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June 9, 1999

Ronald M. Levy
Directorate of Environment
USACMLS & MPCENS & FM
Building 141A, 13th Avenue
Fort McClellan, Alabama 36205-5000

RE: ADEM's Comments on the Draft Finding of Suitability to Lease (FOSL) Parks and Recreation Facilities, City of Anniston
Fort McClellan Base Realignment and Closure
Fort McClellan, Alabama

Dear Mr. Levy:

The Alabama Department of Environmental Management has received and reviewed the *Draft Finding of Suitability to Lease Parks and Recreation Facilities, City of Anniston, Fort McClellan, Alabama*, dated April 15, 1999. As a result of our review, ADEM has determined that certain properties being requested for lease by the City of Anniston are currently undergoing environmental investigations. Because environmental investigations are incomplete, ADEM is unable to ascertain the environmental condition of the property. Since the environmental condition of property is unknown, we cannot support a Finding of Suitability to Lease (FOSL) at this time.

For questions or comments please feel free to contact me at 334-271-7789 or email at clj@adem.state.al.us

Sincerely,

Christopher L. Johnson
Governmental Facilities Section
Hazardous Waste Branch
Land Division

CLJ/tc

cc: Bart Reedy, EPA Region IV

RCVD JUL19'99 PM 1:22

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FINDING OF SUITABILITY TO LEASE (FOSL)

PARKS AND RECREATION FACILITIES

CITY OF ANNISTON
FORT MCCLELLAN, ALABAMA

August 1999

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FINDING OF SUITABILITY TO LEASE
PARKS AND RECREATION FACILITIES
FORT MCCLELLAN (FMC), ALABAMA

On the basis of the Community Environmental Facilitation Act (CERFA) Letter Report for FMC, environmental documents maintained in the Administrative Record and associated visual site inspections, I have determined that the Parks and Recreation Facilities summarized in Table 1 and Figures 1-1 through 1-4 at FMC, Alabama (hereafter referred to as the Property), are suitable for Lease to the City of Anniston for a period of 5 years or until the Property is transferred, whichever comes first. The Property shall be used for recreational purposes and administrative operations with certain land use restrictions and other Environmental Protection Provisions as specified in Attachment 1. The Property to be leased measures approximately 355 acres.

A determination of the environmental conditions of the Property was made by the U.S. Department of the Army by reviewing existing environmental documents, completing associated visual site inspections, and personal interviews. The documents reviewed were as follows:

- Environmental Baseline Survey (EBS) and CERFA Letter Report (January 1998)
- U.S. Environmental Protection Agency Region IV (USEPA) and Alabama Department of Environmental Management (ADEM) concurrence to the CERFA Report
- Asbestos-Containing Building Materials Survey Reports (August 1998)
- Asbestos-Containing Building Materials Survey Reports (June 1998)
- Radon Monitoring Report (June 1991)
- Underground Storage Tank (UST) Summary Report (June 1998)
- Lead-Based Paint (LBP) Risk Assessment Report (July 1995)
- Polychlorinated Biphenyls (PCB) Transformer Database Files (February 1997)
- Biological Assessment Report (April 1998)
- Final Environmental Impact Statement Disposal and Reuse of FMC Alabama (August 1998)
- U.S. Department of Defense (DoD) Base Realignment and Closure Ordnance, Ammunition and Explosives, Chemical Warfare Materials Archives Search Report Findings FMC Anniston, Alabama Final (July 1999)
- FMC Reuse and Redevelopment Authority (FMRRA) FMC Comprehensive Reuse Plan (November 1997)
- FMC Integrated Pest Management Plan, Appendix I, Pest Management Operations, Cane Creek Golf Course (August 1998)

Site investigations are currently on-going to further characterize the Property, however FMC expects no risks to human health or the environment to be identified in these investigations that would preclude lease of the property for the intended purposes. The uses contemplated for the Property and facilities included in this Lease to the City of Anniston are consistent with the FMRRA FMC Comprehensive Reuse Plan (November 1997). Use of the Property shall be consistent with current use for the duration of this lease. The Army agrees, except as provided in the sections on asbestos-containing materials (ACM), LBP, radon, and PCBs, that it will take all remedial action necessary to protect human health and the environment, under and in accordance with applicable law and any DoD or Army policies, with respect to any Hazardous Substances that remain on the property at the time of the lease. Results of the review indicate the Property to be environmentally suitable for Lease to the City of Anniston, provided the City adheres to the Environmental Protection Provisions, land use restrictions, and management plans designed to minimize risks to human health and the environment on the leased Property. Specifically, the following environmental or safety conditions have been identified:

- Asbestos-Containing Building Materials Survey Reports (June 1998): eight buildings (Buildings 128, 129, 130, 137, 1012, 3131, 3139, and 3600) were inspected and analyzed for the presence of friable and non-friable asbestos-containing material (ACM). Friable asbestos may pose a health risk if not managed properly. Buildings 130, 3131 and 3139 contain friable ACM. The ACM is primarily in the form of pipe and fitting insulation in various mechanical rooms that are currently restricted from public access. The Army does not intend to remove or repair the friable ACM in any of the buildings included in the Lease. The friable ACM is contained within areas that are open only to authorized personnel, and thus, does not currently pose a threat to the health and safety of the general public The non-friable asbestos should be managed in place. The friable ACM can be effectively managed in place, provided the proper precautions are taken to eliminate exposure of personnel to airborne asbestos. An Asbestos Management Plan is provided in Attachment 2, where the Asbestos-Containing Building Materials Survey Reports are included in their entirety. Results of these ACM survey reports are summarized below in Table 2. Appropriate asbestos notice is given herein and will be included in the Lease.

- A LBP risk assessment conducted in 1995 shows that four buildings 128, 129, 130, and 1012 were inspected for the presence of LBP. LBP was identified on the exterior surface of Building 128, interior and exterior surfaces of Building 129, on a guide wire adjacent to Building 130, and on metal doors and lockers within Building 1012. The lead-based risk assessment report indicates components/surfaces in the buildings or facilities with LBP were in fair to poor condition. Soil samples were collected to 20 feet at each building where LBP was detected on the exterior (128, 129, and 130). Lead concentrations exceeded 1800 parts per million (ppm) at Building 129 at the 0 to 3-foot interval. Lead concentrations in the soil at Buildings 128 and 130 were less than 250 ppm.. LBP can be properly managed in place, provided the following precautions are taken by the City of Anniston during the period of the lease: 1) Ground cover must be maintained around building 129 in order to prevent soil disturbance. 2) The condition of painted surfaces within buildings containing LBP should be maintained to prevent chipping and dust. These restrictions and controls will ensure the continued protection of human health and the environment. Therefore, the Army does not intend to remove LBP from the soil, or remove or repair the LBP in any of the buildings . Table 3 summarizes the LBP risk assessment survey results for the buildings on the Property. Attachment 3 contains the LBP risk assessment report and survey reports for the four buildings included in the Lease. Appropriate LBP notice is given herein and will be included in the Lease.

- Three buildings (Buildings 128, 129, and 130) were tested for radon in 1991. The mechanical room in Building 129 tested in the range of 8.1 to 12.0 pCi/L. Radon levels for Building 128 and 130 did not exceed 4 pCi/L, which is the current threshold for radon. The Army does not intend to perform radon mitigation in any of the buildings to be leased to the City of Anniston. Appropriate radon notice is given herein and will be included in the Lease.

- No radiological surveys have been conducted on the Property. The Property was not used to repair, maintain, or store radioactive commodities.

- There are no PCB transformers remaining on the Property and there have been no reported releases of (PCB)-contaminated dielectric fluids. It is possible that some flourescent light ballasts may contain PCBs in the potting material in excess of 50 ppm. If removed by the

Lessee, PCBs and PCB-contaminated materials must be stored in an approved hazardous waste storage facility and disposed in accordance with applicable regulations.

- Ordnance and explosives (OE) investigations, consisting of review of the Archive Search Report (USACE, 1998), show the Property is not located in or adjacent to an area impacted by unexploded ordnance.

- Cane Creek and Remount Creek which flow through the Golf Course have been identified as moderate quality gray bat foraging habitat as documented in the Biological Assessment (BA) Report (April 1998). Terms of the BA Sections 2.6.7 and 2.6.8 are provided in Attachment 1. Appropriate endangered species notice is given herein and will be included in the Lease.

- Gray bats are known to forage over the Golf Course as documented in the BA Report (April 1998). Pesticides are restricted on the Golf Course to the following: Daconil® 2787; Dursban 50W; 2,4-d Amine 4; MSMA (Red Panther Super Juice); Pendimethalin (Pendulum® Herbicide; Illoxan® 3EC, Koban 30; Dimension®; and Roundup® (FMC Integrated Pest Management Plan, Appendix I, Pest Management Operations, Cane Creek Golf Course, August 1998). Pesticides that are not included in the Cane Creek Golf Course Plan must have Department of Army and U.S. Fish and Wildlife Service approval prior to any application, due to the presence of the gray bat (Myotis grisescens). Terms of the BA Sections 2.6.7 and 2.6.8 are provided in Attachment 1. A list of DoD-approved pesticides is provided in Attachment 4. Appropriate pesticide management notice is given herein and will be included in the Lease.

- Wetlands have been identified along Cane Creek and at the Golf Course. A map showing the wetlands on the leased Property is provided at Attachment 5 (FMC Natural Resources Environmental Constraints Map).

- No aboveground storage tanks are located on the Property.

- Seven underground storage tank (UST) sites are located on the Property. The current status of each UST is summarized in Table 4. The CERFA Parcel designation for the UST sites are as follows: Parcel 13(7) - Building 1012; Parcel 27(7) - Motor Pool Building 3196; Parcel 28(7) - Motor Pool Building 3148; Parcel 34(7) - Building 128; Parcel 35(7) - Building 130; Parcel 54(7) - Building 3131; and Parcel 55(7) - Building 3161. Closure reports are included in Attachment 6. The UST sites were originally investigated/closed with the understanding the Property Owner or Land Use would not change. In order to minimize the risk to human health and the environment during the period of this lease, the Lessee shall not store or pump fuel from the UST sites on the Leased Property. Because the Property will eventually transfer to new ownership, all seven UST sites have been designated CERFA Category 7 sites (areas that are not evaluated or require further evaluation) and are discussed below.

Following are CERCLA hazardous substance search findings:

Truman Gymnasium, Parcels 150(7), 139(7), and 13(7): Parcel 150(7) is the site of a Former Motor Pool Area and contains a Former Gas Station [Parcel 139(7)] and a 5,000-gallon active heating oil UST, Parcel 13(7). A site investigation is currently underway for the Former Motor Pool Area, Former Gas Station, and UST sites.

Motor Pool Area 3100, 23rd Street, Parcels 147(7), 72(7), 27(7), and 28(7): Parcel 147(7) is the site of an active motor pool area. The motor pool area contains Parcel 72(7), an active washrack, Parcel 27(7), an active 10,000-gallon UST, and Parcel 28(7), an active 2,500-gallon UST. The motor pool area, associated washrack, and USTs are currently undergoing a site investigation.

The Golf Course, Parcel 178(7), 83(7), and 141(7): Parcel 178(7) consists of the current Golf Course, Pesticide Mixing and Storage Facility, [Building S-2252- Parcel 83(7)] and the Former Golf Course Pesticide Mixing and Storage Facility, [Former Building T-2249 - Parcel 141(7)]. The Golf Course and associated pesticide and storage facilities are currently undergoing a site investigation.

Miller Complex Fitness Center [Parcel 34(7)) and Field House (Parcel 35(7)]: Parcel 34(7) is the location where a 4,000-gallon heating oil UST was removed and replaced with a new 4,000-gallon UST in 1996. Parcel 35(7) is the location where a 1,000-gallon heating oil UST was removed and replaced with a new 2,500-gallon UST in 1996. The USTs at the Miller Complex are currently undergoing a site investigation.

Guillion Field, Parcels 54(7) and 55(7): Parcel 54(7) located at Building 3131 is the former location of one 20,000-gallon heating oil tank removed in 1996. Parcel 55(7) located at Building 3161 is the former location of one 1,000-gallon heating oil tank removed in 1996. The USTs at Guillion Field are currently undergoing site investigations.

The environmental impacts associated with proposed lease of the Property have been analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis have been documented in the FMC Disposal and Reuse Environmental Impact Statement (August 1998) and its Record of Decision (June 25, 1999). Any encumbrances or conditions identified in such analysis as necessary to protect human health or the environment have been incorporated in the FOSL. In addition, the proposed lease is consistent with the intended reuse of the Property as set forth in the FMRRA FMC Comprehensive Reuse Plan .

Historical Structures. Building 129 is a historic building and is eligible for inclusion in the National Register of Historical Places as documented in the FMC Historic Buildings Inventory dated June 1993. The lease will include the preservation covenant provided in the Environmental Protection Provision (Attachment 1).

The Lease of this parcel has been found to be protective of human health and the environment based on a review of pertinent records and the EBS. The FOSL has been reviewed by USEPA and ADEM. These agencies comments and the Army's responses to those comments are provided in Attachment 7.

On the basis of the above information, certain terms, conditions, reservations, restrictions, and notifications are required. Environmental Protection Provisions at Attachment 1 will be included in the Lease.

On the basis of the above information, I conclude that all DOD requirements to reach a Finding of Suitability to Lease the Parks and Recreation Facilities, consistent with current use of the Property, have been fully met. The Property is assigned DOD environmental condition Category 1 (areas that have been evaluated and require no further evaluation) and Category 7 (areas that have not been evaluated or require further evaluation) and is suitable for lease pursuant to the terms and conditions specified in the Lease, including the use restrictions detailed in the attached Environmental Protection Provisions. The uses contemplated for the lease are consistent with protection of human health and

the environment, and there are adequate assurances that the United States will take any additional remedial actions found to be necessary that has not been taken on the date of the lease.

