of volatile organic compounds from household use.

This approach is conservative because constituents remaining on the walls and floor of a CSU after washing and repeated rinsing are less mobile than constituents in groundwater. Further, the proposed current and future land use for both of the TA-50 CSUs is industrial. If occupational risk scenarios and levels are considered, the overall projected human health risk is much less then that using the residential screening values indicated in Table 1 due to the lack of exposure pathways. In addition, LANL controls access to both areas, which will be used as Resource Conservation and Recovery Act (RCRA) <90-day storage areas upon completion of the closure requirements set forth in the TA-50 Closure Plan and as amended by this request. The proposed risk based approach combined with the administrative measures and considerations listed above meet the fourth set of criteria listed in Section 8.0 of the TA-50 Closure Plan.

For your information, additional tables (Tables 2 and 3) are attached to this letter that provide details on all of the samples collected for each CSU and how they were screened. The radionuclide information is provided as a separate attachment for your information. Please note that DOE standards for release are 20 DPM for alpha and 200 DPM for beta. Both of these sites met or exceeded these release criteria.

If you have any questions concerning this matter, please contact me at (505) 667-0633.

Sincerely,
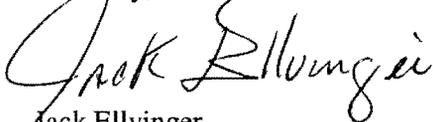
Jack Ellvinger
Solid Waste Regulatory Compliance

JE/vc

Enc. a/s

Cy: w/o enc.

Mr. James Bearzi

Hazardous & Radioactive Materials Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Mr. John Kieling
RCRA Permits Management Program
Hazardous & Radioactive Materials Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Mr. Steve Jetter
RCRA Permits Management Program
Hazardous & Radioactive Materials Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

R. Alexander, FWO-WFM, E518
S. French, FWO-WFM, J595
R. Lechel, FWO-WFM, J593
E. Louderbough, LC-ESH, A187
D. Mclain,FWO-WFM, J593
G. Turner, DOE-LA-AO, A316
L. Vigil-Holterman, SWRC, K490

Table 2
Verification Sample Data from Closure at TA-50-1, Room 59

Sample ID #	Matrix	Description [a]	Requested Analysis [a]	Summary of Results		Human Health Medium Specific Screening Level [b]	Comments
				Analyte	Result		
59-01	Liquid	Baseline #1	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	Bis (2-Ethylhexyl)phthalate Butyl benzyl phthalate	12 16	4.8 7,300	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
59-02	Liquid	Baseline #2	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	Bis(2-Ethylhexyl)phthalate Butyl benzyl phthalate di-n-Butyl phthalate	880 24 1.9	4.8 7,300 3,700	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
59-03	Liquid	Baseline #3	TCLP Metals (mg/L)	Arsenic	0.1	0.0045	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
			VOC (µg/L)	ND	ND		
			SVOC (µg/L)	Butyl benzyl phthalate	18	7,300	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
59-4	Liquid	Field Blank (8-29-02)	VOC (µg/L)	ND	ND	NA	NA
59-5	Liquid	Trip Blank	VOC (µg/L)	ND	ND	NA	NA
59-6	Liquid	Trip Blank	VOC (µg/L)	ND	ND	NA	NA
59-7	Liquid	Trip Blank	VOC (µg/L)	ND	ND	NA	NA
59-9	Liquid	South Wall	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	Bis (2-Ethylhexyl)phthalate	9.7	4.8	The detected level of Bis(2-ethylhexyl) phthalate is above the screening value. However, it is less then the detected levels in the baseline samples.
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	ND	ND	NA	NA
59-10	Liquid	West Wall	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	Butyl benzyl phthalate	33	7,300	The detected level is below the screening value.

