

**Appendix D: List of Locations Where Equipment containing NRC Licensed  
Materials Were Used or Stored**



DEPARTMENT OF THE ARMY  
HEADQUARTERS FORCES COMMAND  
FORT MCPHERSON, GEORGIA 30330-6000



REPLY TO  
ATTENTION OF

AFPI-BC (5-10c)

3 DEC 1993

MEMORANDUM FOR Assistant Chief of Staff for Installation ,  
Management, ATTN: DAIM-BO, Room # 2D657  
600 Army Pentagon, Washington, DC 20310-0600

SUBJECT: Nuclear Regulatory Commission (NRC) Licensed Material  
Site Characterization Survey and Facilities Decommissioning  
Funds for Fort Ord

1. References:

a. First endorsement, FCJ8-BC (AFZW-DBRAC-EE/23 Aug 93),  
13 Sep 93, subject: Request for Immediate Policy, Guidance and  
Funding Lead-based Paint and/or Asbestos.

b. Meeting on 14 Sep 93 between Fort Ord, Army  
Environmental Hygiene Agency (AEHA), Army Materiel Command  
(AMC), and FORSCOM representatives.

c. Memorandum, FCJ8-BC, 15 Oct 93, subject: First Quarter  
FY 94 Distribution of Base Realignment and Closure (BRAC) I and  
91 Environmental Restoration Funds.

2. In reference a, guidance on disposal of property where NRC  
licensed materials have been used and stored was requested.

3. In reference b, meeting representatives agreed that the AEHA  
will conduct the NRC licensed materials site characterization  
survey at Fort Ord with AMC assistance.

4. In reference c, distribution of BRAC I and 91 environmental  
restoration funds for the first quarter of FY 94 was requested.

5. Request \$2,027,842 BRAC 91 environmental restoration funds  
for the first quarter of FY 94 be provided to the AEHA. Funds  
are required to conduct a site characterization survey and  
facilities decommissioning on buildings at Fort Ord where we  
used, stored, and repaired equipment containing NRC licensed  
materials. Cost estimate at enclosure 1 is an update of the  
funding requested for this requirement per reference c. A  
description of the work required for subject requirement is  
provided at enclosure 2.

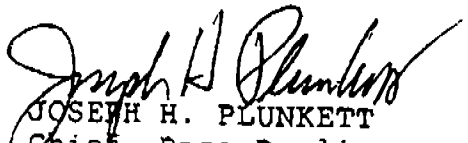
AFPI-BC (5-10c)

SUBJECT: Nuclear Regulatory Commission (NRC) Licensed Material Site Characterization Survey and Facilities Decommissioning Funds for Fort Ord

6. This action has been coordinated through the Engineers Environmental Branch and the Safety Office. Victor Bonilla, DSN 572-4701, or Lynn Clements, DSN 367-6849, can furnish additional information.

FOR THE DCS FOR PERSONNEL AND INSTALLATION MANAGEMENT:

2 Encls

  
JOSEPH H. PLUNKETT  
Chief, Base Realignment  
and Closure Division

CF:

U.S. ARMY ENVIRONMENTAL HYGIENE AGENCY, ATTN: HSHB-MR-HI,  
7TH INFANTRY DIVISION (LIGHT) AND FORT ORD, ATTN: AFZW-DBRAC-EE  
(LTC PERRY), ATTN: AFZW-DE-ENRD (JAMES M. WILLISON)