PHILIP E. SAKOWITZ, JR.
Deputy Chief of Staff for
Base Operations Support
Headquarters, United States Army
Training and Doctrine Command

10 AUG 1999

TABLES

Table 1

Findings of Suitability to Lease Parks and Recreation Facilities
Summary of Property to be Leased
Fort McClellan, Calhoun County, Alabama
(Page 1 Lof 3)

Map Parcel Designation	Building Number	Year Built	Current Use	Square Footage	CERFA Category	CERFA Parcel Label	Non-CERCLA Parcel Label	Non-CERCLA		
								ACM	LBP	Radon
Miller Complex (26.33 acres)										
P.2.6	128	1967	Physical Fitness Center	13300	7	34(7)PS		X	X	
P.2.6	128F		Heat Fuel Underground		7	34(7)PS				
P.2.6	129	1936	Administrative General Purposes	905	1	161(1)	21(Q)-A(P)L/R		X	X
P.2.6	130	1941	ACS Center	24440	7	35(7)PS	20Q-A(P)L	X	X	
P.2.6	130F		Heat Fuel Underground		7	35(7)PS				
P.2.6	132	1941	Court Area		1	161(1)				
P.2.6	133	1942	Softball Field		1	161(1)				
P.2.6	134	1941	Baseball Field		1	161(1)				
P.2.6	135	1941	Running Track		1	161(1)				
P.2.6	136	1977	Separate Toilet/Shower	287	1	161(1)				
P.2.6	137	1976	Physical Fitness Center	1682	7	35(7)PS				
P.2.6	138	1988	Recreation Shelter	3000	1	161(1)				
P.2.6	139	1988	Separate Toilet/Shower	1000	1	161(1)				
Court Area (1.0 acre)										
P.2.9	1703	1977	Court Area		1	161(1)				
Court Area (.04 acre)										
P.2.8	1706	1978	Court Area		1	161(1)				
Court Area (4.11 acres)										
P.2.11	285	1942	Court Area		1	161(1)				
Playground (9.75 acres)										
P.2.7	2104	1971	Playground GP		1	161(1)				
Truman Gymnasium (4.10 acres)										
P.2.2	1012	1977	Physical Fitness Center	41,369	7	139(7)PS 13(7)PS 150(7)PS/PR(P)	33(Q)-A(P)-L	X	X	

Table 1

Findings of Suitability to Lease Parks and Recreation Facilities
Summary of Property to be Leased
Fort McClellan, Calhoun County, Alabama
(Page 2 of 3)

Map Parcel Designation	Building Number	Year Built	Current Use	Square Footage	CERFA Category	CERFA Parcel Label	Non-CERCLA Parcel Label	Non-CERCLA		
								ACM	LBP	Radon
Golf Course (210 acres)										
P.2.12	2246		Facility Sign		7	178(7)HR(P)				
P.2.12	2247	1995	Sports Pro Shop	9900	7	178(7)HR(P)				
P.2.12	2248	1995	Golf Course Maintenance	2960	7	178(7)HR(P)				
P.2.12	T-2249		Demolished		7	141(7)HS/HR(P)				
P.2.12	2251	1954	Golf Course 18th Hole		7	178(7)HR(P)				
P.2.12	2252	1984	Golf Course Maintenance	2000	7	178(7)HR(P)				
P.2.12	S-2253	1989	Water Treatment Support Bldg	400	7	83(7)HS				
P.2.12	2263	1975	General Instrument Building	2460	7	178(7)HR(P)				
P.2.12	4312	1965	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4311	1964	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4332	1972	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4343	1972	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4706	1941	Railroad Bridge		7	178(7)HR(P)				
P.2.12	4301	1985	Vehicle Bridge		7	178(7)HR(P)				
P.2.12	4316	1972	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4317	1972	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4320	1972	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4304	1974	Vehicle Bridge		7	178(7)HR(P)				
P.2.12	4330	1972	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4705	1941	Railroad Bridge		7	178(7)HR(P)				
P.2.12	4329	1972	Pedestrian Bridge		7	178(7)HR(P)				
P.2.12	4315	1972	Pedestrian Bridge		7	178(7)HR(P)				
Motor Pool Area (3.46 acres)										
P.2.4	3139	1956	Vehicle Maintenance Shop	5028	7	147(7) PS/PR(P)		X		
P.2.4	3139F		Diesel Storage Underground							
P.2.4	3140	1979	Engineering/Housing Management	144						

Table 1

Findings of Suitability to Lease Parks and Recreation Facilities
Summary of Property to be Leased
Fort McClellan, Calhoun County, Alabama
(Page 3 of 3)

Map Parcel Designation	Building Number	Year Built	Current Use	Square Footage	CERFA Category	CERFA Parcel Label	Non-CERCLA Parcel Label	Non-CERCLA		
								ACM	LBP	Radon
P.2.4	3146	1956	Wash Platform Org		7	72(7)PS 147(7) PS/PR(P)				
P.2.4	3147	1956	Wash Platform Org		7	72(7) PS 147(7) PS/PR(P)				
P.2.4	3148	1956	Grease Rack		7	147(7)PS/PR(P) 28(7)PS/PR				
P.2.4	3148F		Waste POL Storage		7	28(7)PS/PR 27(7)PS/PR 147(7)PS/PR(P)				
P.2.4	3149	1956	Oil Storage Building	400	7	147(7) PS/PR(P)				
P.2.4	3196	1956	Dispatch Building	192	7	27(7)PS 147(7) PS/PR(P)				
Guillion Field (42.53 acres)										
P.2.5	3131	1954	Company Headquarters	81,212	7	54(7)PS		X		
P.2.5	3131F		Heat Fuel Underground		7	54(7)PS				
P.2.5	3151		Court Area		7	54(7)PS				
P.2.5	3161	1956	Battalion Headquarters	2,655	7	55(7)PS				
P.2.5	3161F		Heat Fuel Underground		7	55(7)PS				
P.2.5	3162	1959	Grandstand/Bleachers		1	161(1)				
P.2.5	3163	1959	Grandstand/Bleachers		1	161(1)				
P.2.5	3164	1959	Grandstand/Bleachers		1	161(1)				
Court Area (3.39 acres)										
P.2.3	3215	1954	Court Area		1	161(1)				
P.2.3	3216	1965	Court Area		1	161(1)				
Youth Center (15.13 acres)										
P.2.1	3600	1984	Youth Center	18400	1	161(1)	1Q-A(P)/L	X	X	
Watershed (34.97 acres)										
P.2.10			Watershed		1	161(1)				

Table 2

Findings of Suitability to Lease
Parks and Recreation Facilities
Summary of Buildings Surveyed for Asbestos
Fort McClellan, Calhoun County, Alabama

Building Number	Year Built	Description	Date Surveyed	Results
128	1967	Physical Fitness Center	May 1997	Friable asbestos-containing material not found to be present. Non-friable asbestos found under floor tile.
129	1936	Administration General Purposes	May 1997	No friable or non-friable asbestos-containing material found.
130	1941	ACS Center	May 1997	Friable asbestos-containing material found in maintenance area. Non-friable asbestos found under floor tiles.
137	1976	Physical Fitness Center	May 1998	No friable or non-friable asbestos-containing material was found.
1012	1997	Physical Fitness Center	June 1997	Presumed asbestos-containing 12-by 12-inch vinyl floor tile and mastic were identified.
3131	1954	Company Headquarters	November 1997	Friable asbestos-containing material was found on pipe insulation, piping-fitting insulation, and white cementitious insulation of straight runs. Non-friable material consisting of floor tile and black mastic found beneath floor tiles is presumed to contain asbestos.
3139	1956	Vehicle Maintenance Shop	June 1997	Friable asbestos-containing material was found on all fiberglass pipe straight runs.
3600	1984	Youth Center	1997	Friable asbestos-containing material was not found to be present. Non-friable floor tile and black mastic underneath the floor tile presumed to contain asbestos was found.

Table 3

Findings of Suitability to Lease
Parks and Recreation Facilities
Summary of Buildings Surveyed for the Presence of Lead-Based Paint
Fort McClellan, Calhoun County, Alabama

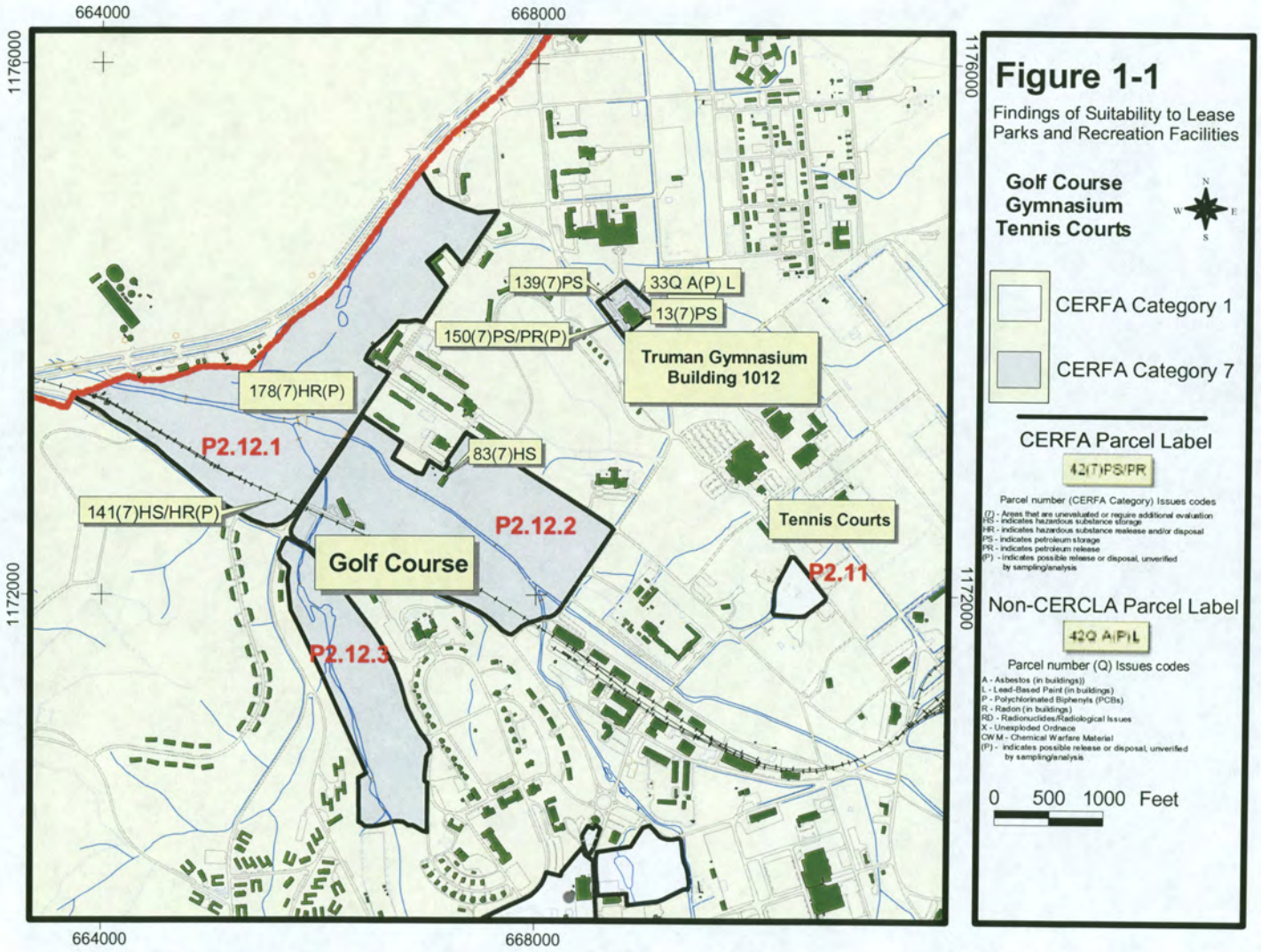
Building No.	LBP Present	LBP Fair Condition	LBP on Impact Surfaces	Lead Dust Exceed Standard	Soil Lead Exceed 400 ppm
128 Physical Fitness Center	Interior -None detected Exterior -Yes	Fair	Door & Jamb	Stairwell Floor	< 250 ppm
129 Administration General Purposes	Interior -Yes Exterior -Yes	Fair Poor			Within 0 to 3 ft of building, lead concentrations exceeded 1,800 ppm
130 ACS Center	Interior -None detected Exterior -Yes	Fair to good		Not tested	< 250 ppm
1012 Physical Fitness Center	Interior -Yes Exterior -None detected	Fair	Orange metal doors	Not tested	Not sampled. LBP not detected on exterior of Building 1012.