Table 2 (Continued)
Verification Sample Data from Closure at TA-50-1, Room 59

Sample ID #	Matrix	Description [a]	Requested Analysis [a]	Summary of Results		Human Health Medium Specific Screening Level [b]	Comments
				Analyte	Result		
59-11	Liquid	North Wall (roll up door)	TCLP Metals (mg/L)	Lead	0.07	0.015	The detected level is above the screening value and cannot be eliminated when compared to background, baseline, and/or QA/QC sample levels.
59-12	Liquid	Floor (south half)	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	Benzyl alcohol Butyl benzyl phthalate	98 64	11,000 7,300	The detected levels are below the screening value.
59-13	Liquid	Floor (north half)	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	Bis (2-Ethylhexyl)phthalate	19	4.8	The detected level of Bis(2-ethylhexyl) phthalate is above the screening value. However, it is less then the detected levels in the baseline samples.
				Butyl benzyl phthalate	47	7,300	The detected level for butyl benzyl phthalate is below the screening value.
59-14	Liquid	Floor (north half duplicate)	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	di-n-Butylphthalate	1.3	3,700	The detected level is below the screening value.

a   Specified in the "Los Alamos National Laboratory Technical Area 50 Closure Plan for Container Storage Units TA-50-1, Room 59; TA-50-37; and TA-50-114," LA-UR-02-4729 (LANL, 2002).

b   Section 9.0 of the TA-50 Closure Plan describes the proposed alternative demonstrations of closure including comparison of the verification analytical data to the EPA Region 9 Human Health Medium-Specific Screening Levels for drinking water. LANL is located in EPA Region 6, which has recently adopted the Region 9 screening levels as its own risk based screening levels for drinking water. The table provides a comparison of the detected constituents and compares them to the Region 6 levels.

TCLP = toxicity characteristic leaching procedure
mg/L = milligrams per liter
ND = non-detect
SVOC = semi-volatile organic compounds
µg/L = micrograms per liter
VOC = volatile organic compounds

Table 3
Verification Sample Data from Closure at TA-50-114

Sample ID #	Matrix	Description [a]	Requested Analysis [a]	Summary of Results		Human Health Medium-Specific Screening Level [b]	Comments
				Analyte	Result		
114-01	Liquid	Baseline #1	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	Acetone	15	610	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
			SVOC (µg/L)	Benzyl Alcohol Bis(2-Ethylhexyl)phthalate Butyl benzyl phthalate di-n-Butyl phthalate	71 49 13 1.3	11,000 4.8 7,300 3,700	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
114-02	Liquid	Baseline #2	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	Acetone Toluene	45 1.9	610 720	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
			SVOC (µg/L)	Bis(2-Ethylhexyl)phthalate	16	4.8	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
114-03	Liquid	Baseline #3	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	Acetone	29	610	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
			SVOC (µg/L)	Bis(2-Ethylhexyl)phthalate	47	4.8	This is a baseline sample and was used to eliminate contaminates associated with materials used to decontaminate the CSU.
114-04	Liquid	Field Blank (8-28-02)	VOC (µg/L)	ND	ND	NA	NA
114-05	Liquid	Trip Blank "Elmer"	VOC(µg/L)	ND	ND	NA	NA
114-06	Liquid	Trip Blank "Daffy"	VOC (µg/L)	ND	ND	NA	NA
114-07	Liquid	Trip Blank "Sylvester"	VOC (µg/L)	ND	ND	NA	NA
114-08	Liquid	Trip Blank "Bugs"	VOC (µg/L)	ND	ND	NA	NA
114-09	Liquid	Trip Blank "Tweety"	VOC (µg/L)	ND	ND	NA	NA