COST WORK SHEET FOR SURVEY AT FORT ORD, CA

I. INTERIOR BUILDING SURVEYS

BUILDING NUMBER	USAGE	FLOOR AREA SQUARE FT (FT2)	ROOM FLOOR AREA (FT2)	ROOM SURFACE AREA (FT2)	TOTAL COST
0016-T	STORAGE	1,223	1,223	4,125	\$3,052
0087-7	CHEMICAL SCHOOL	3,663	663	2,562	\$1,896
0111	STORAGE	28,678	1,625	5,185	\$3,837
0385	MAINTENANCE	8,620	6,401	16,642	\$12,315
0507	MAINTENANCE	64,920	64,920	142,070	\$105,132
0509	STORAGE	8,650	4,000	11,036	\$8,166
0510	STORAGE	21,947	3,940	10,893	\$8,061
0524	MAINTENANCE	36,007	3,848	10,674	\$7,898
0527	MAINTENANCE	39,446	11,200	27,480	\$20,335
0535	STORAGE/MAINTENANCE	27,456	2,300	6,902	\$5,107
0746	ASP/STORAGE	2,120	2,120	6,450	\$4,773
1421	STORAGE	3250	3,250	9,236	\$6,835
1422	STORAGE	3250	3,250	9,236	\$6,835
1423	STORAGE	3250	3,250	9,236	\$6,835
1424	STORAGE	3250	3,250	9,236	\$6,835
1483	STORAGE	15,593	15,593	37,180	\$27,513
1489	STORAGE	14,570	14,570	34,934	\$25,851
1649	STORAGE	4968	4,968	13,319	\$9,856
1674	STORAGE	18,346	18,346	43,193	\$31,963
1709	STORAGE	4,720	4,720	12,738	\$9,426
1711	STORAGE	4,720	4,720	12,738	\$9,426
1721	STORAGE	4563	810	2,986	\$2,210
1727	STORAGE	8620	6,401	16,642	\$12,315
1740	STORAGE	4,720	4,720	12,738	\$9,426
1750	STORAGE	2246	6,401	16,642	\$12,315
1751	STORAGE	28678	1,625	5,185	\$3,837
1760	STORAGE	4,720	4,720	12,738	\$9,426
1761	STORAGE	2,206	2,206	6,666	\$4,933
1894	STORAGE	2,740	2,740	7,993	\$5,914
1911	STORAGE	1,144	1,144	3,912	\$2,895
1913	STORAGE	1,144	1,144	3,912	\$2,895
1914	STORAGE	1,144	1,144	3,912	\$2,895
1915	STORAGE	1,144	1,144	3,912	\$2,895
1925	STORAGE	4,720	4,720	12,738	\$9,426
1926	STORAGE	4,720	4,720	12,738	\$9,426
1933	STORAGE	4,720	4,720	12,738	\$9,426
1936	STORAGE	4,720	4,720	12,738	\$9,426
1945	STORAGE	4,720	4,720	12,738	\$9,426
1953	STORAGE	4,720	4,720	12,738	\$9,426
1954	STORAGE	4,720	4,720	12,738	\$9,426
1973	STORAGE	2,206	2,206	6,666	\$4,933
1974	STORAGE	2,206	2,206	6,666	\$4,933
2033	STORAGE	2,740	2,740	7,993	\$5,914
2035	STORAGE	2,740	2,740	7,993	\$5,914
2048	MAINTENANCE	8,645	8,645	21,753	\$16,097
2065	STORAGE	18,876	7,680	19,567	\$14,479
2082	STORAGE	12,180	12,180	29,657	\$21,946
2083	STORAGE	12,180	12,180	29,657	\$21,946