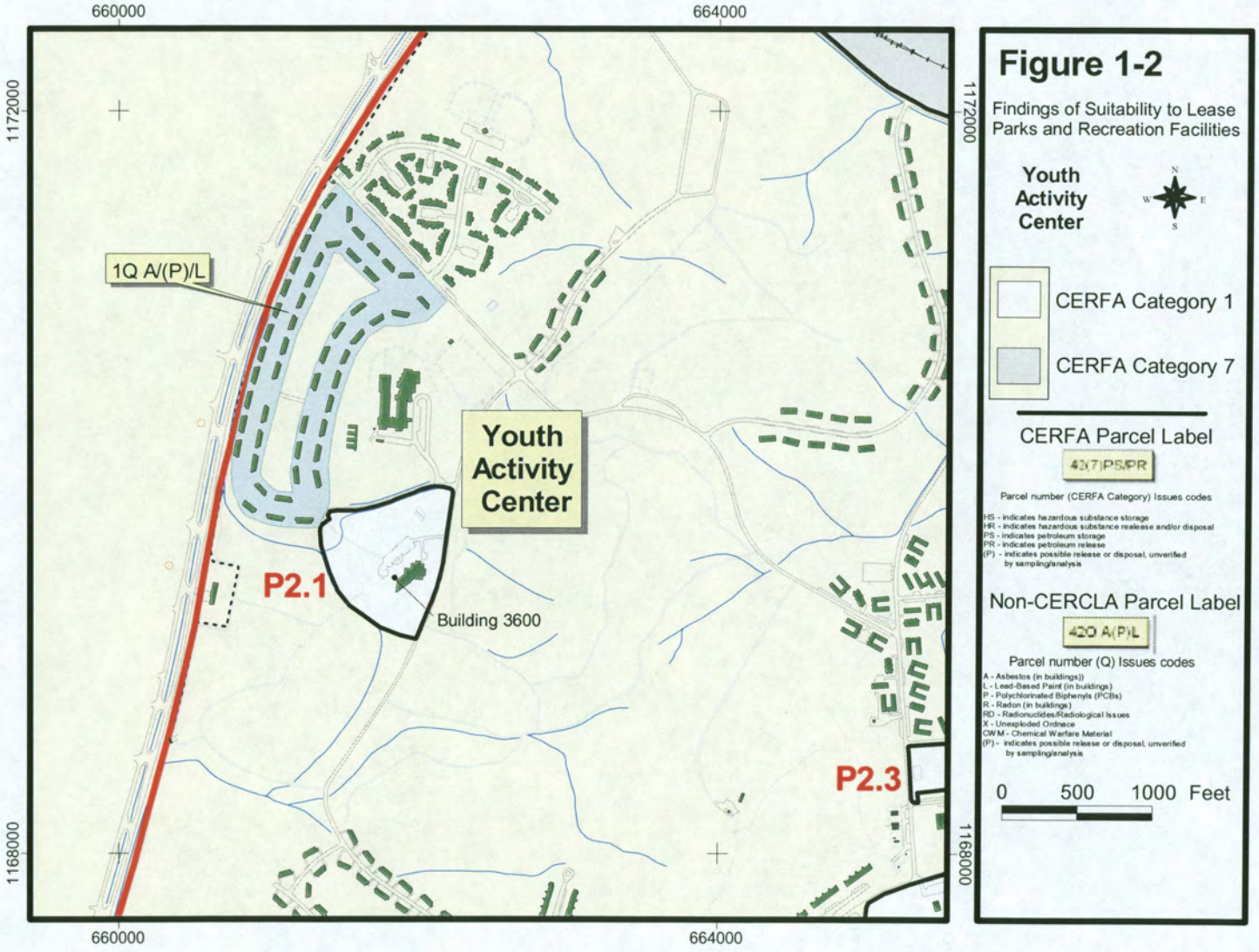
Table 4

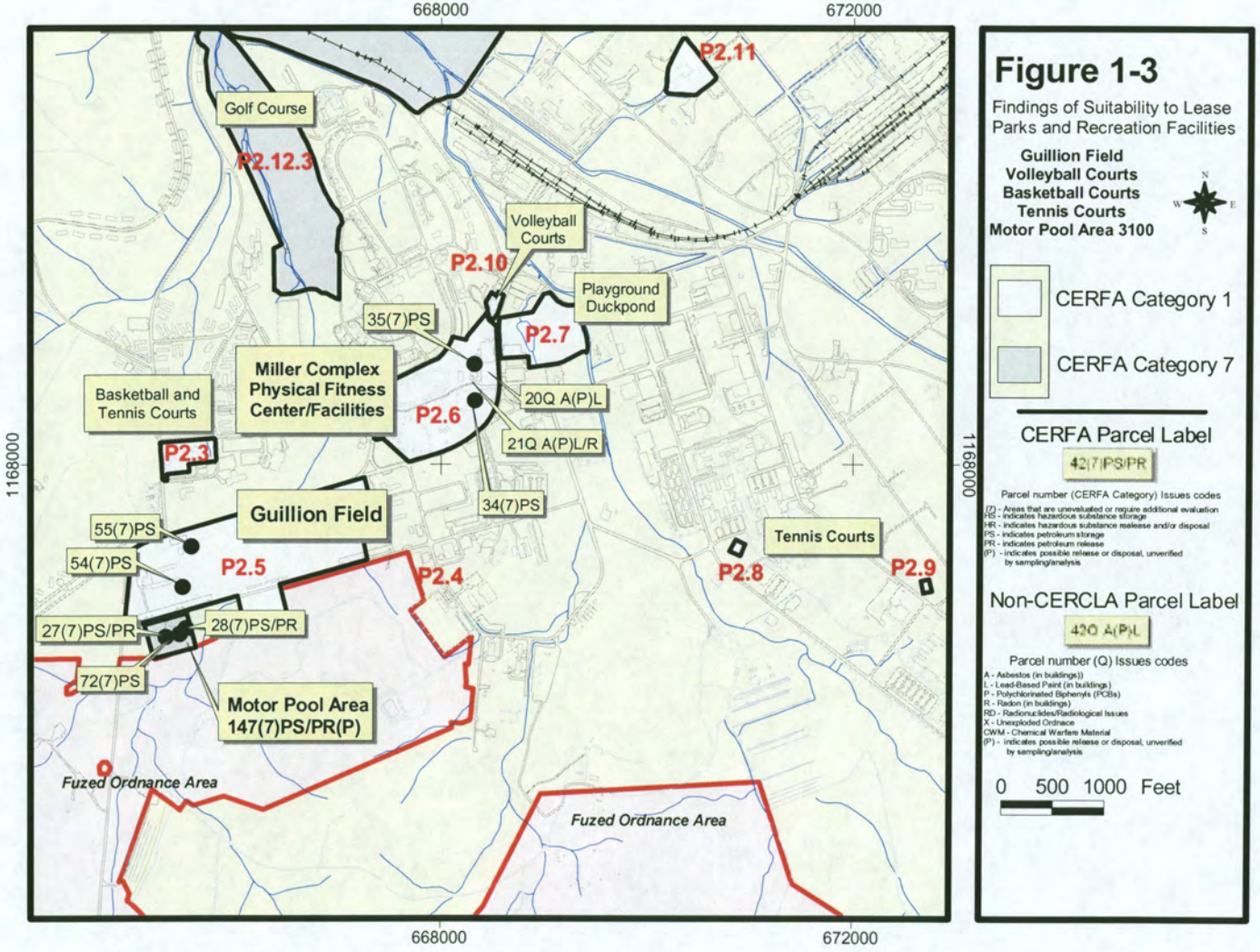
Findings of Suitability to Lease
Parks and Recreation Facilities
UST Status Summary
Fort McClellan, Calhoun County, Alabama

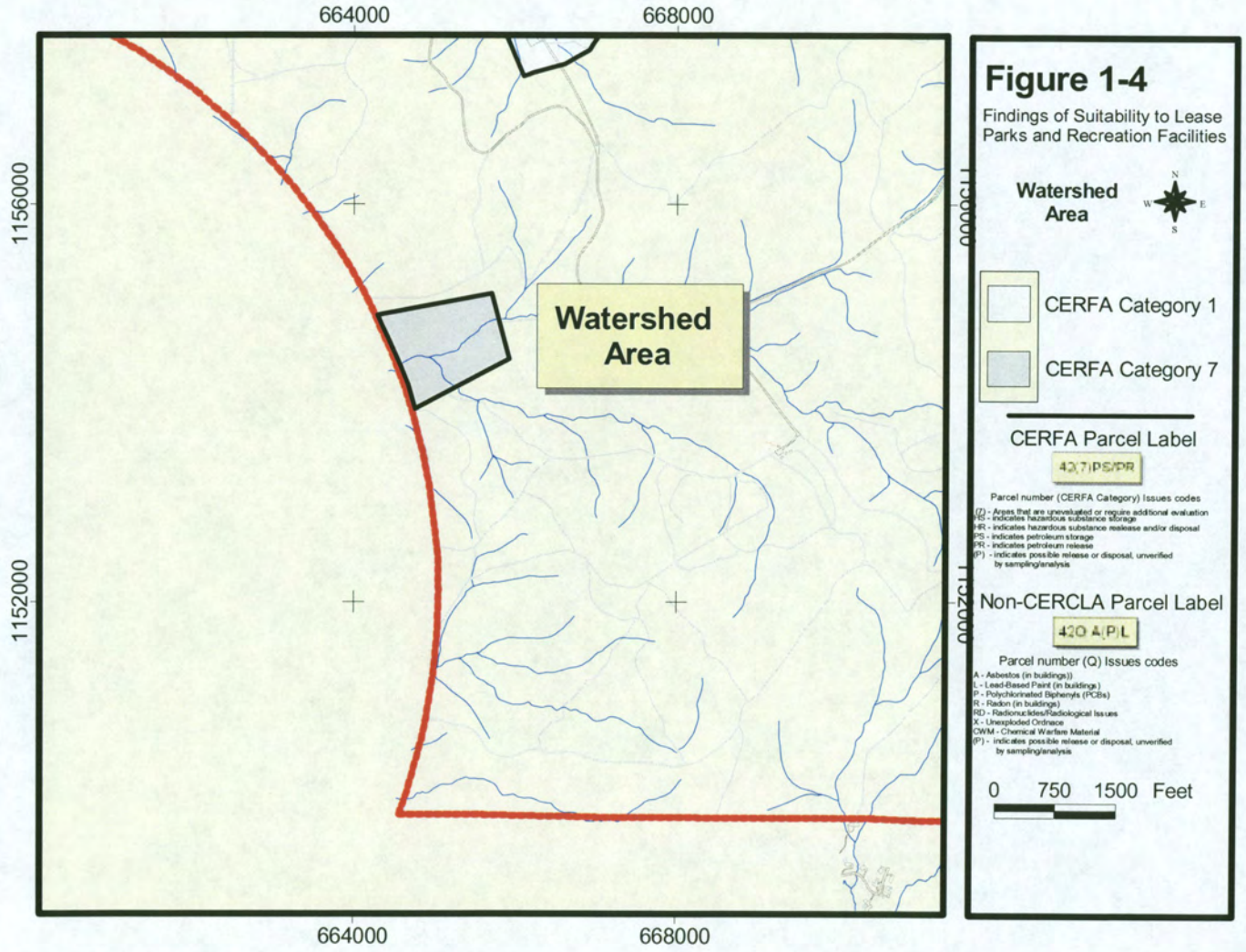
Site Description	Parcel No.	Tank Contents	Size (gl)	Date Installed	Date Closed	Tank Rmv'ed	Piping Rmv'ed	Sampled	TPH (ppm)	Notes
Physical Fitness Center, Building 128	34(7)PS	heating oil	4000	1978	4/17/96	yes	yes	soil	854	replaced with new 4,000-gallon UST
	34(7)PS	heating oil	4000	**1996**	**Active**					
ACS Center, Building 130	35(7)PS	heating oil	2500	1975	4/11/96	yes	yes	none	na	replaced with 1,000-gallon UST
	35(7)PS	heating oil	1000	**1996**	**Active**					
Physical Fitness Center, Building 1012	13(7)PS	heating oil	5000	1977	1996	yes	yes	no	na	replaced with new 5,000-gallon UST
		heating oil	5000	**1996**	**Active**					
Heat Fuel Underground, Building 3131	54(7)PS	heating oil	20,000	1980	1996	yes	no	no	na	tank not replaced
Heat Fuel Undergbround, Building 3161	55(7)PS	heating oil	1,000	1980	1996	yes	no	no	na	tank not replaced
UST Building 3196	27(7)PS/PR	diesel	10,000	**1986**	**Active**					Compliance work performed 1991.
Waste POL Storage, Building 3196/3148 Motor Pool	28(7)PS/PR	waste oil	2000	1982	5/5/94	no-filled	yes	soil	9000	replaced with 2,500-gallon UST
	28(7)PS/PR	waste oil	2500	**1994**	**Active**					

FIGURES


664000
668000
1176000
1172000
139(7)PS
33Q A(P) L
13(7)PS
150(7)PS/PR(P)
Truman Gymnasium
Building 1012
178(7)HR(P)
P2.12.1
83(7)HS
141(7)HS/HR(P)
P2.12.2
Golf Course
Tennis Courts
P2.11
P2.12.3
Figure 1-1
Findings of Suitability to Lease
Parks and Recreation Facilities
Golf Course
Gymnasium
Tennis Courts
N
W
E
S
CERFA Category 1
CERFA Category 7
CERFA Parcel Label
42(7)PS/PR
Parcel number (CERFA Category) Issues codes
(7) - Areas that are unevaluated or require additional evaluation
HS - indicates hazardous substance storage
HR - indicates hazardous substance release and/or disposal
PS - indicates petroleum storage
PR - indicates petroleum release
(P) - indicates possible release or disposal, unverified by sampling/analysis
Non-CERCLA Parcel Label
42Q A(P)L
Parcel number (Q) Issues codes
A - Asbestos (in buildings))
L - Lead-Based Paint (in buildings)
P - Polychlorinated Biphenyls (PCBs)
R - Radon (in buildings)
RD - Radionuclides/Radiological Issues
X - Unexploded Ordnace
CW M - Chemical Warfare Material
(P) - indicates possible release or disposal, unverified by sampling/analysis
0 500 1000 Feet


660000
664000
1172000
1168000
1Q A/(P)/L
Youth Activity Center
P2.1
Building 3600
P2.3
Figure 1-2
Findings of Suitability to Lease Parks and Recreation Facilities
Youth Activity Center
N
W
E
S
CERFA Category 1
CERFA Category 7
CERFA Parcel Label
42(7)PS/PR
Parcel number (CERFA Category) Issues codes
HS - indicates hazardous substance storage
HR - indicates hazardous substance realease and/or disposal
PS - indicates petroleum storage
PR - indicates petroleum release
(P) - indicates possible release or disposal, unverified by sampling/analysis
Non-CERCLA Parcel Label
420 A(P)L
Parcel number (Q) Issues codes
A - Asbestos (in buildings))
L - Lead-Based Paint (in buildings)
P - Polychlorinated Biphenyls (PCBs)
R - Radon (in buildings)
RD - Radionuclides/Radiological Issues
X - Unexploded Ordnace
CWM - Chemical Warfare Material
(P) - indicates possible release or disposal, unverified by sampling/analysis
0
500
1000 Feet


668000
672000
1168000
Golf Course
P2.12.3
P2.11
Volleyball Courts
P2.10
Playground Duckpond
35(7)PS
P2.7
Miller Complex Physical Fitness Center/Facilities
Basketball and Tennis Courts
P2.6
20Q A(P)L
21Q A(P)L/R
P2.3
Guillion Field
34(7)PS
55(7)PS
54(7)PS
P2.5
P2.4
Tennis Courts
P2.8
P2.9
27(7)PS/PR
28(7)PS/PR
72(7)PS
Motor Pool Area 147(7)PS/PR(P)
Fuzed Ordnance Area
Fuzed Ordnance Area
Figure 1-3
Findings of Suitability to Lease Parks and Recreation Facilities
Guillion Field
Volleyball Courts
Basketball Courts
Tennis Courts
Motor Pool Area 3100
N
W
E
S
CERFA Category 1
CERFA Category 7
CERFA Parcel Label
42(7)PS/PR
Parcel number (CERFA Category) Issues codes
(I) - Areas that are unevaluated or require additional evaluation
HS - indicates hazardous substance storage
HR - indicates hazardous substance release and/or disposal
PS - indicates petroleum storage
PR - indicates petroleum release
(P) - indicates possible release or disposal, unverified by sampling/analysis
Non-CERCLA Parcel Label
42Q A(P)L
Parcel number (Q) Issues codes
A - Asbestos (in buildings))
L - Lead-Based Paint (in buildings)
P - Polychlorinated Biphenyls (PCBs)
R - Radon (in buildings)
RD - Radionuclides/Radiological Issues
X - Unexploded Ordnace
CWM - Chemical Warfare Material
(P) - indicates possible release or disposal, unverified by sampling/analysis
0 500 1000 Feet


664000
668000
1156000
1152000
Watershed Area
Figure 1-4
Findings of Suitability to Lease Parks and Recreation Facilities
Watershed Area
N
W
E
S
CERFA Category 1
CERFA Category 7
CERFA Parcel Label
42(7)PS/PR
Parcel number (CERFA Category) Issues codes
(7) - Areas that are unevaluated or require additional evaluation
PS - indicates hazardous substance storage
HR - indicates hazardous substance release and/or disposal
PS - indicates petroleum storage
PR - indicates petroleum release
(P) - indicates possible release or disposal, unverified by sampling/analysis
Non-CERCLA Parcel Label
420 A(P)L
Parcel number (Q) Issues codes
A - Asbestos (in buildings))
L - Lead-Based Paint (in buildings)
P - Polychlorinated Biphenyls (PCBs)
R - Radon (in buildings)
RD - Radionuclides/Radiological Issues
X - Unexploded Ordnace
CWM - Chemical Warfare Material
(P) - indicates possible release or disposal, unverified by sampling/analysis
0 750 1500 Feet

ATTACHMENT 1

ENVIRONMENTAL PROTECTION PROVISIONS

ATTACHMENT 1
ENVIRONMENTAL PROTECTION PROVISIONS
PARKS AND RECREATION FACILITIES
FORT MCCLELLAN, ALABAMA

The following conditions will be placed in the Lease to ensure there will be no unacceptable risk to human health or the environment and no interference with the ongoing Fort McClellan (FMC) Installation Restoration Program (IRP), and to ensure the regulatory requirements for the IRP and other compliance programs administered by the Army are met.

1. The sole purposes, for which the Leased Property and any improvements thereon may be used, in the absence of prior written approval of the Government for any other use, are recreational and administrative consistent with the prior use of the Property.

2. The Lessee shall neither transfer nor assign this Lease or any interest therein or any property on the Leased Property, nor sublet the Leased Property or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Lease without the prior written consent of the Government. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection Provisions herein.

3. The Lessee and any sublessee shall comply with the applicable Federal, state and local laws, regulations, ordinances, permits, and standards that are or may become applicable to Lessee's activities on the Leased Property.

4. The Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operations under the Lease, independent of any existing permits.

5. The Government's rights under this Lease specifically include the right for Government officials to inspect the Leased Property for compliance with environmental, safety and occupational health laws and regulations, whether or not the Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The Government normally will give the Lessee or sublessee twenty-four (24) hours prior notice of its intention to enter the Leased Property unless it determines the entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee, or contractor thereof.

6. The Lessee acknowledges that it has received and reviewed the EBS (Environmental Baseline Survey, January 1998), the Archives Search Report (U.S. Department of Defense Base Realignment and Closure Ordnance, Ammunition, and Explosives Archives Search Report Conclusions and Recommendations. FMC, Anniston, Alabama. Final. July, 1999), and the Environmental Protection Provisions herein, prior to the execution of the Lease.

7. Amendments, renewals, or extensions of the Lease shall not require a new EBS unless the Lessee changes the Leased Property or there is a change to the environmental condition of the Property.

8. The Government and its officers, agents, employees, contractors, and subcontractors have the right, upon reasonable notice to the Lessee and any sublessee, to enter upon the Leased Property for the purposes enumerated in this subparagraph:
   a. to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the FMC IRP;
   b. to inspect field activities of the Government and its contractors and subcontractors in implementing the FMC IRP;
   c. to conduct any test or survey related to the implementation of the IRP or environmental conditions at the Leased Property or to verify any data submitted to the Environmental Protection Agency (EPA) or Alabama Department of Environmental Management (ADEM) by the Government relating to such conditions;
   d. to construct, operate, maintain or undertake any other response or remedial action as required or necessary under the FMC IRP, including, but not limited to monitoring wells, pumping wells and treatment facilities.