Table 3 (continued)
Verification Sample Data from Closure at TA-50-114

Sample ID #	Matrix	Description [a]	Requested Analysis [a]	Summary of Results		Human Health Medium-Specific Screening Level [b]	Comments
				Analyte	Result		
114-12	Liquid	Cell #1 West wall	TCLP Metals (mg/L)	ND	ND	NA	NA
			VOC (µg/L)	1,2 Dichlorobenzene	1.1	370	The detected level is below the screening value.
			SVOC (µg/L)	ND	ND	NA	NA
114-13	Liquid	Cell #1 South Wall	TCLP Metals (mg/L)	Silver	0.04	0.18	The detected level is below the screening value.
			VOC (µg/L)	1,2 Dichlorobenzene	1.0	370	The detected level is below the screening value.
			SVOC (µg/L)	Bis(2-Ethylhexyl)phthalate	72	4.8	**The detected level of bis(2-Ethylhexyl) phthalate is above the screening value and the levels detected in the baseline samples.**
				di-n-Octylphthalate	23	730	The detected level of di-n-Octylphthalate is below the screening value.
114-14	Liquid	Cell #1 East Wall	TCLP Metals (mg/L)	Silver	0.05	0.18	The detected level is below the screening value.
			VOC (µg/L)	1,2 Dichlorobenzene	1.0	370	The detected level is below the screening value.
			SVOC (µg/L)	Bis(2-Ethylhexyl)phthalate	10	4.8	
114-15	Liquid	Cell #1 North Wall	TCLP Metals (mg/L)	Barium	0.2	2.6	The detected level is below the screening value.
			VOC (µg/L)	1,2 Dichlorobenzene	1.1	370	The detected level is below the screening value.
			SVOC (µg/L)	Diethyl phthalate	4.1	29,000	The detected level is below the screening value.
114-16	Liquid	Cell #1 Floor	TCLP Metals (mg/L)	Barium	0.1	2.6	The detected level is below the screening value.
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	ND	ND	NA	NA
114-17	Liquid	Cell #1 Floor – Duplicate	TCLP Metals (mg/L)	Barium	0.1	2.6	The detected level is below the screening value.
			VOC (µg/L)	1,2 Dichlorobenzene	1.1	370	The detected level is below the screening value.
			SVOC (µg/L)	Bis(2-Ethylhexyl)phthalate	19	4.8	The detected level of bis(2-Ethylhexyl) phthalate is above the screening value. However, it is less then the detected levels in the baseline samples.
				Diethyl phthalate	1.3	29,000	The detected level of diethyl phthalate is below the screening value.

Table 3 (continued)
Verification Sample Data from Closure at TA-50-114

Sample ID #	Matrix	Description [a]	Requested Analysis [a]	Summary of Results		Human Health Medium-Specific Screening Level [b]	Comments
				Analyte	Result		
114-18	Liquid	Cell #2 West Wall	TCLP Metals (mg/L)	Selenium	0.16	0.18	The detected level for selenium is below the screening value. Please note that selenium was detected in the method blank but not in the solid and/or liquid waste samples collected during the decontamination. Its presence is attributed to laboratory contamination.
			VOC (µg/L)	1,2 Dichlorobenzene Acetone	1.1 14	370 610	The detected levels are below the screening value.
			SVOC (µg/L)	di-n-Butyl phthalate	1.5	3,700	The detected level is below the screening value.
114-19	Liquid	Cell #2 South Wall	TCLP Metals (mg/L)	Selenium	0.15	0.18	The detected level for selenium is above the screening value. However, selenium was detected in the method blank but not in the solid and/or liquid waste samples collected during the decontamination. Its presence is attributed to laboratory contamination.
			VOC (µg/L)	Acetone	11	610	The detected level is below the screening value.
			SVOC (µg/L)	Butyl benzyl phthalate di-nButylphthalate	84 1.6	7,300 3,700	The detected levels are below the screening value.
114-20	Liquid	Cell #2 East Wall	TCLP Metals (mg/L)	Barium Selenium	0.2 0.21	2.6 0.18	The detected level is below the screening value. The detected level for selenium is above the screening value. However, selenium was detected in the method blank but not in the solid and/or liquid waste samples collected during the decontamination. Its presence is attributed to laboratory contamination.
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	Butyl benzyl phthalate Diethyl phthalate di-n-Butyl phthalate	75 4.7 1.8	7,300 29,000 3,700	The detected levels are below the screening value.

