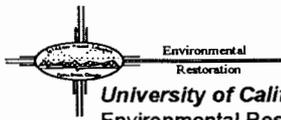


Stu *RD*
Teri ✓



University of California
Environmental Restoration Project, MS M992
Los Alamos, New Mexico 87545
505-667-0808/FAX 505-665-4747



U. S. Department of Energy
Los Alamos Area Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
505-667-7203/FAX 505-665-4504

Date: October 17, 1996
Refer to: EM/ER:96-545



7/05/95

Mr. Benito Garcia
NMED-HRMB
P.O. Box 26110
Santa Fe, NM 87502

SUBJECT: VCA COMPLETION REPORT FOR TA-15, PRS 15-004(b) ACTIVITIES

Dear Mr. Garcia:

Enclosed please find two copies of the Voluntary Corrective Action Completion Report for Technical Area 15, Potential Release Site (PRS) 15-004(b) cleanup activities completed in Fiscal Year 1996. The other appropriate entities within the Department have been included on distribution. The Environmental Restoration Project believes that this completion report justifies no further action (NFA) at this PRS. This PRS is listed in the Hazardous and Solid Waste Amendments (HSWA) Module of the Los Alamos National Laboratory's Resource Conservation and Recovery Act operating permit; therefore, we are asking for your concurrence in our recommendation to remove this site from the HSWA Module.

The Department of Energy has reviewed and approved this report and agrees with the recommendation for NFA. The approval form is attached to the report. The Certification of Completion has been signed and is included in the enclosed report.

If you have any questions, please call Gene Gould at (505) 665-0402 or Everett Trollinger at (505) 667-5801.

Sincerely,

Jorg Jansen
Jorg Jansen, Program Manager
LANL/ER Project

Sincerely,

Theodore J. Taylor
Theodore J. Taylor, Program Manager
DOE/LAEO

JJ/TT/bp



3927

TL

Mr. Benito Garcia
EM/ER:96-545

-2-

October 17, 1996

Enclosures: (1) Final VCA Completion Report for TA-15, PRS 15-004(b)
(2) Certification of Completion
(3) DOE Approval Form

Cy (w/ encs.):

S. Anderson, NMED-AIP, MS J993
G. Gould, ESA-EPE, MS G787
D. Griswold, AL-ERD, MS A906
J. Harry, EM/ER, MS M992
M. Leavitt, NMED-GWQB
N. Naraine, DOE-HQ, EM-453
D. Neleigh, EPA, R.6, 6PD-N (2 copies)
J. Piatt, NMED-SWQB
C. Rodriguez, CIO, MS M707
T. Taylor, LAAO, MS A316
E. Trollinger, LAAO, MS A316
N. Weber, NMED-AIP, MS J993
J. White, ESH-19, MS K490
S. Yanicak, NMED-AIP, MS J993
RPF, MS M707

Cy (w/o encs.):

T. Baca, EM, MS J591
D. Bradbury, EM/ER, MS M992
T. Glatzmaier, DDEES/ER, MS M992
D. McInroy, EM/ER, MS M992
J. Levings, AL-ERD, MS A906
W. Spurgeon, DOE-HQ, EM-453
J. Vozella, LAAO, MS A316
K. Zamora, LAAO, MS A316
EM/ER File, MS M992

APPENDIX B

RFI CHARACTERIZATION DATA

RFI characterization data are available in FIMAD, or will be provided upon request.

**APPENDIX C
COST COMPARISON**

The estimated costs of this VCA are compared with the actual costs through September 11, 1996 in Table C-1. Differences between estimated and actual costs are discussed in the following sections.

**TABLE C-1
ESTIMATED VERSUS ACTUAL COST FOR VCA AT PRS 15-004(b)**

Activity	Budget Cost	Actual Cost
Plan Development	\$ 28,000	\$ 1,500
Mobilization	\$ 7,500	\$ 2,500
Cleanup	\$ 18,000	\$ 27,000
Verification Sampling	\$ 4,600	\$ 10,000
Waste Disposal	\$ 7,000	\$ 7,000
Field Screening	\$ 1,500	\$ 26,700
Demobilization/Site Restoration	\$ 1,200	\$ 1,200
Reporting	\$ 12,000	\$ 2,000
Total Cost	\$ 79,800	\$ 77,900

C.1 Plan Development

The actual cost for plan development was significantly less than the budget due to consolidation of plan writing with other plans.