9. The Lessee agrees to comply with the provisions of any health or safety plan in effect under the IRP during the course of any of the above described response or remedial actions. Any inspection, survey, investigation, or other response or remedial action will, to the extent practicable, be coordinated with representatives designated by the Lessee and any sublessee. The Lessee and sublessees shall have no claim on account of such entries against the United States or any officer, agent, employee, or contractor thereof. In addition, the Lessee shall comply with all applicable Federal, state, and local occupational safety and health regulations.

10. The Lessee further agrees that in the event of any assignment or sublease of the Leased Property, it shall provide to the EPA and ADEM by certified mail, a copy of the agreement or sublease of the Leased Property within fourteen (14) days after the effective date of such transaction. The Lessee may delete the financial terms and any other proprietary information from the copy of any agreement of assignment or sublease furnished pursuant to this condition.

11. The Lessee will not store or dispose of hazardous materials on the Leased Property unless authorized under 10 U.S.C. 2692. The Lessee shall strictly comply with the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA); Alabama Hazardous Wastes Management and Minimization Act, Code of Alabama (1975), §§ 22-30-1 through 22-30-24, as amended, and ADEM Administrative Code Div. 335-14; and any other applicable laws, rules or regulations. The Lessee must provide at its own expense such hazardous waste storage facilities that comply with all laws and regulations, as it may need for such storage. Any violation of the requirements of this provision shall be deemed a material breach of this Lease.

12. Army accumulation points for hazardous and other wastes will not be used by the Lessee or any sublessee. Neither will the Lessee or sublessee permit its hazardous wastes to be commingled with hazardous waste of the Army.

13. The Lessee shall have a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations on the Leased Property. Such plan shall be independent of the FMC plan and, except for initial fire response and or spill containment, shall not rely on use of installation personnel or equipment. Should the Government provide any personnel or equipment, whether for initial fire response and/or spill containment, or otherwise on request of the Lessee, or because the Lessee was not, in the opinion of the said officer, conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its costs. To further minimize the risk to human health and the environment

during the period of the lease, the Lessee shall not store or pump fuel from the underground storage tanks on the Leased Property.

14. The Lessee shall not construct or make or permit its sublessees or assigns to construct or make any substantial alterations, additions, or improvements to or installations upon or otherwise modify or alter the Leased Property in any way which may adversely affect the cleanup, human health, or the environment without the prior written consent of the Government. Such consent may include a requirement to provide the Government with a performance and payment bond satisfactory to it in all respects and other requirements deemed necessary to protect the interests of the Government. Except as such written approval shall expressly provide otherwise, all such approved alterations, additions, modifications, improvements, and installations shall become Government Property.

15. Wetlands protection is required by Executive Order 11990, Protection of Wetlands. National Environmental Policy Act review is required to identify wetland conflicts with any planned projects or actions. Projects with potential impacts are referred to the Corps of Engineers, U.S. Fish and Wildlife Service or Environmental Protection Agency as required to determine if jurisdictional wetlands are implicated and to establish mitigation procedures.

16. The Lessee shall not conduct or permit its sublessees to conduct any subsurface excavation, digging, drilling or other disturbance of the surface without the prior written approval of the Government with the exception of replacement or repair of existing utilities and normal facilities maintenance.

17. The Army agrees that following receipt of the final Site Investigation(s), should additional investigative or remedial work be required, that work will be accomplished by the Army prior to transfer. Final transfer will not occur until all investigation and remediation is complete or in place and operating effectively.

18. The act of leasing the golf course prior to finalization of the subject site investigation is an interim action. The Army and the Lessee agree that the use of certain parcels within the lease may be restricted or eliminated from the lease at any time, should environmental conditions pose an unacceptable risk to human health and the environment. The Lessee further agrees to indemnify and hold harmless the Army, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, a restriction of use of the Leased Premises should environment conditions pose an unacceptable risk to human health and the environment.

19. The Government's rights under this Lease include the right to apply additional restrictions as warranted based on the results of the on-going environmental program.

20. NOTICE OF THE PRESENCE OF ASBESTOS-CONTAINING MATERIALS (ACM) AND COVENANT

    a. The Lessee is hereby informed and does acknowledge that non-friable and friable asbestos or ACM have been found on the Property, as described in the EBS and in the Reisz Engineering Asbestos Surveys and Management Plans, FMC, Alabama. Except as provided for in (b) below, the ACM on the Property does not currently pose a threat to human health or the environment. Except as provided in (b) below, all friable asbestos that posed a risk to human health has either been removed or encapsulated.

b. Several buildings have been determined to contain friable asbestos that may pose a threat to human health. Specifically, friable asbestos-containing insulation was found on small pipe fittings and straight runs in Building 130; friable asbestos-containing insulation was found on straight runs of piping and pipe fittings in Building 3131; and friable asbestos was found on all straight runs of fiberglass piping in Building 3139. Detailed information is contained in the EBS and referenced asbestos surveys. The non-friable ACM can be managed in place. The friable ACM can be effectively managed in place, provided the proper precautions are taken to eliminate exposure of personnel to airborne asbestos. The Army has agreed to lease said buildings and structures to the Lessee, prior to remediation of asbestos hazards, in reliance upon the Lessee's express representation and promise that the Lessee will, prior to use or occupancy of said buildings, agree to undertake any and all abatement or remediation that may be required under CERCLA 120h(3) or any other law or regulation. The Lessee acknowledges that the consideration for Lease of the Property was negotiated based upon the Lessee's agreement to the provision contained in this subsection.

c. The Lessee agrees that its use and occupancy of the Property will be in compliance with all applicable laws relating to asbestos; and that the Army assumes no liability for any future remediation of asbestos or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos or ACM on the Property, whether the Lessee, its successors or assigns have been properly warned or failed to properly warn the individual(s) injured. The Lessee agrees to be responsible for any future remediation of asbestos found to be necessary on the Property. The Lessee assumes no liability for damages for personal injury, illness, disability, death or property damage arising from any exposure or failure to comply with any legal requirements applicable to asbestos on any portion of the Property arising prior to the Army's leasing of such portion of the Property to the Lessee pursuant to this Lease, or any disposal of any asbestos or ACM prior to the lease of the Property.

d. Unprotected or unregulated exposures to asbestos in product manufacturing, shipyard, building construction workplaces have been associated with asbestos-related diseases. Both Occupational Safety and Health Administration (OSHA) and EPA regulate asbestos because of the potential hazards associated with exposure to airborne asbestos fibers. Both OSHA and EPA have determined that such exposure increases the risk of asbestos-related diseases, which include certain cancers and which can result in disability or death.

e. The Lessee acknowledges that it has inspected the Property as to its asbestos content and condition and any hazardous or environmental conditions relating thereto prior to accepting the responsibilities imposed upon the Lessee under this section. The failure of the Lessee to inspect, or to be fully informed as to the asbestos condition of all or any portion of the Property, will not constitute grounds for any claim or demand against the United States, or any adjustment under this Lease.

f. The Lessee further agrees to indemnify and hold harmless the Army, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, exposure to asbestos on any portion of the Property to the Lessee or any future remediation or abatement of asbestos or the need therefor. The Lessee's obligation hereunder shall apply whenever the United States incurs costs or liabilities for actions giving rise to liability under this section.

21. NOTICE OF THE PRESENCE OF LEAD-BASED PAINT (LBP) AND COVENANT

a. The Leased Property does not contain residential dwellings and is not being Leased for residential purposes. The Lessee is notified that the Leased Property contains buildings built prior to 1978 that contain LBP. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Such Property may present exposure to lead from LBP that may place young children at risk of developing lead poisoning. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems and impaired memory. A risk assessment or inspection for possible LBP hazards is recommended prior to Lease.

b. Available information concerning known LBP and/or LBP hazards, the location of LBP and/or LBP hazards, and the condition of painted surfaces is contained in the EBS, which has been provided to the Lessee. Additionally, the following reports pertaining to LBP and/or LBP hazards have been provided to the Lessee: LBP Risk Assessment Survey Report for FMC, Alabama, dated July 17, 1995. Additionally, the Lessee has been provided with a copy of the Federally-approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of all of the information described in this subparagraph.

c. The Lessee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of LBP and/or LBP hazards prior to execution of this Lease.

d. The Lessee shall not permit use of any buildings or structures on the Leased Property for residential habitation without first obtaining the written consent of the Army. As a condition of its consent, the Army may require the Lessee to: (1) inspect for the presence of LBP and/or LBP hazards; (2) abate and eliminate LBP hazards in accordance with all applicable laws and regulations; and (3) comply with the notice and disclosure requirements under applicable Federal and state law. The Lessee agrees to be responsible for any future remediation of LBP found to be necessary on the Leased Property.

e. The Army assumes no liability for remediation or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to possession and/or use of any portion of the Leased Property containing LBP as residential housing. The Lessee further agrees to indemnify and hold harmless the Army, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or Property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Leased Property containing LBP as residential housing. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this Lease or any conveyance of the Leased Property to the Lessee. The Lessee's obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.

f. LBP can be properly managed in place, provided the following precautions are taken by the City of Anniston during the period of the lease: 1) Ground cover must be maintained around building 129 in order to prevent soil disturbance. 2) The condition of painted surfaces within buildings containing LBP should be maintained to prevent chipping and dust.

23. NOTICE OF THE PRESENCE OF RADON AND COVENANT

a. Available radon assessment data pertaining to Building 129, located in the EBS, indicate that Building 129 has levels of radon above the EPA's radon reduction level of 4 picocuries/liter. A radiation-induced increased risk of contracting lung cancer is the primary health concern with elevated levels of indoor radon.

b. The Lessee acknowledges that it has had the opportunity to inspect Building 129 as to radon levels prior to accepting the Property. Failure of the Lessee to inspect or to be fully informed as to the radon levels of the Property will not constitute grounds for any claim or demand against the United States.

c. The Lessee shall indemnify and hold harmless the United States, its officers, agents and employees from and against all suits, claims, demands, or actions, liabilities, judgements, costs and attorneys' fees arising out of, or in any manner predicated upon, exposure to radon on any portion of Building 129 after lease of the building or any future redemption or abatement of radon or the need therefore. The Lessee's obligation hereunder shall apply whenever the United States incurs costs or liabilities for actions giving rise to liability under this section. The obligations of the Lessee under this section are solely those of the Lessee and not its successors and assigns.

24. NOTICE OF THE PRESENCE OF ENDANGERED SPECIES AND COVENANT

a. Gray bats (*Myotis grisescens*) are known to forage near the main channel of Cane Creek and Remount Creek and are known to roost in caves and under bridges in the vicinity. The Golf Course, Parcel 178(7), has been identified as suitable gray bat foraging habitat. Gray bats are listed as endangered by the U.S. Fish and Wildlife Service (FWS) and are afforded Federal protection under the Endangered Species Act (ESA) of 1973, as amended. Section 9 of the ESA prohibits private landowners from "taking" (harm, harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) endangered species.

b. The following measures will limit potential take of gray bats on this parcel. Failure to follow these measures could subject the violator to criminal sanctions of the ESA:

- Gray bats are known to use man-made structures in the vicinity of Parcel 178(7). Prior to removing or altering the structure of a bridge, abandoned building, or cistern, the structure should be checked for the presence of gray bats. The FWS will be contacted if bats are found to be present.
- Trees along the main channel of Cane Creek and Remount Creek with high or moderate quality foraging habitat on this parcel provide protective cover and prey for foraging gray bats. Forest within 50 feet of these streams should not be removed. If removal of dead or live trees within 50 feet of these streams is necessary, the FWS must be consulted prior to cutting.
- Gray bats primarily feed on insects with an aquatic life stage; therefore, water quality and the physical characteristics of streams affect the amount and types of insects available for these bats. State and Federal regulations pertaining to water quality and erosion control should be followed. Additionally, modification of stream banks and water flow should be avoided to maintain present water quality and physical structure.
- Use of pesticides, particularly malathion, should be managed according to a FWS consultation letter dated June 11, 1998. The grantee should avoid (or eliminate or minimize) fogging in the vicinity of all high to moderate quality foraging habitat. FWS requested that if malathion is used it should be sprayed only during daylight hours no earlier than one hour after sunrise and no later than one hour prior to sunset between March 15 and October 31. Use atmospheric conditions to determine appropriate timing for fogging on lands directly adjacent to foraging areas.

25. NOTICE OF PESTICIDE MANAGEMENT AND APPLICATION PRACTICES AND COVENANT

a. Gray bats are known to forage over the Golf Course, Parcel 178(7). If land use changes to something other than a golf course, the U.S. Fish and Wildlife Service may require preparation of a Conservation Agreement or Habitat Conservation Plan.
b. The Lessee shall strictly comply with the provisions set forth in the Pesticide Management Operations Plan, Cane Creek Golf Course dated August 4, 1998. Any deviations from this plan must be approved by the Fort McClellan Garrison Commander.
c. Pesticides currently used on the golf course include Daconll® 27871 Dursban 50W; 2,4-D Amine 4: MSMA; Pendimethalin; Llioxan® 3EC; Koban 30'; Dimension®; and Roundup®. Use of these pesticides in compliance with the following guidelines will not adversely affect gray bats.
   - Do not spray pesticides directly onto or into streams, lakes, ponds, or other bodies of surface water.
   - Do not allow pesticides to drift onto water, and do not apply when weather conditions favor drift or runoff from treated areas.
   - Do not apply within 20 feet (6 meters) of banks or natural levees associated with streams, lakes, ponds or other bodies of surface water. Llioxan® should not be applied within 100 feet (30 meters) of surface water.
   - Apply pesticides only during daylight hours.
   - Apply pesticides only for approved uses.
   - Follow all use and disposal directions as specified on labels.

26. NOTICE OF HISTORIC PROPERTY AND PRESERVATION COVENANT

Building number 129 is eligible for inclusion in the National Register of Historic Places. This building will be maintained by the Lessee in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings (U.S. Department of the Interior, National Park Service 1992) (Standards). The Lessee will notify the Army of any proposed rehabilitation or structural alteration to this building or to the landscape/landscape features and will provide a detailed description of the undertaking prior to undertaking said rehabilitation/alterations. Within 30 days of receipt of such notification and adequate supporting documentation, the Army will notify the Lessee in writing that the undertaking conforms to the Standards and that the Lessee may proceed or that the undertaking does not conform to the Standards and that the Lessee may not proceed. If the Army determines that the undertaking does not meet the Standards, the Army will, with the assistance of the Lessee, fulfill the requirements of Section 106 of the National Historic Preservation Act and its implementing regulations, "Protection of Historic Properties" (36 CFR Part 800). The Lessee will not undertake the proposed action until the Army notifies the Lessee that the requirements of Section 106 have been fulfilled and the Lessee may proceed. If the Army objects to the Lessee's proposed undertaking, the Army will notify the Lessee that the proposed action may not proceed.

27. NOTICE OF THE POTENTIAL FOR PRESENCE OF POLYCHLORINATED BIPHENYL (PCB) AND COVENANT

PCB's have been used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment like fluorescent light ballasts. EPA considers PCB's to be probable cancer-causing chemicals in humans. PCB and PCB-contaminated items that will be disposed, must be stored in a hazardous waste storage facility. The Lessee is hereby informed that fluorescent light ballasts containing PCBs are present on the property. The PCB containing equipment does

not currently pose a threat to human health or the environment. All PCB equipment is presently in full compliance with applicable laws and regulations. The Lessee agrees that its continued possession, use and management of any PCB containing equipment will be in compliance with all applicable laws relating to PCBs and PCB containing equipment and that the Army shall assume no liability for the future remediation of PCB contamination or damages for personal injury, illness or disability or death to the permitee, its successors or assigns, or to any other person, including members of the general public arising from or incident to future use, handling, management, disposition or any activity causing or leading to contact of any kind whatsoever with PCB containing equipment during the period of this permit. The Lessee agrees to be responsible for any remediation of PCB containing equipment found to be necessary on the premises resulting from its use or possession thereof.