Table 3 (continued)
Verification Sample Data from Closure at TA-50-114

Sample ID #	Matrix	Description [a]	Requested Analysis [a]	Summary of Results		Human Health Medium-Specific Screening Level [b]	Comments
				Analyte	Result		
114-21	Liquid	Cell #2 North Wall	TCLP Metals (mg/L)	Barium			The detected level for barium is below the screening value.
				Selenium	0.1	2.6	The detected level for selenium is above the screening value. However, selenium was detected in the method blank but not in the solid and/or liquid waste samples collected during the decontamination. Its presence is attributed to laboratory contamination.
					0.19	0.18	
			VOC (µg/L)	Acetone	18	610	The detected level for acetone is below the screening value.
				Naphthalene	7.8	6.2	**The detected level for naphthalene is above the screening value.**
			SVOC (µg/L)	Butyl benzyl phthalate	75	7,300	The detected levels are below the screening value.
				Diethyl phthalate	1.4	29,000	
114-22	Liquid	Cell #2 Floor	TCLP Metals (mg/L)	Barium	0.1	2.6	The detected levels are below the screening value.
				Selenium	0.17	0.18	
			VOC (µg/L)	ND	ND	NA	NA
			SVOC (µg/L)	ND	ND	NA	NA
114-27	Liquid	Field Blank (8-29-02)	VOC (µg/L)	1,2 Dichlorobenzene	1.2	370	This is a field blank sample and was used to eliminate contaminates associated with field background conditions at the site.

a   Specified in the "Los Alamos National Laboratory Technical Area 50 Closure Plan for Container Storage Units TA-50-1, Room 59; TA-50-37; and TA-50-114," LA-UR-02-4729 (LANL, 2002).

b   Section 9.0 of the TA-50 Closure Plan describes the proposed alternative demonstrations of closure including comparison of the verification analytical data to the EPA Region 9 Human Health Medium-Specific Screening Levels for drinking water. LANL is located in EPA Region 6, which has recently adopted the Region 9 screening levels as its own risk based screening levels for drinking water. The table provides a comparison of the detected constituents and compares them to the Region 6 levels.

mg/L = milligrams per liter
ND = non-detect
TCLP = toxicity characteristic leaching procedure
SVOC = semi-volatile organic compounds
µg/L = micrograms per liter
VOC = volatile organic compounds

ESH-1 SMEAR SURVEY FORM

SAMPLE DESCRIPTION

Sample Date/Time: 9-17-02 No. Of Samples: 30

TA: 50 Bldg: 1

RCT: JV16iC Z Number: 121285

RCT Signature: Jan MS: E518

Phone/Fax: 7-6919

SAMPLE TRACKING NUMBER

PURPOSE OF SURVEY

- [ ] Routine
- [ ] Pre-Job
- [ ] Post-Job
- [ ] Hot-Job
- [ ] Item Release
- [ ] Offsite Shipment
- [ ] Onsite Shipment
- [x] Non-Routine / Other: Decontroling Of Rm. 59

INSTRUMENTATION

TYPE	HSE No.	CAL Due	% EFF	BKG
LVS770	962448	5-18-03	SEE DATA SHEETS	
SHP360mg	13234	3-19-03	n/a	α.57.4 β-2.34

ESH-1 REVIEW BY

ADDITIONAL INFORMATION

Occurrence No.:

Incident No.: n/a

RWP No.:

Smear No.	Location	ALPHA*		BETA*		Smear No.	Location	ALPHA*	BETA*
1	Floor	<mdA		<mdA		16	S. Roll up Door	<mdA	<mdA
2	Floor					17	S. Wall		
3	Floor					18	S. Wall		
4	Floor					19	W. Wall	↓	
5	Floor					20	W. Wall	4.9	
6	Floor					21	W. Wall	<mdA	
7	Floor					22	N. Roll up Door		
8	Floor					23	N. Roll up Door		
9	Floor					24	Scale		
10	Floor					25	Top Shelf ITEMS		
11	Floor N.					26	Shelf - 2 ITEMS		
12	Floor under Shelfs					27	Shelf - 3 ITEMS	↓	
13	Floor N.					28	Shelf - 4 ITEMS	6.2	
14	Floor N.					29	Shelf - 5 ITEMS	<mdA	
15	Floor N.	↓		↓		30	Shelf - 5 ITEMS	<mdA	↓