2084	STORAGE/PACKING	14,400	14,400	34,560	\$25,574
2119	STORAGE	7,000	7,000	18,016	\$13,332
2217	MAINTENANCE	6,578	6,578	17,049	\$12,416
2223	STORAGE	2,250	2,250	6,777	\$5,015
2309	STORAGE	1,144	1,144	3,912	\$2,895
2330	STORAGE	4,720	4,720	12,738	\$9,426
2430	RAD WASTE STORAGE	1,600	1,600	5,120	\$3,789
2433	STORAGE/PACKING	5,000	5,000	13,394	\$9,912
2790	CLASSIFICATION	3,165	3,165	9,030	\$6,682
2820	STORAGE	18,544	1,700	5,379	\$3,981
2822	STORAGE	18,544	1,700	5,379	\$3,981
2908	STORAGE	18,544	1,700	5,379	\$3,981
3563	STORAGE	8,620	6,401	16,642	\$12,315
3570	STORAGE	28,080	4,848	13,038	\$9,648
3575	STORAGE	23,876	4,656	12,587	\$9,315
3621	STORAGE	22,439	22,439	52,068	\$38,530
3640	STORAGE	29,022	29,022	66,221	\$49,004
3643	STORAGE	29,022	29,022	66,221	\$49,004
3708	MAINTENANCE	5,627	5,627	14,855	\$10,992
3762-A	STORAGE	6,844	1,625	5,185	\$3,837
3855	STORAGE	4,000	1,625	5,185	\$3,837
3858	STORAGE	4,000	1,625	5,185	\$3,837
3870	STORAGE	400	400	1,760	\$1,302
3875	STORAGE	400	400	1,760	\$1,302
3897	MAINTENANCE	6,180	2,016	6,187	\$4,579
4430	STORAGE	5,100	5,100	13,628	\$10,085
4434	STORAGE	5,104	5,104	13,637	\$10,092
4436	STORAGE	40,653	40,653	90,984	\$67,328
4438	STORAGE	5,627	5,328	14,160	\$10,478
4440	STORAGE	5,100	5,100	13,628	\$10,085
4442	STORAGE	5,104	5,104	13,637	\$10,092
4444	STORAGE	5,104	5,104	13,637	\$10,092
4450	STORAGE	12,194	4,612	12,484	\$9,238
4456	STORAGE	40,587	13,566	32,723	\$24,215
4458	STORAGE	12,194	4,612	12,484	\$9,238
4464*	STORAGE	12,393	12,393	30,130	\$22,296
4466*	STORAGE	40,567	40,567	90,802	\$67,193
4469*	STORAGE	40,587	40,587	90,844	\$67,225
4471*	STORAGE	40,587	40,587	90,844	\$67,225
4473*	STORAGE	12,194	12,194	29,688	\$21,949
4484*	STORAGE	1,056	1,056	3,672	\$2,717
4488C*	STORAGE	4,600	828	3,037	\$2,248
4552	STORAGE	8,620	6,401	16,642	\$12,315
4554	STORAGE	8,620	6,401	16,642	\$12,315
4556	STORAGE	8,620	6,401	16,642	\$12,315
4558	STORAGE	8,620	6,401	16,642	\$12,315
4562	STORAGE	40,653	40,653	90,984	\$67,328
4564	STORAGE	5,104	5,104	13,637	\$10,092
4568	STORAGE	5,104	5,104	13,637	\$10,092
4580	STORAGE	5,099	5,099	13,626	\$10,083
4582	STORAGE	5,100	5,100	13,628	\$10,085
4584	STORAGE	5,104	5,104	13,637	\$10,092
4586	STORAGE	5,104	5,104	13,637	\$10,092
4590	STORAGE	5,104	5,104	13,637	\$10,092
4592	STORAGE	5,104	5,104	13,637	\$10,092
4594	STORAGE	35,549	35,549	80,148	\$59,310
		35,549	35,549	80,148	\$59,310

4596	STORAGE	5,104	5,104	13,637	\$10,092
4782	STORAGE	5,100	5,100	13,628	\$10,085
4786	STORAGE	5,104	5,100	13,628	\$10,085
4791	STORAGE	10,195	10,195	25,237	\$18,675
4792	STORAGE	15000	15,000	35,879	\$26,550
4794	STORAGE	5,104	5,104	13,637	\$10,092
4795	STORAGE	5,104	5,104	13,637	\$10,092
4796	STORAGE	15000	15,000	35,879	\$26,550
4798	STORAGE	5,104	5,104	13,637	\$10,092
4799	STORAGE	9,804	9,804	24,361	\$18,027
4867	STORAGE	3550	500	2,073	\$1,534
4885	MAINT/FIRE CNTL	26,121	26,121	60,000	\$44,400
	SUBTOTAL	1,324,003	978,144	2,400,581	\$1,525,557