C.2 Mobilization

Mobilization costs were less than planned because the team's field trailer is approximately 100 yds from the site.

C.3 Cleanup

Cleanup costs exceeded the budget because additional lead values approaching the PRG were found while excavating the sites.

C.4 Verification Sampling

Verification sampling exceeded budget because 5-day turn-around was required for all analysis.

C.5 Waste Disposal

Waste disposal costs are as planned.

C.6 Field Screening

Field screening costs exceeded the budget because additional samples were collected to verify the absence of lead in the soil.

C.7 Demobilization/Site Restoration

Demobilization costs reflect staging drums in the <90 day storage area, radiological screening of all equipment, and transporting equipment to the appropriate storage areas. The costs were as anticipated.

C.8 Reporting

Report costs include writing the final report, as well as compilation of files for the Records Processing Facility (RPF). Because the VCA occurred without any problems, and the reports were consolidated with other reports, less reporting time was required.

C.9 Total Cost

Although cost savings by consolidating plan and report writing were significant, the total cost of the VCA was only slightly less than anticipated because of the additional areas of lead values approaching the PRG.

**APPENDIX D
CONFIRMATORY SAMPLING RESULTS TABLE**

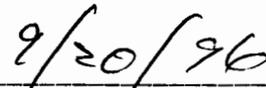
See Table 3.3-1

**APPENDIX E
CERTIFICATION OF COMPLETION**

I certify that all the work pertaining to the voluntary corrective action PRS 15-004(b) has been completed in accordance with the Department of Energy approved VCA plan entitled VCA Plan for Potential Release Site 15-004(b), Former Firing Site. Based on my personal involvement or inquiry of the person or persons who managed this cleanup, a review of all data gathered and a visit to the site, to the best of my knowledge and belief, all criteria of the plan have been met or exceeded. I believe that the completion of this VCA is protective of both human health and the environment. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.



Field Unit 2, Field Project Leader
Environmental Restoration Project
Los Alamos National Laboratory



Date Signed

**VOLUNTARY CORRECTIVE ACTION (VCA) COMPLETION REPORT
APPROVAL/DISAPPROVAL FORM**

PRS(s) 15-004(b)

The undersigned have reviewed the VCA Completion Report and believe that the intent and goals of the VCA plan have been met.

FPL 

Date 9/20/96

FPC 

Date 9-30-96

.....

I, Theodore J. Taylor, DOE-LAO, **APPROVE** , **DISAPPROVE** the accompanying Voluntary Correction Action Report for PRS(s) 15-004(b), TA-15.

The following reasons reflect the decision for disapproval:

Signed: 

Date: 9/30/96

**APPENDIX F
XRF SAMPLE RESULTS**

Western Grid Sample Locations

Sample Location	Lead (ppm)	Sample Location	Lead (ppm)
2603	-17	2660 56-62"	1
2604	26	2661	74
2605	59	2662	46
2607	19	2663	164
2608	1.9	2669	-12
2609	40	2670	19
2610	13	2671	-2.9
2614	15	2672	2.1
2615	57	2673	5.8
2616	-7.6	2674	21
2617	16	2675	382
2618	49	2676	180
2619	97	2683	7.7
2620	30	2684	3
2621	7.3	2685	32
2633	27	2686	38
2634	14	2687	-6
2635	8.2	2688	112
2636	18	2689	81
2637	-9.4	2690	127
2638	9.1	2697	9.1
2639	42	2698	5.2
2640	14	2699	-17
2641	13	2700	74
2642	-15	2701	28
2643	1.1	2702	156
2644	4.9	2703	116
2645	17	2704	333
2646	25	2711	2.7
2647	-12	2712	11
2648	21	2713	63
2649	28	2714	26
2650	29	2715	133
2651	38	2716	218
2652	67	2717	189
2655	-8.2	2718	155
2656	20	2719	189
2657	13	2720	308
2658	7.2	2721	321
2659	17	2722	211
2660	54	2723	99
2660 18-24"	-15	2724	48
2660 30-36"	-14	2725	-4.8