*dpm/100 cm²

Sample Measurement Parameters:
Comment: DECONTROL RM.59
User: MARTINEZ   Instrument Name: TA50-1 BERT
Preset Time: 3:00   Cycles: 1
Alpha Preset Error: 2.0%   Beta Preset Error: 2.0%
User Protocol: ALPHA\BETA

Cycle 1 of 1
Start Time: 9/12/02 10:50:37   Elapsed Time: 3:00
                                                       Guard: 18.10 cps

	Spl #	Sample Name	Alpha (DPM)	Cat	MDA	MRA	Beta (DPM)	Cat	MDA	MRA
1	1	SEE DATA SHEE'	0.000	1	5.9418	1.1237	1.189 (>100%)	1	8.4193	3.1862
2	2	SEE DATA SHEE'	3.438 (±66.7%)	1	6.4504	1.4246	2.092 (>100%)	1	7.8378	2.8909
3	3	SEE DATA SHEE'	0.65 (>100%)	1	6.6522	1.5582	2.559 (±94.3%)	1	8.6290	3.2252
4	4	SEE DATA SHEE'	3.005 (±73.9%)	1	6.9700	1.7447	0.71 (>100%)	1	7.9390	2.9809
5	5	SEE DATA SHEE'	0.84 (>100%)	1	5.9243	1.2427	2.357 (>100%)	1	8.6487	3.2996
6	6	SEE DATA SHEE'	2.166 (±85.0%)	1	6.1021	1.2811	1.119 (>100%)	1	9.2061	3.5511
7	7	SEE DATA SHEE'	1.006 (>100%)	1	5.7446	1.0855	2.462 (±86.2%)	1	7.4412	2.7626
8	8	SEE DATA SHEE'	0.90 (>100%)	1	6.3179	1.3253	2.228 (>100%)	1	8.2235	3.0888
9	9	SEE DATA SHEE'	0.000	1	4.6857	0.6328	2.459 (±87.0%)	1	7.5176	2.7931
10	10	SEE DATA SHEE'	1.061 (>100%)	1	5.4453	0.9552	2.910 (±84.8%)	1	8.5976	3.2912

Sample Measurement Parameters:
Comment: DECONTROL RM.59
User: MARTINEZ
Preset Time: 3:00
Alpha Preset Error: 2.0%
User Protocol: ALPHA\BETA

Instrument Name: TA50-1 BERT
Cycles: 1
Beta Preset Error: 2.0%

Cycle 1 of 1
Start Time: 9/12/02 10:59:33

Elapsed Time: 3:00
Guard: 17.68 cps

	Spl #	Sample Name	Alpha (DPM)	Cat	MDA	MRA	Beta (DPM)	Cat	MDA	MRA
1	11	SEE DATA SHEE'	1.040 (>100%)	1	5.9444	1.1240	2.697 (±88.7%)	1	8.4220	3.1870
2	12	SEE DATA SHEE'	2.117 (±88.6%)	1	6.4531	1.4250	2.095 (>100%)	1	7.8404	2.8916
3	13	SEE DATA SHEE'	0.65 (>100%)	1	6.6549	1.5586	0.16 (>100%)	1	8.6318	3.2260
4	14	SEE DATA SHEE'	0.45 (>100%)	1	6.9728	1.7451	0.000	1	7.9416	2.9817
5	15	SEE DATA SHEE'	0.000	1	5.9267	1.2430	0.000	1	8.6515	3.3005
6	16	SEE DATA SHEE'	0.87 (>100%)	1	6.1046	1.2814	1.896 (>100%)	1	9.2091	3.5520
7	17	SEE DATA SHEE'	0.000	1	5.7470	1.0858	1.057 (>100%)	1	7.4437	2.7633
8	18	SEE DATA SHEE'	3.595 (±65.0%)	1	6.3205	1.3256	5.239 (±52.0%)	1	8.2262	3.0896
9	19	SEE DATA SHEE'	0.000	1	4.6879	0.6330	0.33 (>100%)	1	7.5201	2.7938
10	20	SEE DATA SHEE'	4.959 (±52.5%)	2	5.4477	0.9555	5.136 (±54.2%)	1	8.6004	3.2920