#### II. OUTDOOR SITES SURVEY

1.	ASP YARD			27,000	\$19,980
2.	DRMO SITE #1			90,000	\$66,600
3.	DRMO SITE #2			90,000	\$66,600
4.	ARTILLERY WASH-DOWN			360,000	\$266,400
	SUBTOTAL			567,000	\$419,580

#### III. SURVEY AND MONITORING EQUIPMENT

1.	5 Set Data Logger; Atlantic Nuclear, Model 235				\$42,045
2.	5 Model 239-1F without Meter				\$11,050
3.	5 Tritium Survey Meters with Gas Bottle				\$15,195
4.	Upgrade on 2 Model 5100 II to 5100 Windows				\$8,415
5.	LBA-BC on 2 Bar Code Readers compatible with Tanneloc (2 each) - Air Quality Software				\$6,000
	SUBTOTAL				\$82,705

#### IV. TOTALS OF INTERIOR & OUTDOOR SURVEYS

	GRAND TOTAL				\$2,027,842
--	-------------	--	--	--	-------------

Total cost does not include five sites marked above with an \* (\$250,873).

## SCOPE OF WORK STATEMENT FOR BASE CLOSURE WORK AT FORT ORD, CA

Scope of Work. The scope of work will include, in broad terms, the historical data review of the use of radiological materials at Fort Ord; radiation protection surveys to scope and characterize affected sites; limited remedial procedures to reduce low-level radiological contamination of affected areas to NRC and EPA acceptable criteria, and verification surveys to evaluate the results of any clean-up effort. The scope of work in specific terms will cover 117 buildings (2,400,381 square feet of total surface area), and four outdoor sites (Ammunition Supply Point [ASP] Yard [approximately 27,000 square feet]), two DRMO's demilitarization sites (90,000 square feet each), and one artillery wash-down area (360,000 square feet). This work plan includes a projection that 10% (240,000 square feet) of the total surface area will require some form of decontamination and resurveys to meet federal and state standards. The scope of work will be performed to comply with NRC licensing scheme for the decommissioning process; the criteria for conducting and evaluating plans and activities and NRC licensed facilities termination; occupational exposure; general safety; quality assurance during decommissioning; record keeping and facilitation. Our objective is to remove these facilities safely from service and to reduce residual radioactivity to a level that permits release of the property for unrestricted use and maintain compliance with on-going NRC licenses for Army radioactive commodities for world-wide use. This scope of work will not cover decommissioning efforts that require structure remediation of contaminated facilities for removal of contaminated soil. However, this Agency will be available to support development of work plans that support such operations and perform verification surveys once remediation has occurred.

## SUMMARY OF OUTDOOR SURVEY SITES

Ammunition Supply Point (ASP) Yard. The ASP Yard consists of an area of 300 x 90 feet. The area will be evaluated to assess potential radiological contamination that may have been accidentally placed in the yard. All radiological surveys and environmental sampling will be conducted in accordance with NRC and EPA guidance. The ASP Yard will be surveyed to evaluate potential alpha, beta and beta-gamma activities in surface soil. The survey will include instrumentation surveys and environmental samples, such as soil, and if applicable, water and vegetation samples. Radiochemistry laboratory analyses will be performed by USAEHA, Radiochemistry Branch.

Artillery Wash-Down Area. The artillery wash-down area is an area approximately 600 x 600 feet. The area will be evaluated to assess potential tritium contamination on the wash-down pad; for potential contamination of soil surrounding the pad area and drainage streams resulting from potential contamination water run off.

Two Defense Reutilization and Marketing Offices (DRMO). The two DRMO demilitarization sites consist of areas about 300 x 300 feet each. Both areas will be evaluated for potential radiological contamination of the soil from radium found in vehicle instrument dials and gauges. All radiological surveys and environmental sampling will be conducted in accordance with EPA guidelines and methodologies. Both areas will be surveyed to evaluate potential contamination from alpha, beta and beta-gamma emitting radioisotopes and specifically radium. The survey will include instrumentation surveys and collection of environmental samples. Radiochemistry laboratory support will be provided by the USAEHA, Radiochemistry Branch.