ATTACHMENT 2

ASBESTOS CONTAINING MATERIALS SURVEY REPORTS

BUILDING 128

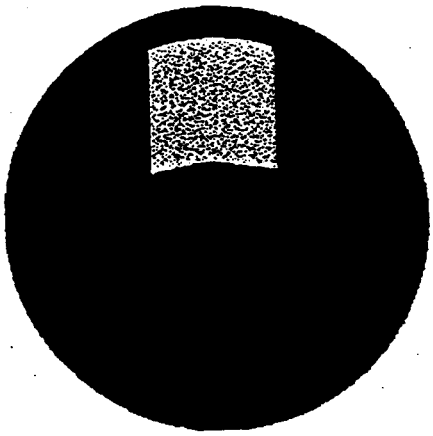
ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
FITNESS CENTER
BUILDING 128

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Fort McClellan



StayingBeautiful

Prepared by:

REISZ ENGINEERING
P.O. BOX 1349
HUNTSVILLE, ALABAMA 35807

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
FITNESS CENTER
BUILDING 128

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Prepared For:

DIRECTORATE OF ENVIRONMENT
FORT McCLELLAN

James R. Wright
APPROVED FOR TRANSMITTAL BY
JAMES R. WRIGHT

Conducted and Prepared by:

REISZ ENGINEERING

April, 1998

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APPENDIX E - SELECTED ACM PHOTOGRAPHS

1.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this survey was to locate and identify asbestos containing building materials at the Building 128, Fitness Center, located at Fort McClellan, Alabama. Pursuant to the Contract, REISZ Engineering was required to provide the survey in accordance with AHERA (40 CFR Part 763 Subpart E) protocol. AHERA is applicable to interior building products installed prior to October 12, 1988. AHERA does not apply to the exterior of buildings and does not apply to non-building materials (e.g. cabinetry, special equipment and chalkboards). REISZ Engineering has included as part of the survey those readily accessible, suspect friable interior non-building materials (e.g. vibration dampers); but has not included certain items (e. g. interior linings of equipment and special supplies, some non-friable materials such as transite, etc.). Exterior building materials were not sampled as part of this contract unless those materials were suspected to be of friable nature and continuous with indoor materials (e.g. piping insulation). Specifically, REISZ Engineering was contracted to provide the following services:

1. Identify and collect samples of accessible suspect friable building materials within the referenced project area.
2. Perform a visual inspection to provide information on material condition, material quantities, material locations, and building use.
3. Analysis of all bulk samples for asbestos content utilizing Polarized Light Microscopy and Dispersion Staining Techniques performed in accordance with EPA Bulk Analysis Method

   EPA 600/M4-82-020.
4. Make recommendations as to response actions pertaining to those materials identified as asbestos containing.
5. Compilation of a final report (contained herein) which details all sample results, identifies

sample locations, and provides recommendations based upon the results.

6. Preparation of a Building specific Operations & Maintenance (O&M) Plan for buildings containing friable asbestos materials.

2.0 REGULATORY STANDARDS

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) requires the Owner or Operator of a facility to determine the presence or non-presence of asbestos containing materials prior to conducting renovation or demolition activities. The NESHAP Standard for asbestos (40CFR Part 61 Sub-part M) requires the use of engineered control procedures for removal of asbestos materials that are or will become friable during renovation or demolition. The removal must occur before renovation or demolition activities impact those materials.

On October 11, 1994 an OSHA promulgated regulation (29 CFR Part 1926.1101) became effective. This Standard is related to asbestos exposure in construction, renovation and building maintenance work places. Building owners are required, pursuant to the Standard, to notify employees, tenants and prospective employers (contractors) of the presence, location and quantities of ACM in the building. Implementation of the "communication of hazards" provisions in the Standard were originally to be not later than April 10, 1995 but was extended to July 10, 1995 and is now in effect. The OSHA Standard does not apply to work performed by employees of State agencies in states without state run OSHA programs (e.g. Alabama).

In October 1986, the Asbestos Hazard Emergency Response Act (AHERA) was signed into law. Included in this act are provisions directing E.P.A. to establish rules and regulations (40CFR Part 763) addressing asbestos-containing materials in schools. Specifically, the E.P.A. was directed to address the issues of: 1) identifying, 2) evaluating and 3) controlling asbestos

containing materials (ACM) in schools. AHERA requires schools to perform building inspections and to prepare management plans for ACM control. Although the AHERA regulation does not specifically apply to this project it is generally accepted as the industry standard and was cited by Fort McClellan in the Asbestos Survey Request as the basis of survey methodology. The AHERA inspections must be conducted using specific guidelines, which include a minimum number of samples per material type. This survey was conducted in accordance with those guidelines per the Contract requirements.

On November 28, 1992 a law became effective which extended the EPA's Model Accreditation Plan to all public and commercial buildings. Currently the rule extends the accreditation requirements of persons performing asbestos work (inspectors, project designers, abatement supervisors, and workers) in public and commercial buildings, but does not extend the other aspects of AHERA. This project was conducted utilizing EPA accredited personnel.

3.0 PROJECT CHARACTERISTICS

During the month of May 1997, Reisz Engineering accredited Asbestos Inspectors performed an inspection of Building 128 for the purpose of identifying building materials suspected to contain asbestos. Building 128 is a fitness center/gymnasium comprised of a ground level floor containing approximately 13,300 sq. ft. of floor space. Based on information provided by Fort McClellan representatives, the building was originally constructed in 1936. Various renovations have no doubt taken place since the building was originally constructed. However, no construction plans have been found that verify specific dates or projects. The majority of interior walls are constructed of either concrete block or wallboard. Ceilings for the most part are non-existent or comprised of lay-in acoustical composition tile. The two dominant flooring conditions existing in the facility are 1) 12x12- inch vinyl floor tile, and 2) concrete.

4.0 SURVEY METHODOLOGY

The building was visually inspected for the presence of material suspected to contain asbestos. Those suspect materials were identified, bulk samples were obtained and placed into individual vials for transportation to the University of Alabama in Huntsville. General areas for sample locations were selected on a random basis with a preference for exact positioning at existing damage. A number on the plans in Appendix C represents each sample location. Those numbers directly correspond with the numbers listed elsewhere in this report.

If any additional suspect materials are identified during renovation or demolition they should be analyzed for asbestos content. Materials visibly identifiable as non-asbestos (fiberglass, foam rubber, wood, etc.) were not sampled. Materials installed after October 12, 1988 (as reported by Fort McClellan staff) were not sampled.

Hazard Assessment Factors

Each time suspect ACM was sampled, it was classified as either a friable or a non-friable material. Friable material may be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is more hazardous than non-friable ACM because friable material can release airborne asbestos fibers more easily. In assessing the fiber release potential, the current condition of all ACM identified was noted. Evidence of deterioration, physical damage, water damage, erosion of ACM due to its' proximity to an air plenum, high vibration, or contact potential was also noted.

5.0 LABORATORY ANALYSIS METHODOLOGY

All bulk samples were analyzed at UAH by polarized light microscopy utilizing dispersion staining or Becke line techniques, in accordance with the EPA's "Interim Method for Determination of Asbestos in Bulk Insulation Samples" (EPA 6OO/m4-82-020). Quality control samples were taken as duplicates at a rate of 1 to 10 and were sent to a second accredited laboratory. This type of analysis requires the microscopist to take a portion of the bulk sample and treat it with oil of specific refractive index. This prepared slide is then subjected to a variety of optical tests.

Each type of asbestos displays unique characteristics when subjected to these tests. Percentages of the identified types of asbestos are determined by visual estimation. Even though this is an estimation, any material that contains greater than one percent of any type of fibrous asbestos is considered ACM and must be handled according to OSHA and EPA regulations if disturbed during maintenance, renovation, demolition or removal.

The UAH laboratory participates in the American Industrial Hygiene Association (AIHA) quality assurance program for polarized light microscopy and is accredited by the AIHA through their voluntary program.

6.0 SUSPECT MATERIALS

The following is a general list of building materials that were suspected to contain asbestos. A complete and detailed description of these substances can be found in Appendix B.

Surfacing

- None

Thermal System Insulation

- None

Miscellaneous Material

- Vinyl flooring mastics

7.0 ASBESTOS INSPECTION AND SAMPLING RESULTS

A total of 4 bulk samples were collected and analyzed. Details of all laboratory results can be found in Appendix A. A listing of all **suspect** materials, their corresponding sample numbers, general location, and asbestos content are indicated in Appendix B. A narrative description of all "Friable Asbestos Containing Material" and "Non-Friable ACM" identified during the survey, is given below.

FRIABLE ACM

No friable asbestos containing materials were found to be present in Building 128.

NON FRIABLE ACM

Non-friable asbestos containing materials were found to be present in Building 128 by laboratory testing. Black mastic adhesive was found under the 12x12-inch floor tile within the building. Refer to Appendix A for laboratory results.

INACCESSIBLE MATERIAL,

Insulation and spray-on compounds associated with inaccessible crawl space and tunnel areas should be assumed as "like" materials corresponding to materials sampled within the building.

8.0 CONCLUSIONS AND RECOMMENDATIONS

None of the materials identified within this report are damaged to the extent that significant asbestos fiber release may be likely under normal conditions and some of the asbestos containing materials, are subject to routine maintenance activities that could involve significant disturbance. Reisz Engineering has written a Building Operations & Maintenance Plan for Building 65 and we suggest that recommendations included in this plan be followed.

9.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions and recommendations expressed in this report are based only on conditions that were observed during the inspections of Building 128 during May 1997. Reisz Engineering and this report make no representation or assumptions as to past conditions or future occurrences.

Our inspection was generally non-destructive in nature. Any conditions or material that were not visible on the surface were not inspected and may differ from those observed. It was not within the scope of this investigation to remove surface materials to investigate portions of the structure or materials that lay beneath the surface. Our selection of sample locations and

frequency is based upon our observations and the assumption that all materials in the same area are homogeneous.

This report is designed to aid the building owner, architect, construction manager, general contractors, and potential asbestos abatement contractors in locating ACM. Under no circumstances is this report to be utilized as a bidding document or as a project specification document.

APPENDIX A

REPORT OF LABORATORY ANALYSIS FOR ASBESTOS

UAH
The University of Alabama in Huntsville

Environmental Laboratory
Kenneth E. Johnson Research Center

Huntsville, Alabama 35899
Phone: (205) 890-6391
Fax: (205) 890-6376

Re : Bulk Asbestos Analysis
EPA 600/R-93/116

Receipt Date : 05-16-97

AIHA : 023601

Sample Date : 05/15/97

Client : Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Microscopist : Tom Carrington

Sample/Description	Asbestos Fibers (%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	MW	CaSO4	Othr
B128-01 / pipe joint insul tape material						60			40
B128-02 / pipe tape surrounding fiberglass insul						90			10
B128-03 / pipe tape surrounding fiberglass insul						90			10
B128-04 / floor tile					10				90
B128-05 / mastic on floor tile	10				10				80

Chry = Chrysotile
Amos = Amosite
Croc = Crocidolite

Othr = Other
Cell = Cellulose

MW = Mineral Wool
$Ca\ SO_4$ = Calcium Sulfate
Fbgl = Fiberglass

APPENDIX B

ASBESTOS CONTAINING MATERIALS

SUMMARY TABLE
ASBESTOS CONTAINING MATERIALS
FITNESS CENTER
BUILDING 128
FORT McCLELLAN, ALABAMA

SAMPLE #(S)	Description of Material	General Location of Material	Quantity (approx.)
B128-05	Black Mastic	Adhesive for all Floor Tile	4000 sq. ft.