Sample Measurement Parameters:
Comment: DECONTROL RM.59
User: MARTINEZ
Preset Time: 3:00
Alpha Preset Error: 2.0%
User Protocol: ALPHA\BETA

Instrument Name: TA50-1 BERT
Cycles: 1
Beta Preset Error: 2.0%

Cycle 1 of 1
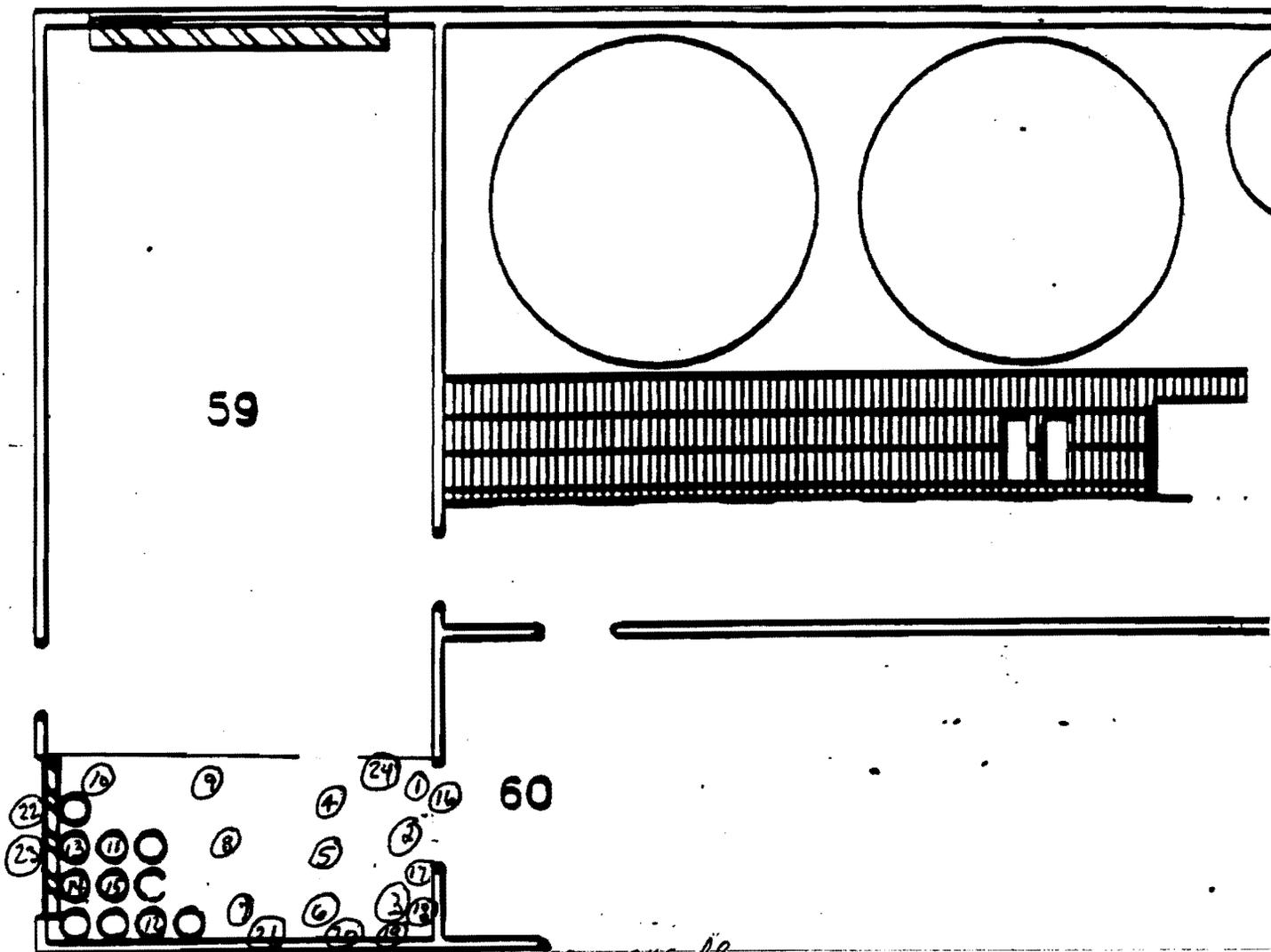Start Time: 9/12/02 11:04:45