Western Grid Sample Locations

Sample Location	Lead (ppm)	Sample Location	Lead (ppm)
2726	51	2760	171
2727	76	2761	61
2728	153	2762	37
2729	181	2763	239
2730	223	2764	229
2731	178	2765	200
2732	214	2766	481
2733	241	2767	419
2733 6-12"	309	2768	329
2734	278	2769	244
2735	250	2770	185
2736	162	2771	231
2737	149	2772	32
2738	111	2773	40
2739	28	2774	101
2740	103	2775	34
2741	314	2776	155
2742	441	2777	342
2743	256	2778	313
2744	258	2779	282
2745	225	2780	115
2746	277	2781	72
2747	280	2782	63
2748	234	2783	12
2749	195	2784	39
2750	172	2785	-4.7
2751	43	2786	33
2752	167	2787	78
2753	260	2788	121
2754	378	2789	120
2755	507	2790	73
2756	331	2791	4.1
2757	222	2792	13
2758	238	2793	50
2759	218		

XRF Confirmatory Samples

15-2428	
Sample Location	Lead (ppm)
2428 B	9.1
2428 E	195
2428 N	364
2428 S	204
2428 W	206

XRF Confirmatory Samples

15-2434	
Sample Location	Lead (ppm)
2434 B	46
2434 E	399
2434 N	294
2434 S	324
2434 W	317

XRF Confirmatory Samples

15-2464	
Sample Location	Lead (ppm)
2464 B	695
2464 M	566
2464 NE	415
2464 NW	403
2464 SE	529
2464 SW	343
2464 B2	614
2464 B3	-10

B = Base of excavation
 E = East of excavation
 N = North of excavation
 S = South of excavation
 W = West of excavation
 M = Middle of excavation
 NE = Northeast of excavation
 NW = Northwest of excavation
 SE = Southeast of excavation
 SW = Southwest of excavation
 B2 = 2nd base of excavation after removing material
 B3 = 3rd base of excavation after removing material

XRF Confirmatory Samples

15-2444			
Sample Location	Lead (ppm)	Sample Location	Lead (ppm)
2444 B	223	2444 E8	515
2444 M	450	2444 E10	383
2444 NE	311	2444 E12	513
2444 NW	620	2444 E14	363
2444 SE	435	2444 E16	436
2444 SW	728	2444 E18	355
2444 NE2	352	2444 SE8	394
2444 NW2	399	2444 SE10	367
2444 SE2	663	2444 SE12	274
2444 SW2	404	2444 SE14	402
2444 SE3	565	2444 E6D2	260
2444 SE3W	602	2444 SE3ND2	80
2444 SE3N	683	2444 SE3N2D1	899
2444 S4	689	2444 SE3N4	728
2444 S5	561	2444 SE4N2	751
2444 S6	518	2444 SE4N3	345
2444 SE4	636	2444 SE4N4	523
2444 SE5	610	2444 SE3N4D1	769
2444 SE6	548	2444 SE3N3	726
2444 E4	555	2444 E8D1	593
2444 E5	534	2444 SE3N3D1	1078
2444 E6	664	2444 SE10D1	735
2444 SE4W	462	2444 E4D1	388
2444 SE4W1	326	2444 SE3N2	718
2444 SE4N	486	2444 SE3N1D1	399
2444 SE4N1	452	2444 SE14D1	451
2444 SE3W1	447	2444 E12D1	585
2444 SE3N1	597	2444 E14D1	594
2444 SE5D1	299	2444 E16D1	452
2444 S4D1	199	2444 N2D1	241
2444 SE4D1	224	2444 SE3N3D2	278
2444 E6D1	1160	2444 SE4N4D1	422
2444 SE3ND1	723	2444 E18D1	481
2444 SE3WD1	369	2444 W2	202