APPENDIX C

SAMPLE LOCATIONS PLANS

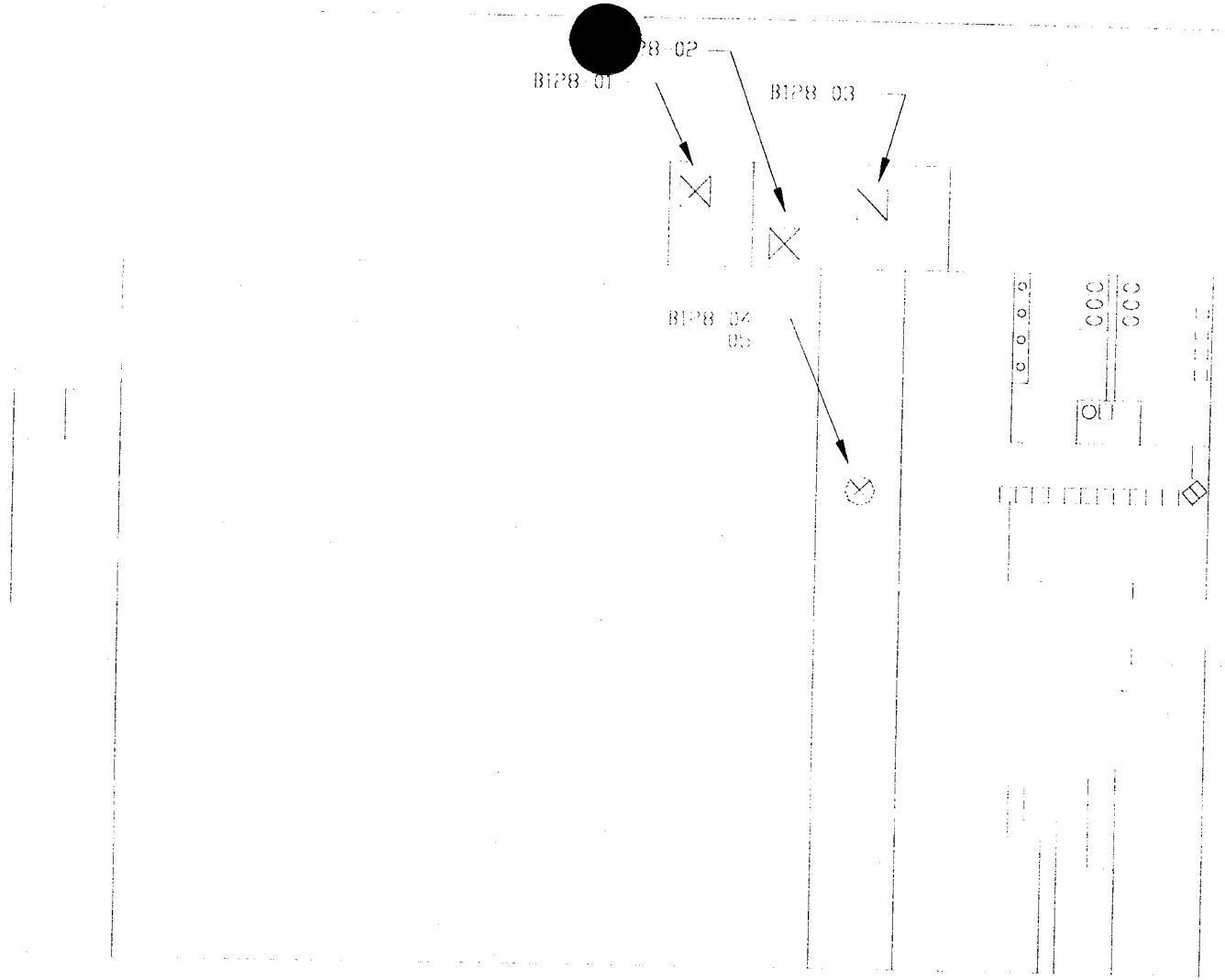


FIG. 1 LAYOUT PLAN

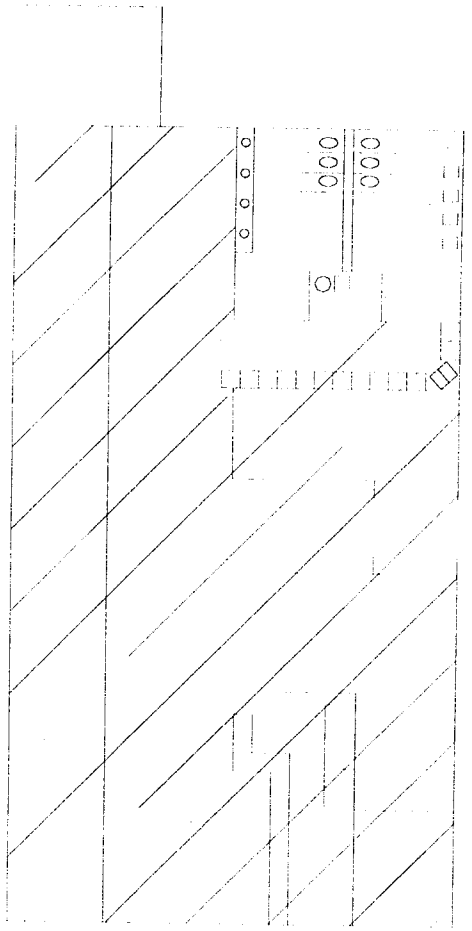
Positive Sample

Negative Sample

BUILDING 128 | FIG. 1 LAYOUT | ASBESTOS SURVEY DAB102 96 D 0005 LM/05 | **REISZ ENGINEERING**

APPENDIX D

SELECTED ACM LOCATIONS PLANS



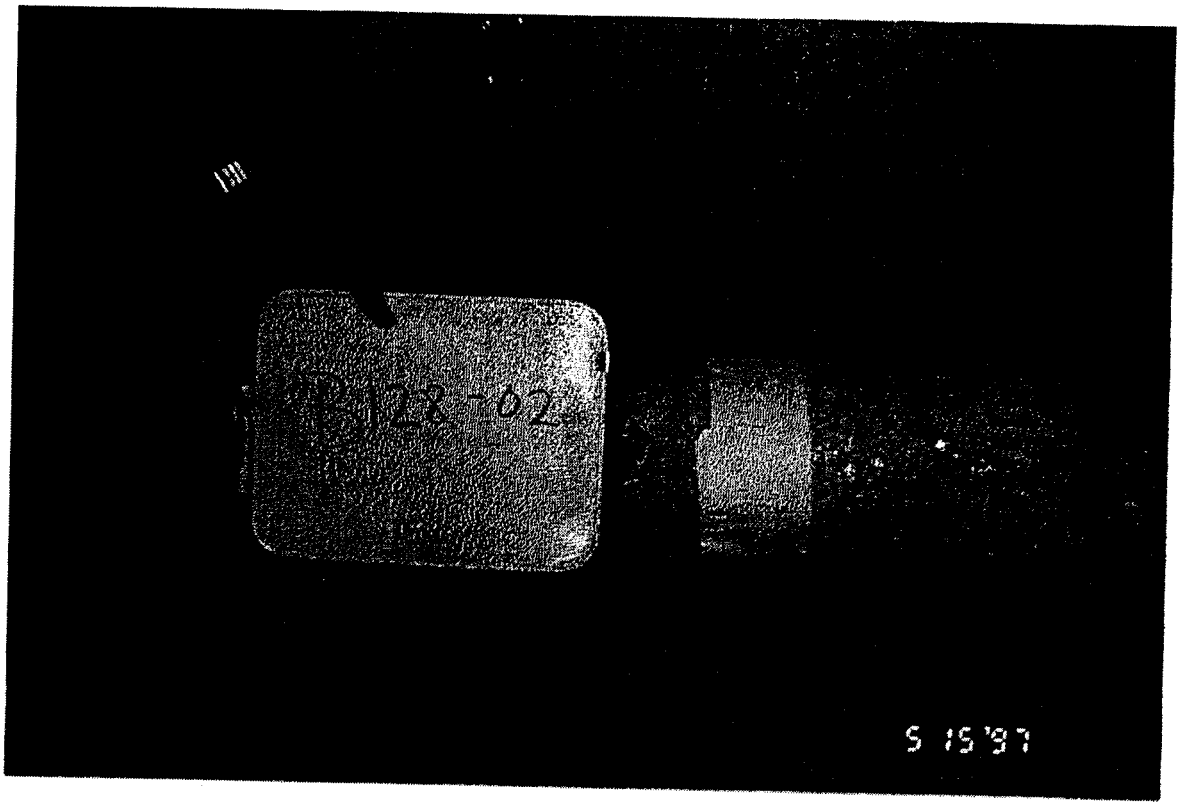
12X12 VINYL FLOOR TILE AND MASTIC

FIG 1 LAYOUT PLAN

BUILDING 128 | FIG 1 LAYOUT | ASBESTOS SURVEY DAB10P 96 D 0005 FM/05 | **REISZ ENGINEERING**

APPENDIX E

SELECTED ACM PHOTOGRAPHS



B128-02: Suspect tape on pipe insulation. (non-asbestos)

BUILDING 129 AND 137

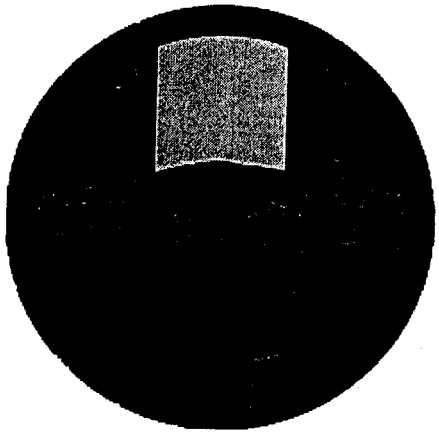
ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
MISCELLANEOUS BUILDINGS
No PACM

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Fort McClellan



Staying Beautiful

Conducted and Prepared by:

REISZ ENGINEERING
P.O. BOX 1349
HUNTSVILLE, ALABAMA 35807

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY

MISCELLANEOUS BUILDINGS
No PACM

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Prepared For:

DIRECTORATE OF ENVIRONMENT
FORT McCLELLAN

APPROVED FOR TRANSMITTAL BY
JAMES R. WRIGHT

Conducted and Prepared by:

REISZ ENGINEERING

June, 1998

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APPENDICES

APPENDIX A – LIST OF BUILDINGS WITH NO PRESUMED ACM

1.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this survey was to locate and identify asbestos containing building materials at Fort McClellan, Alabama. Pursuant to the Contract, REISZ Engineering was required to provide the survey in accordance with AHERA (40 CFR Part 763 Subpart E) protocol. AHERA is applicable to interior building products installed prior to October 12, 1988. AHERA does not apply to the exterior of buildings and does not apply to non-building materials (e.g. cabinetry, special equipment and chalkboards). REISZ Engineering has included as part of the survey those readily accessible, suspect friable interior non-building materials (e.g. vibration dampers); but has not included certain items (e. g. interior linings of equipment and special supplies, some non-friable materials such as transite, etc.). Exterior building materials were not sampled as part of this contract unless those materials were suspected to be of friable nature and continuous with indoor materials (e.g. piping insulation). Specifically, REISZ Engineering was contracted to provide the following services:

1. Identify and collect samples of accessible suspect friable building materials within the referenced project area.
2. Perform a visual inspection to provide information on material condition, material quantities, material locations, and building use.
3. Analysis of all bulk samples for asbestos content utilizing Polarized Light Microscopy and Dispersion Staining Techniques performed in accordance with EPA Bulk Analysis Method
   EPA 600/M4-82-020.
4. Make recommendations as to response actions pertaining to those materials identified as asbestos containing.
5. Compilation of a final report (contained herein) which details all sample results, identifies

sample locations, and provides recommendations based upon the results.

6. Preparation of a Building specific Operations & Maintenance (O&M) Plan for buildings containing friable asbestos materials.

2.0 PROJECT CHARACTERISTICS

Reisz Engineering accredited Asbestos Inspectors performed inspections of the buildings listed in Appendix A for the purpose of identifying building materials suspected to contain asbestos. None of the buildings listed in the survey report were found to contain PACM.

APPENDIX A

MISCELLANEOUS BUILDINGS WITH NO PACM

BUILDING NUMBERS

57
129
137
144
181
197
198
200
201
206
208
212
213
234
235
236
242
243
250
257
262
265
266
294
309
326
327
341
342
345
346
402
699
1077
1122
1211
1212
1213
1214
1215
1216
1217
1218
1219
1220
1221
1222
1367
1387
1928
1965 (has transite cooling tower)
1967
2041
2099
2105
3133
3134
3135
3165
3182
3192
4400
4405
4417
4420
4422
4423
4424
4450
6357
6530
6552
6574
6586
6594

BUILDING 130

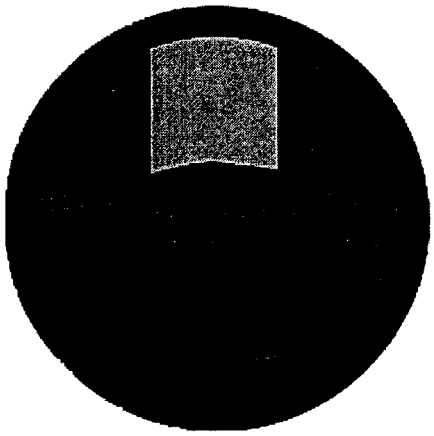
ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
MILLER SPORTS ARENA
BUILDING 130

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Fort McClellan



Staying Beautiful

Conducted and Prepared by:

REISZ ENGINEERING
P.O. BOX 1349
HUNTSVILLE, ALABAMA 35807

BUILDING 130

ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
MILLER SPORTS ARENA
BUILDING 130

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Prepared For:

DIRECTORATE OF ENVIRONMENT
FORT McCLELLAN

APPROVED FOR TRANSMITTAL BY
JOSEPH L. HILLERICH

Conducted and Prepared by:

REISZ ENGINEERING

January, 1998

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APPENDIX D - SELECTED ACM LOCATIONS PLANS
APPENDIX E - SELECTED ACM PHOTOGRAPHS

1.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this survey was to locate and identify asbestos containing building materials at the Building 130, Miller Sports Arena, located at Fort McClellan, Alabama. Pursuant to the Contract, REISZ Engineering was required to provide the survey in accordance with AHERA (40 CFR Part 763 Subpart E) protocol. AHERA is applicable to interior building products installed prior to October 12, 1988. AHERA does not apply to the exterior of buildings and does not apply to non-building materials (e.g. cabinetry, special equipment and chalkboards). REISZ Engineering has included as part of the survey those readily accessible, suspect friable interior non-building materials (e.g. vibration dampers); but has not included certain items (e. g. interior linings of equipment and special supplies, some non-friable materials such as transite, etc.). Exterior building materials were not sampled as part of this contract unless those materials were suspected to be of friable nature and continuous with indoor materials (e.g. piping insulation). Specifically, REISZ Engineering was contracted to provide the following services:

1. Identify and collect samples of accessible suspect friable building materials within the referenced project area.
2. Perform a visual inspection to provide information on material condition, material quantities, material locations, and building use.
3. Analysis of all bulk samples for asbestos content utilizing Polarized Light Microscopy and Dispersion Staining Techniques performed in accordance with EPA Bulk Analysis Method

   EPA 600/M4-82-020.
4. Make recommendations as to response actions pertaining to those materials identified as asbestos containing.

5. Compilation of a final report (contained herein) which details all sample results, identifies sample locations, and provides recommendations based upon the results.

6. Preparation of a Building specific Operations & Maintenance (O&M) Plan for buildings containing friable asbestos materials.

2.0 REGULATORY STANDARDS

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) requires the Owner or Operator of a facility to determine the presence or non-presence of asbestos containing materials prior to conducting renovation or demolition activities. The NESHAP Standard for asbestos (40CFR Part 61 Sub-part M) requires the use of engineered control procedures for removal of asbestos materials that are or will become friable during renovation or demolition. The removal must occur before renovation or demolition activities impact those materials.

On October 11, 1994 an OSHA promulgated regulation (29 CFR Part 1926.1101) became effective. This Standard is related to asbestos exposure in construction, renovation and building maintenance work places. Building owners are required, pursuant to the Standard, to notify employees, tenants and prospective employers (contractors) of the presence, location and quantities of ACM in the building. Implementation of the "communication of hazards" provisions in the Standard were originally to be not later than April 10, 1995 but was extended to July 10, 1995 and is now in effect. The OSHA Standard does not apply to work performed by employees of State agencies in states without state run OSHA programs (e.g. Alabama).

In October 1986, the Asbestos Hazard Emergency Response Act (AHERA) was signed into law. Included in this act are provisions directing E.P.A. to establish rules and regulations

(40CFR Part 763) addressing asbestos-containing materials in schools. Specifically, the E.P.A. was directed to address the issues of: 1) identifying, 2) evaluating and 3) controlling asbestos containing materials (ACM) in schools. AHERA requires schools to perform building inspections and to prepare management plans for ACM control. Although the AHERA regulation does not specifically apply to this project it is generally accepted as the industry standard and was cited by Fort McClellan in the Asbestos Survey Request as the basis of survey methodology. The AHERA inspections must be conducted using specific guidelines, which include a minimum number of samples per material type. This survey was conducted in accordance with those guidelines per the Contract requirements.

On November 28, 1992 a law became effective which extended the EPA's Model Accreditation Plan to all public and commercial buildings. Currently the rule extends the accreditation requirements of persons performing asbestos work (inspectors, project designers, abatement supervisors, and workers) in public and commercial buildings, but does not extend the other aspects of AHERA. This project was conducted utilizing EPA accredited personnel.

3.0 PROJECT CHARACTERISTICS

During the month of May 1997, Reisz Engineering accredited Asbestos Inspectors performed inspections of Building 130 for the purpose of identifying building materials suspected to contain asbestos. Building 130 is a Sports/Gymnasium facility comprised of a ground level floor and a basement containing approximately 24,500 sq. ft. of floor space. Based on information provided by Fort McClellan representatives, the building was originally constructed in 1956. Various renovations have no doubt taken place since the building was originally constructed but no building plans have been found that could be used to verify specific dates.

The majority of interior walls are constructed of either concrete block or wallboard. Ceilings in office spaces are for the most part lay-in acoustical composition tile with the gymnasium area being open to the deck. The dominant flooring conditions existing in the facility are 1) vinyl floor tile, 2) ceramic tile, and 3) wood.

4.0 SURVEY METHODOLOGY

The building was visually inspected for the presence of material suspected to contain asbestos. Those suspect materials were identified, bulk samples were obtained and placed into individual vials for transportation to the University of Alabama in Huntsville. General areas for sample locations were selected on a random basis with a preference for exact positioning at existing damage. A number on the plans in Appendix C represents each sample location. Those numbers directly correspond with the numbers listed elsewhere in this report.

If any additional suspect materials are identified during renovation or demolition they should be analyzed for asbestos content. Materials visibly identifiable as non-asbestos (fiberglass, foam rubber, wood, etc.) were not sampled. Materials installed after October 12, 1988 (as reported by Fort McClellan staff) were not sampled.

Hazard Assessment Factors

Each time suspect ACM was sampled, it was classified as either a friable or a non-friable material. Friable material may be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is more hazardous than non-friable ACM because friable material can release airborne asbestos fibers more easily. In assessing the fiber release potential, the current condition of all ACM identified was noted. Evidence of deterioration, physical damage, water damage,

erosion of ACM due to its' proximity to an air plenum, high vibration, or contact potential was also noted.

5.0 LABORATORY ANALYSIS METHODOLOGY

All bulk samples were analyzed at UAH by polarized light microscopy utilizing dispersion staining or Becke line techniques, in accordance with the EPA's "Interim Method for Determination of Asbestos in Bulk Insulation Samples" (EPA 6OO/m4-82-020). Quality control samples were taken as duplicates at a rate of 1 to 10 and were sent to a second accredited laboratory. This type of analysis requires the microscopist to take a portion of the bulk sample and treat it with oil of specific refractive index. This prepared slide is then subjected to a variety of optical tests.