Elapsed Time: 3:00
Guard: 17.69 cps

	Spl #	Sample Name	Alpha (DPM)	Cat	MDA	MRA	Beta (DPM)	Cat	MDA	MRA
1	21	SEE DATA SHEE'	1.040 (>100%)	1	5.9444	1.1240	0.000	1	8.4220	3.1870
2	22	SEE DATA SHEE'	0.79 (>100%)	1	6.4531	1.4250	2.095 (>100%)	1	7.8404	2.8917
3	23	SEE DATA SHEE'	0.000	1	6.6550	1.5586	3.364 (±75.7%)	1	8.6318	3.2260
4	24	SEE DATA SHEE'	0.000	1	6.9728	1.7451	2.169 (>100%)	1	7.9416	2.9817
5	25	SEE DATA SHEE'	0.000	1	5.9268	1.2430	3.114 (±80.6%)	1	8.6516	3.3005
6	26	SEE DATA SHEE'	3.469 (±65.1%)	1	6.1046	1.2814	5.762 (±52.2%)	1	9.2091	3.5520
7	27	SEE DATA SHEE'	1.007 (>100%)	1	5.7471	1.0858	5.282 (±48.3%)	1	7.4437	2.7633
8	28	SEE DATA SHEE'	6.291 (±48.0%)	2	6.3205	1.3256	2.232 (>100%)	1	8.2262	3.0896
9	29	SEE DATA SHEE'	1.153 (>100%)	1	4.6879	0.6330	2.462 (±86.9%)	1	7.5201	2.7938
10	30	SEE DATA SHEE'	3.660 (±61.6%)	1	5.4477	0.9555	3.655 (±70.6%)	1	8.6004	3.2920

59

60

INTE SMARS #'S 25-30 ARE ALL SHELF ITEMS.

ESH-1 SMEAR SURVEY FORM

SAMPLE DESCRIPTION

Sample Date/Time: _1-15-03/1100_   No. Of Samples: _20_

TA: _50_   Bldg: _114_

RCT: _Harold Martinez_   Z Number: _107759_

RCT Signature: _Harold D Mar_   MS: _E518_

Phone/Fax: _7-6917_

PURPOSE OF SURVEY

☐ Routine ☐ Pre-Job ☐ Post-Job ☐ Hot-Job

☐ Item Release ☐ Offsite Shipment ☐ Onsite Shipment

■ Non-Routine / Other: _Bldg 114 Survey_

ADDITIONAL INFORMATION

Occurrence No.: _____

Incident No.: _____

RWP No.: _____

SAMPLE TRACKING NUMBER

INSTRUMENTATION

TYPE	HSE No.	CAL Due	% EFF	BKG
Alpha Barthold LB770	962498	5-18-07	See Data Sheets	
Beta				

ESH-1 REVIEW BY

Smear No.	Location	ALPHA*	BETA*	Smear No.	Location	ALPHA*	BETA*
1	Floor	<MDA	<MDA	16	Floor	<MDA	<MDA
2	Floor			17	North Wall		
3	Floor			18	East Wall		
4	Floor			19	South Wall	↓	↓
5	Floor			20	West Wall	<MDA	<MDA
6	Floor Floor			21			
7	North Wall			22			
8	East Wall			23			
9	South Wall			24			
10	West Wall			25			
11	Floor			26			
12	Floor			27			
13	Floor			28			
14	Floor			29			
15	Floor	<MDA	<MDA	30			

*dpm/100 cm²

Sample Measurement Parameters:
Comment: BUILDING 114 HAZ SHED SURVEY
User: MARTINEZ   Instrument Name: TA50-1 BERT
Preset Time: 3:00   Cycles: 1
Alpha Preset Error: 2.0%   Beta Preset Error: 2.0%
User Protocol: ALPHA\BETA