B = Base of excavation

M = Middle of excavation

NE = Northeast of excavation

NW = Northwest of excavation

SE = Southeast of excavation

SW = Southwest of excavation

D1 = Depth sample

D2 = 2nd depth sample from the same location

NE2 = 1 foot northeast of NE

SE3 = 2 ft southeast of SE corner

S4 = 1 ft south of the SE3 corner

E4 = 1 ft east of the SE3 corner

SE3W = 1 ft west of SE3 corner

SE3N = 1 ft north of SE3 corner

SE4W1 = 2 ft west of SE3 corner and 1 ft south

PE Sample Results

Date	Pb (ppm)
8/20/96	587
8/20/96	581
8/20/96	582
8/20/96	655
8/21/96	564
8/21/96	600
8/22/96	627
8/22/96	609
8/23/96	635
8/23/96	621
8/26/96	576
8/26/96	643
Certified Value	690 ± 60

**APPENDIX G
RADIOLOGICAL SMEAR AND SURVEY RESULTS**

VCA Completion Report

09-04-96
9:52

Northoid LH770 Control System: LH770 1
SAMPLE MEASUREMENT

Page: 1

Component: GPO 804239 (PROPERTY #) OPERATOR: ROBINSON INI *JCH*
 LH770 Number: 1 User File: Alpha/Beta Sample Data File: ICR004
 Sample Sets: DIPPEN Pb SHEET Mode: Alpha/Beta
 HV-Near Counter (V) = 1543 HV-Guard Counter (V) = 1500
 Statistical Error Definition: 2 standard deviation(s)

Category List (Units)

Category	Alpha		Beta	
	Low	High	Low	High
1	0.000	6.08	0.000	9.05
2	6.08	20.0	9.05	200.0
3	20.0		200.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
background (cps)	0.184	0.072	0.139	0.089	0.117	0.061	0.094	0.089	0.150	0.111
Efficiency	0.271	0.281	0.271	0.287	0.282	0.286	0.287	0.289	0.250	0.285
(1/2) (days)	--	--	--	--	--	--	--	--	--	--
Manufacture Date	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Beta										
background (cps)	2.17	1.55	2.48	1.91	1.87	1.94	1.64	1.77	1.90	1.94
Efficiency	0.434	0.440	0.436	0.426	0.442	0.440	0.443	0.447	0.430	0.450
(1/2) (days)	--	--	--	--	--	--	--	--	--	--
Manufacture Date	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Soilover	0.119	0.121	0.133	0.115	0.135	0.141	0.133	0.123	0.140	0.133
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 09-04-96 Time 9:52:20
 Measuring Time (min:sec) Elapsed 0003:00 Preset 0003:00 Cycle 1/1
 Guard [cpm] 1200

Det#	Sol#	Sol. Name	ALPHA			BETA				
			DPM	%Error	Cat	DPM	%Error	Cat		
1	1	LEAD SHEET	3.16	> 100	1	6.07	5.52	> 100	1	8.65
2	2	"	8.05	78.0	2	5.09	8.73	71.9	1	7.57
3	3	BLANK	0.716	> 100	1	6.02	1.90	> 100	1	9.04
4	4	"	0.000	0.000	1	5.19	0.000	0.000	1	8.38
5	5	"	0.000	0.000	1	5.57	3.35	> 100	1	8.01
6	6	"	0.000	0.000	1	4.84	0.157	> 100	1	8.16
7	7	BLANK	0.833	> 100	1	5.24	1.49	> 100	1	7.63
8	8	"	0.000	0.000	1	5.15	0.000	0.000	1	7.76
9	9	"	0.649	> 100	1	5.88	0.032	> 100	1	8.27
10	10	"	0.000	0.000	1	5.46	0.000	0.000	1	7.94

NDA = Minimum Detectable Activity (DPM)