Each type of asbestos displays unique characteristics when subjected to these tests. Percentages of the identified types of asbestos are determined by visual estimation. Even though this is an estimation, any material that contains greater than one percent of any type of fibrous asbestos is considered ACM and must be handled according to OSHA and EPA regulations if disturbed during maintenance, renovation, demolition or removal.

The UAH laboratory participates in the American Industrial Hygiene Association (AIHA) quality assurance program for polarized light microscopy and is accredited by the AIHA through their voluntary program.

6.0 SUSPECT MATERIALS

The following is a general list of building materials that were suspected to contain asbestos. A complete and more detailed description of these substances can be found in Appendix B.

Surfacing

- None

Thermal System Insulation

- cementitious hand formed pipe fittings (mechanical room)
- white powdery straight run pipe insulation (mechanical room)
- fibrous straight run insulation (restrooms)

Miscellaneous Material

- Vinyl floor tiles 12x12
- Vinyl flooring mastics

7.0 ASBESTOS INSPECTION AND SAMPLING RESULTS

A total of 3 bulk sample was collected and analyzed. Details of all laboratory results can be found in Appendix A. A listing of all **suspect** materials, their corresponding sample numbers, general location, and asbestos content are indicated in Appendix B. A narrative description of all "Friable Asbestos Containing Material" and "Non-Friable ACM" identified during the survey, is given below.

FRIABLE ACM

A friable asbestos containing insulation was found to be present on the a small amount of pipe fittings and straight runs located in the boiler/mechanical room of Building 130.

NON FRIABLE ACM

No friable asbestos containing materials were found to be present in Building 130 by laboratory testing. However, 12x12 inch floor tile found in the office areas of the building that was not sampled and is **assumed** to be ACM.

1) 12x12 inch asbestos containing vinyl floor tile is found covering the floors in office areas of Building 130.
2) A black asbestos containing mastic is found under the existing vinyl floor tile.

INACCESSIBLE MATERIAI,

Insulation and spray-on compounds associated with inaccessible crawl space and tunnel areas should be assumed as "like" materials corresponding to materials sampled within the building.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The asbestos containing materials identified within this report (boiler room) are damaged to the extent that significant asbestos fiber release may be likely under normal conditions and some of the asbestos containing materials are subject to routine maintenance activities that could involve significant disturbance. Reisz Engineering has written an Building Operations &

Maintenance Plan for Building 130 and we suggest that recommendations included in this plan be followed.

9.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions and recommendations expressed in this report are based only on conditions that were observed during the inspections of Building 130 during May 1997. Reisz Engineering and this report make no representation or assumptions as to past conditions or future occurrences.

Our inspection was generally non-destructive in nature. Any conditions or material that were not visible on the surface were not inspected and may differ from those observed. It was not within the scope of this investigation to remove surface materials to investigate portions of the structure or materials that lay beneath the surface. Our selection of sample locations and frequency is based upon our observations and the assumption that all materials in the same area are homogeneous.

This report is designed to aid the building owner, architect, construction manager, general contractors, and potential asbestos abatement contractors in locating ACM. Under no circumstances is this report to be utilized as a bidding document or as a project specification document.

APPENDIX A

REPORT OF LABORATORY ANALYSIS FOR ASBESTOS

UAH
The University of Alabama in Huntsville

Environmental Laboratory
Kenneth E. Johnson Research Center

Huntsville, Alabama 35899
Phone: (205) 895-6391
Fax: (205) 895-6376

Re : Bulk Asbestos Analysis
EPA 600/R-93/116

AIHA : 023601

Client : Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Receipt Date : 05-16-97

Sample Date : 05/15/97

Microscopist : Tom Carrington

Sample/Description	Asbestos Fibers (%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	MW	CaSO4	Othr
B130-01 / pipe insul joint	30	10				10	50		
B130-02 / pipe insul straight run	60				5	5			30
B130-03 / fiberglass insul Fabric wrap						90			10

Chry = Chrysotile
Amos = Amosite
Croc = Crocidolite

Othr = Other
Cell = Cellulose

MW = Mineral Wool
Ca SO_4 = Calcium Sulfate
Fbgl = Fiberglass

APPENDIX B

ASBESTOS CONTAINING MATERIALS

SUMMARY TABLE
ASBESTOS CONTAINING MATERIALS
MILLER SPORTS ARENA
BUILDING 130
FORT McCLELLAN, ALABAMA

SAMPLE #(s)	Description of Material	General Location Of Material	Quantity (approx.)
B130-01	Elbow Joint Compound	Mechanical Room	5 fittings
B130-02	TSI Straight Runs	Mechanical room	10 linear ft. 12 in. piping

APPENDIX C

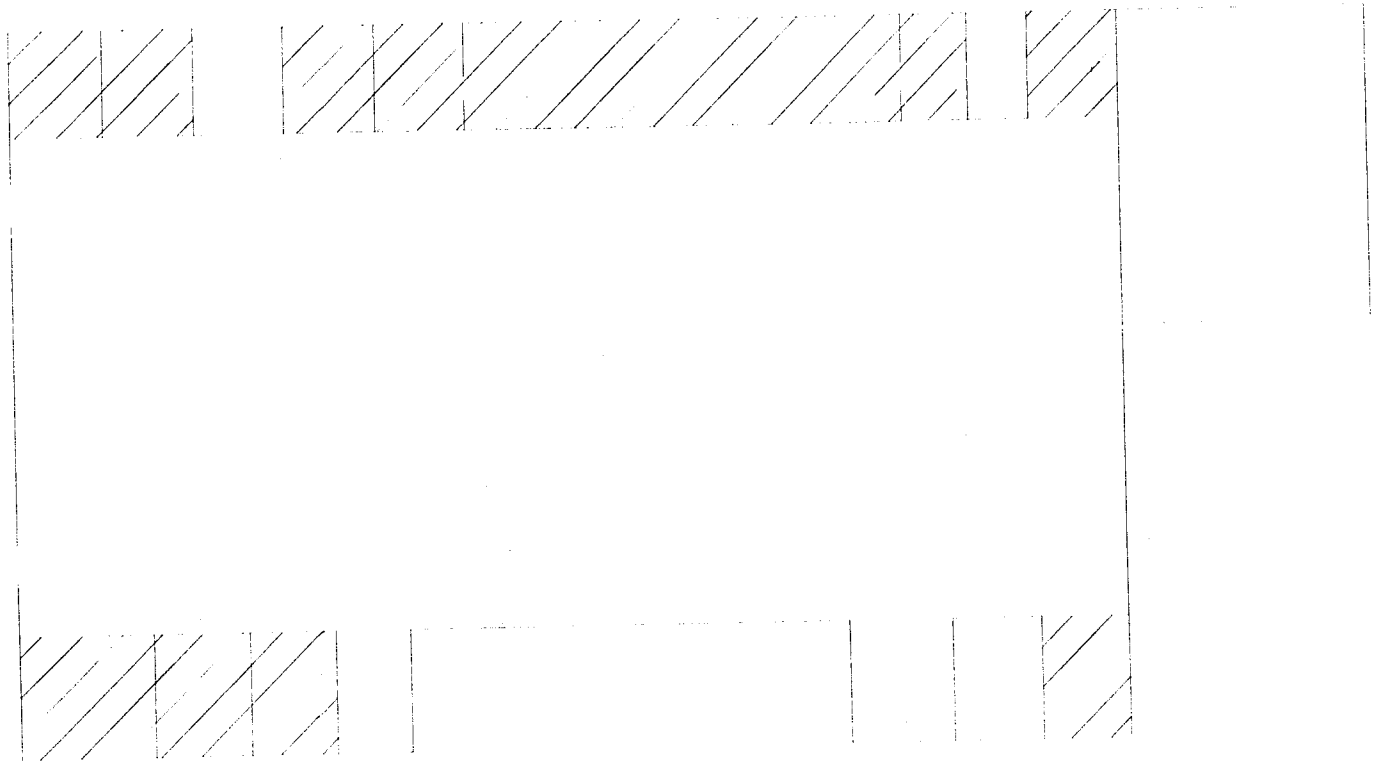
SAMPLE LOCATIONS PLANS

FIG. 1 LAYOUT PLAN

BUILDING 130 | FIG. 1 LAYOUT | ASBESTOS SURVEY DAB102 96 D 0005 EM/05 | REISZ ENGINEERING

APPENDIX D

SELECTED ACM LOCATION PLANS



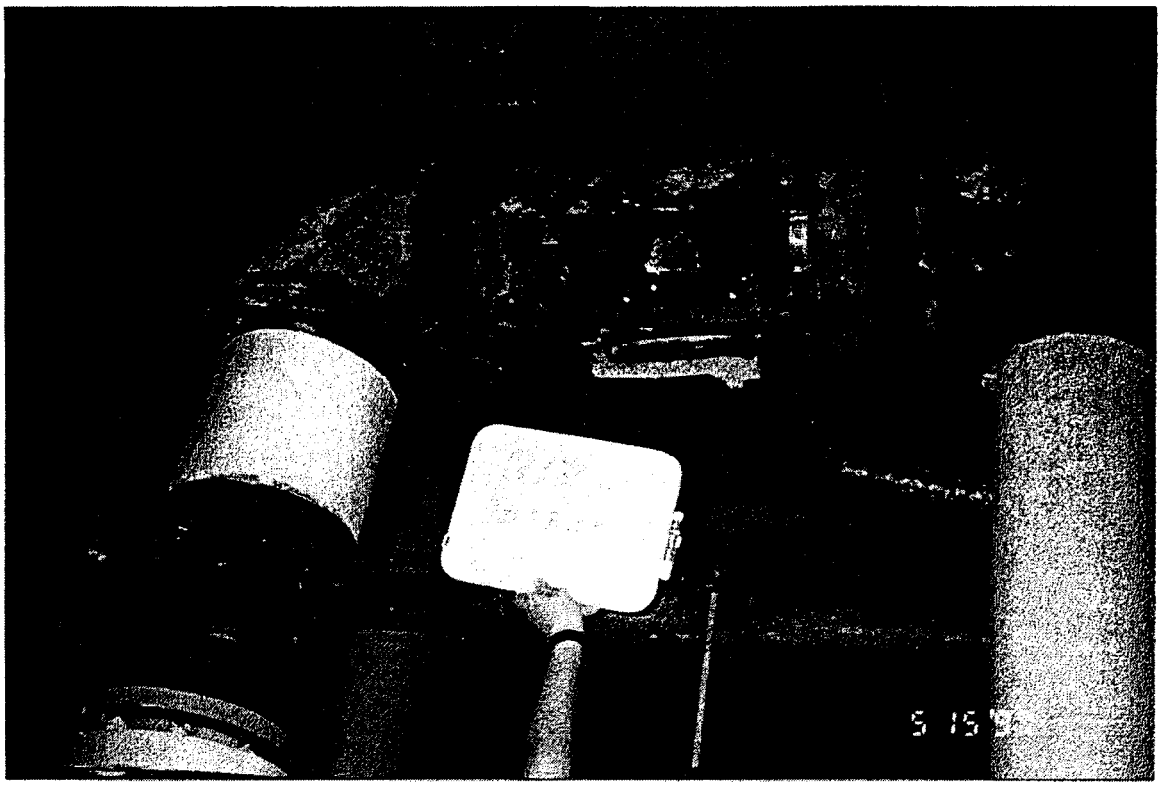
12" X 12" Floor Tile

FIG. 1 LAYOUT PLAN

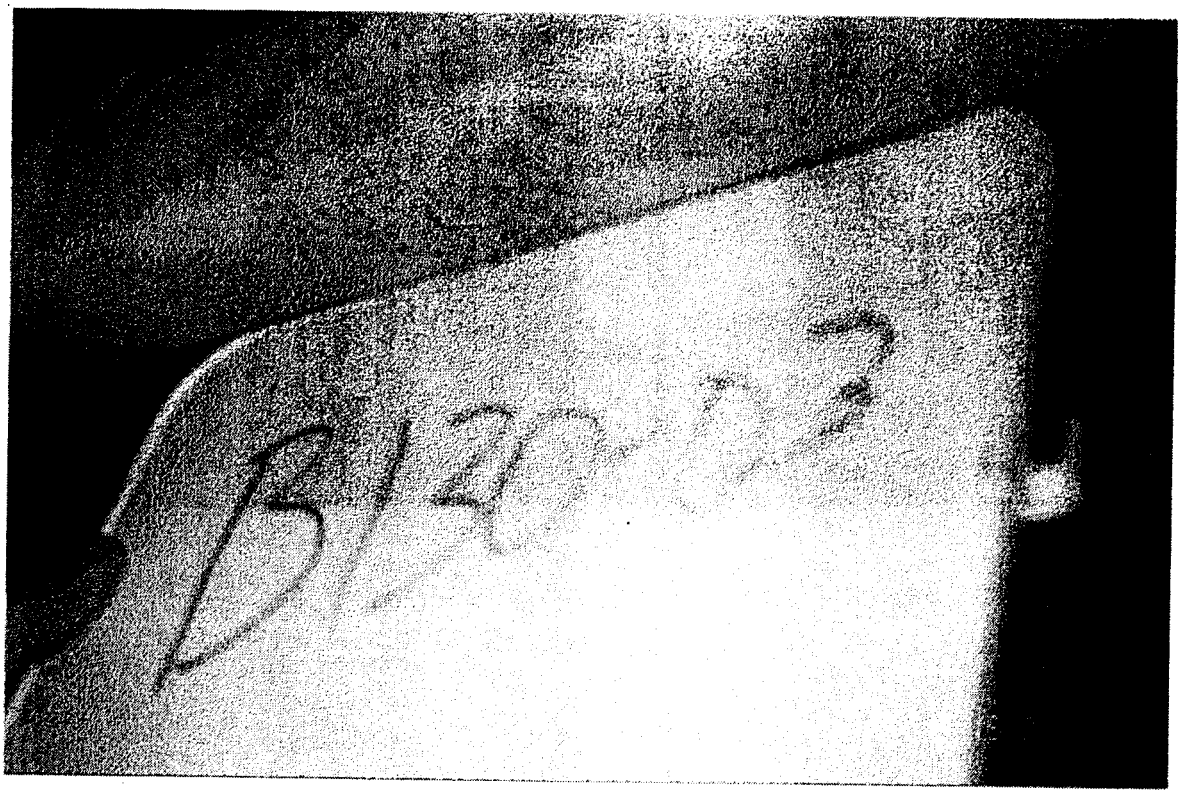
BUILDING 130 | FIG. 1 LAYOUT | ASBESTOS SURVEY DAB102-96-D-0005 EM/05 | **REISZ ENGINEERING**

APPENDIX E

SELECTED ACM PHOTOGRAPHS



Sample # B130-01,02: Partially removed TSI.(Boiler/Mechanical Room)



Sample # B130-03: Fribrous TSI found in restrooms and above drop ceilings throughout building (non-ACM)

BUILDING 1012 and 3600

ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
MISCELLANEOUS BUILDINGS
PACM

FORT McCLELLAN, ALABAMA

1012 3600

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Fort McClellan

Staying Beautiful

Conducted and Prepared by:

REISZ ENGINEERING
P.O. BOX 1349
HUNTSVILLE, ALABAMA 35807

BUILDING 1012 and 3600

ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
MISCELLANEOUS BUILDINGS
PACM

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Prepared For:

DIRECTORATE OF ENVIRONMENT
FORT McCLELLAN

APPROVED FOR TRANSMITTAL BY
JOSEPH L. HILLERICH

Conducted and Prepared by:

REISZ ENGINEERING

P.O. BOX 1349

HUNTSVILLE, ALABAMA 35807

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APPENDIX B – LIST OF MISCELLANEOUS BUILDINGS WITH PACM
APPENDIX C - SELECTED PACM LOCATIONS PLANS
APPENDIX D – SUMMARY TABLE OF PACM AND COST ESTIMATES

1.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this survey was to locate and identify asbestos containing building materials at miscellaneous buildings located throughout Fort McClellan, Alabama. (See Appendix B for a complete list of buildings included in this document). Pursuant to the Contract, REISZ Engineering was required to provide the survey in accordance with AHERA (40 CFR Part 763 Subpart E) protocol. AHERA is applicable to interior building products installed prior to October 12, 1988. AHERA does not apply to the exterior of buildings and does not apply to non-building materials (e.g. cabinetry, special equipment and chalkboards). REISZ Engineering has included as part of the survey those readily accessible, suspect friable interior non-building materials (e.g. vibration dampers); but has not included certain items (e.g. interior linings of equipment and special supplies, some non-friable materials such as transite, etc.). Exterior building materials were not sampled as part of this contract unless those materials were suspected to be of friable nature and continuous with indoor materials (e.g. piping insulation). Specifically, REISZ Engineering was contracted to provide the following services:

1. Identify and collect samples of accessible suspect friable building materials within the referenced project area.
2. Perform a visual inspection to provide information on material condition, material quantities, material locations, and building use.
3. Analysis of all bulk samples for asbestos content utilizing Polarized Light Microscopy and Dispersion Staining Techniques performed in accordance with EPA Bulk Analysis Method EPA 600/M4-82-020.
4. Make recommendations as to response actions pertaining to those materials identified as asbestos containing.
5. Compilation of a final report (contained herein) which details all sample results, identifies sample locations, and provides recommendations based upon the results.