Cycle 1 of 1
Start Time: 1/15/03 11:32:12   Elapsed Time: 3:00
                                            Guard: 19.13 cps

	Spl #	Sample Name	Alpha (DPM)	Cat	MDA	MRA	Beta (DPM)	Cat	MDA	MRA
1	1	SEE DATA SHEE'	1.040 (>100%)	1	5.9422	1.1237	1.941 (>100%)	1	8.4196	3.1863
2	2	SEE DATA SHEE'	0.79 (>100%)	1	6.4508	1.4247	0.000	1	7.8381	2.8910
3	3	SEE DATA SHEE'	3.248 (±69.4%)	1	6.6526	1.5582	0.96 (>100%)	1	8.6293	3.2253
4	4	SEE DATA SHEE'	3.005 (±73.9%)	1	6.9704	1.7447	0.71 (>100%)	1	7.9393	2.9810
5	5	SEE DATA SHEE'	0.84 (>100%)	1	5.9246	1.2428	1.605 (>100%)	1	8.6491	3.2997
6	6	SEE DATA SHEE'	4.768 (±54.6%)	2	6.1024	1.2811	4.211 (±66.5%)	1	9.2065	3.5512
7	7	SEE DATA SHEE'	0.000	1	5.7449	1.0855	2.463 (±86.2%)	1	7.4416	2.7627
8	8	SEE DATA SHEE'	0.90 (>100%)	1	6.3182	1.3253	2.229 (>100%)	1	8.2239	3.0889
9	9	SEE DATA SHEE'	1.152 (>100%)	1	4.6860	0.6329	1.040 (>100%)	1	7.5179	2.7932
10	10	SEE DATA SHEE'	2.359 (±77.9%)	1	5.4456	0.9553	0.000	1	8.5979	3.2913

Sample Measurement Parameters:
Comment: BUILDING 114 HAZ SHED SURVEY
User: MARTINEZ
Preset Time: 3:00
Alpha Preset Error: 2.0%
User Protocol: ALPHA\BETA

Instrument Name: TA50-1 BERT
Cycles: 1
Beta Preset Error: 2.0%

Cycle 1 of 1
Start Time: 1/15/03 11:37:35

Elapsed Time: 3:00
Guard: 18.39 cps

	Spl #	Sample Name	Alpha (DPM)	Cat	MDA	MRA	Beta (DPM)	Cat	MDA	MRA
1	11	SEE DATA SHEE	1.040 (>100%)	1	5.9444	1.1240	5.706 (±49.6%)	1	8.4220	3.1870
2	12	SEE DATA SHEE	0.000	1	6.4531	1.4250	0.000	1	7.8404	2.8916
3	13	SEE DATA SHEE	0.000	1	6.6549	1.5586	0.000	1	8.6318	3.2260
4	14	SEE DATA SHEE	3.007 (±73.9%)	1	6.9728	1.7451	0.72 (>100%)	1	7.9416	2.9817
5	15	SEE DATA SHEE	3.371 (±65.0%)	1	5.9267	1.2430	0.10 (>100%)	1	8.6515	3.3005
6	16	SEE DATA SHEE	2.168 (±85.0%)	1	6.1046	1.2814	1.896 (>100%)	1	9.2091	3.5520
7	17	SEE DATA SHEE	0.000	1	5.7470	1.0858	1.761 (>100%)	1	7.4437	2.7633
8	18	SEE DATA SHEE	0.90 (>100%)	1	6.3205	1.3256	4.488 (±58.3%)	1	8.2262	3.0896
9	19	SEE DATA SHEE	0.000	1	4.6879	0.6330	1.043 (>100%)	1	7.5201	2.7938
10	20	SEE DATA SHEE	2.361 (±77.9%)	1	5.4477	0.9555	0.69 (>100%)	1	8.6004	3.2920

W

S

N

E

TA-50-114

10
3   2   1
9   17
6   5   4
20 8
13   12   11
19   17
16   15   14
18