6. Preparation of a Building specific Operations & Maintenance (O&M) Plan for buildings containing friable asbestos materials.

2.0 REGULATORY STANDARDS

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) requires the Owner or Operator of a facility to determine the presence or non-presence of asbestos containing materials prior to conducting renovation or demolition activities. The NESHAP Standard for asbestos (40CFR Part 61 Sub-part M) requires the use of engineered control procedures for removal of asbestos materials that are or will become friable during renovation or demolition. The removal must occur before renovation or demolition activities impact those materials.

On October 11, 1994 an OSHA promulgated regulation (29 CFR Part 1926.1101) became effective. This Standard is related to asbestos exposure in construction, renovation and building maintenance work places. Building owners are required, pursuant to the Standard, to notify employees, tenants and prospective employers (contractors) of the presence, location and quantities of asbestos-containing materials (ACM) in the building. Implementation of the "communication of hazards" provisions in the Standard were originally to be not later than April 10, 1995 but was extended to July 10, 1995 and is now in effect. The OSHA Standard does not apply to work performed by employees of State agencies in states without state run OSHA programs (e. g. Alabama).

In October 1986, the Asbestos Hazard Emergency Response Act (AHERA) was signed into law. Included in this act are provisions directing EPA to establish rules and regulations (40CFR Part 763) addressing ACM in schools. Specifically, the EPA was directed to address the issues of: 1) identifying, 2) evaluating, and 3) controlling ACM in schools. AHERA requires schools to perform building inspections and to prepare management plans for ACM control. Although the AHERA regulation does not specifically apply to this project it is generally accepted as the industry standard and was cited by Fort McClellan in the Asbestos Survey

Request as the basis of survey methodology. The AHERA inspections must be conducted using specific guidelines that include a minimum number of samples per material type. This survey was conducted in accordance with those guidelines per the Contract requirements.

On November 28, 1992 a law became effective which extended the EPA's Model Accreditation Plan to all public and commercial buildings. Currently the rule extends the accreditation requirements of persons performing asbestos work (inspectors, project designers, abatement supervisors, and workers) in public and commercial buildings, but does not extend the other aspects of AHERA. This project was conducted utilizing EPA's accredited personnel.

3.0 PROJECT CHARACTERISTICS

Reisz Engineering's accredited asbestos inspectors performed inspections of presumed asbestos containing material (PACM) buildings for the purpose of identifying building materials suspected to contain asbestos. Based on information provided by our observations and tests results it appears that all buildings referenced in this survey contain only non-friable materials. None of the buildings within this survey were found to have any friable ACM. Although, various renovations may have taken place since the building was originally constructed but no building plans have been found which can be used to verify specific dates and activities.

The three dominant flooring conditions existing in the PACM buildings are 1) carpet, 2) vinyl floor tile and 3) concrete. Other materials include ceramic and brick tile, wood flooring, cement, linoleum, and terrazzo. Also carpet has been installed over vinyl tiles in some locations of the buildings.

4.0 SURVEY METHODOLOGY

The buildings were visually inspected for the presence of material suspected to contain asbestos. The suspect materials were identified and bulk samples were obtained and placed into

individual vials for transportation to the University of Alabama in Huntsville (UAH). General areas for sample locations were selected on a random basis with a preference for exact positioning at existing damage. Each sample location is represented by a number on the plans in Appendix C. Those numbers directly correspond with the numbers listed elsewhere in this report.

If any additional suspect materials are identified during renovation or demolition they should be analyzed for asbestos content. Materials visibly identifiable as non-asbestos (fiberglass, foam rubber, wood, etc.) were not sampled. Materials installed after October 12, 1988 (as reported by Fort McClellan staff) were not sampled.

Hazard Assessment Factors

Each time suspect ACM was sampled, it was classified as either a friable or a non-friable material. Friable material may be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is more hazardous than non-friable ACM because friable material can release airborne asbestos fibers more easily. In assessing the fiber release potential, the current condition of all ACM identified was noted. Evidence of deterioration, physical damage, water damage, erosion of ACM due to its' proximity to an air plenum, high vibration, or contact potential was also noted.

5.0 LABORATORY ANALYSIS METHODOLOGY

All bulk samples were analyzed at UAH by polarized light microscopy utilizing dispersion staining or Becke line techniques, in accordance with the EPA's "Interim Method for Determination of Asbestos in Bulk Insulation Samples" (EPA 6OO/m4-82-020). Quality control samples were taken as duplicates at a rate of 1 to 20 and were sent to a second accredited laboratory. This type of analysis requires the microscopist to take a portion of the bulk sample

and treat it with an oil of specific refractive index. This prepared slide is then subjected to a variety of optical tests.

Each type of asbestos displays unique characteristics when subjected to these tests. Percentages of the identified types of asbestos are determined by visual estimation. Even though this is an estimation, any material that contains greater than one percent of any type of fibrous asbestos is considered ACM and must be handled according to OSHA and EPA regulations if disturbed during maintenance, renovation, demolition or removal.

The UAH laboratory participates in the American Industrial Hygiene Association (AIHA) quality assurance program for polarized light microscopy and is accredited by the AIHA through their voluntary program.

6.0 SUSPECT MATERIALS

The following is a general list of building materials that were suspected to contain asbestos.

Surfacing

- None

Thermal System Insulation

- Rear wall gas heater reflectors in building 4437

Miscellaneous Material

- Vinyl surfaced sheet flooring
- Vinyl flooring mastics
- Drywall joint compound
- Asbestos siding
- Transite siding
- Transite piping

7.0 ASBESTOS INSPECTION AND SAMPLING RESULTS

A total of three bulk samples were collected and analyzed. Details of all laboratory results can be found in Appendix A. A narrative description of all "Friable Asbestos Containing Material" and "Non-Friable ACM" identified during the survey, is given below.

FRIABLE ACM

None

NON FRIABLE ACM

Five types of non-friable ACM's were found in various buildings: 1) 12x12 inch vinyl floor tile, 2) 9x9 inch vinyl floor tile, 3) asbestos siding is located on the exterior of B793, 4) transite piping in B1920 and 5) thermal system insulation in B4437.

1) Presumed asbestos containing 12x12 inch vinyl floor tile and mastic is found in the following buildings:

B66 B184 B698 B793 B888 B891 B900 B992 B1012 B1800 B1920 B1928 B2090 B2116 B2202 B3136 B3189 B3600 B4434

Generally, the tiles were found to be in good condition.

2) Presumed asbestos containing 9x9-inch vinyl floor tile and mastic is found in the following buildings:

B1108 B1919 B2020 B2115 B2116

3) Asbestos siding can be found on the exterior walls of the building:

B793

4) The hot water heater vent pipe contains a transite pipe extending into the attic of the following building:

B1920

5) Thermal system insulation is located in the gas heater reflectors and is assumed to contain possible ACM. The gas heater is located in the rear wall of the following building:

B4437

INACCESSIBLE MATERIAI,

Insulation and spray-on compounds associated with inaccessible crawl-space and tunnel areas may be assumed as "like" materials corresponding to materials sampled within the building.

8.0 CONCLUSIONS AND RECOMMENDATIONS

None of the materials identified within this report are damaged to the extent that significant asbestos fiber release is likely under normal conditions. However, some of the asbestos containing materials, is subject to routine maintenance activities that could involve significant disturbance. As concluded by this survey, the buildings within this report were found to contain non-friable asbestos containing materials. Proper management of the material in-place may be acceptable assuming the proper precautions are taken to eliminate exposure of personnel to any airborne asbestos.

9.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions and recommendations expressed in this report are based only on conditions which were observed during the inspections of the PACM Buildings during 1997. Reisz Engineering and this report make no representation or assumptions as to past conditions or future occurrences.

Our inspection was generally non-destructive in nature. Any conditions or material, which were not visible on the surface, were not inspected and may differ from those observed. It was not within the scope of this investigation to remove surface materials to investigate portions of the structure or materials that lay beneath the surface. Our selection of sample locations and frequency is based upon our observations and the assumption that all materials in the same area are homogeneous.

This report is designed to aid the building owner, architect, construction manager, general contractor, and potential asbestos abatement contractors in locating ACM. Under no circumstances is this report to be utilized as a bidding document or as a project specification

document.

APPENDIX A

REPORT OF LABORATORY ANALYSIS FOR ASBESTOS

UAH
The University of Alabama in Huntsville

Environmental Laboratory
Kenneth **E.** Johnson Research Center

Huntsville, Alabama 35899
Phone: (256) 890-6391 Fax: (256) 890-6376

: Bulk Asbestos Analysis
EPA 600/R-93/116

Receipt Date: 06-13-97

AIHA: 023601

Sample Date : 06/10/97

Client: Reisz Engineering
Building 32 Suite A2
3322 S. Memorial Parkway
Huntsville, AL 35801

Microscopist : Tom Carrington

Sample/Description	Asbestos Fibers (%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	NIW	CaSO4	Othr
B 1928-01 / 12 x 12 floor tile brown rock-type				1					99

Chry = Chrysotile
Amos = Amosite
Croc = Crocidolite

Othr = Other
Cell = Cellulose

MW = Mineral Wool
Ca SO4= Calcium Sulfate
Fbgl = Fiberglass

UAH

Environmental Laboratory
Kenneth **E.** Johnson Research
Center

Huntsville, Alabama 35899
Phone: (256) 890-6391
Fax: (256) 890-6376

Re : Bulk Asbestos
Analysis EPA
600/R-93/116

AIHA:
023601

Client: Reisz Engineering
Building 32 Suite, A2
3322 Memorial Parkway South
Huntsville, AL 35801

Receipt Date : 06-20-97

Sample Date : 06/18/97

Microscopist: Tom Canington

Sample/Description	Asbestos Fibers (%)			Non-Asbestos Material (%)	
	Chry	Amos	Croc	Othr	Cell
Fbgl MW CaSO4 Othr					
B3136-01 / run of TSI chalk-like insul		55	20		25
3136-02 / elbow-putty terial			40	60	

y = Chrysotile
Amos = Amosite
Croc = Crocidolite

Othr = Other
Cell = cellulose

MW = Mineral Wool
Ca SO4 = Calcium Sulfate
Fbgl = Fiberglass

APPENDIX B

MISCELLANEOUS BUILDINGS WITH PACM

BUILDING NUMBERS

184
698
793
888
891
900
992
1012
1108
1800
1919
1920
1928
2020
2090
2115
2116
2202
3136
3189
3600
4434
4437

APPENDIX C

SELECTED ACM LOCATIONS PLANS

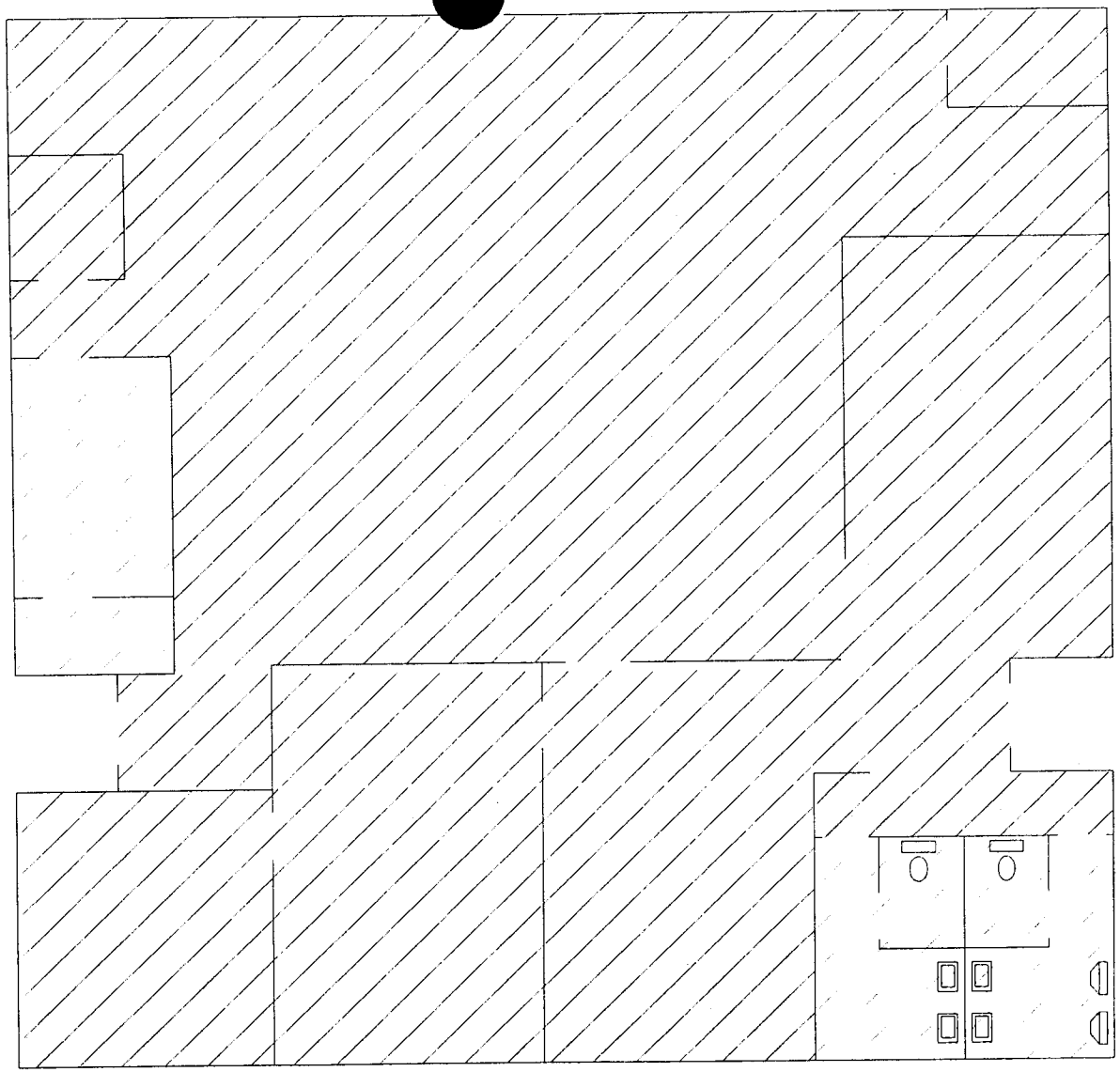
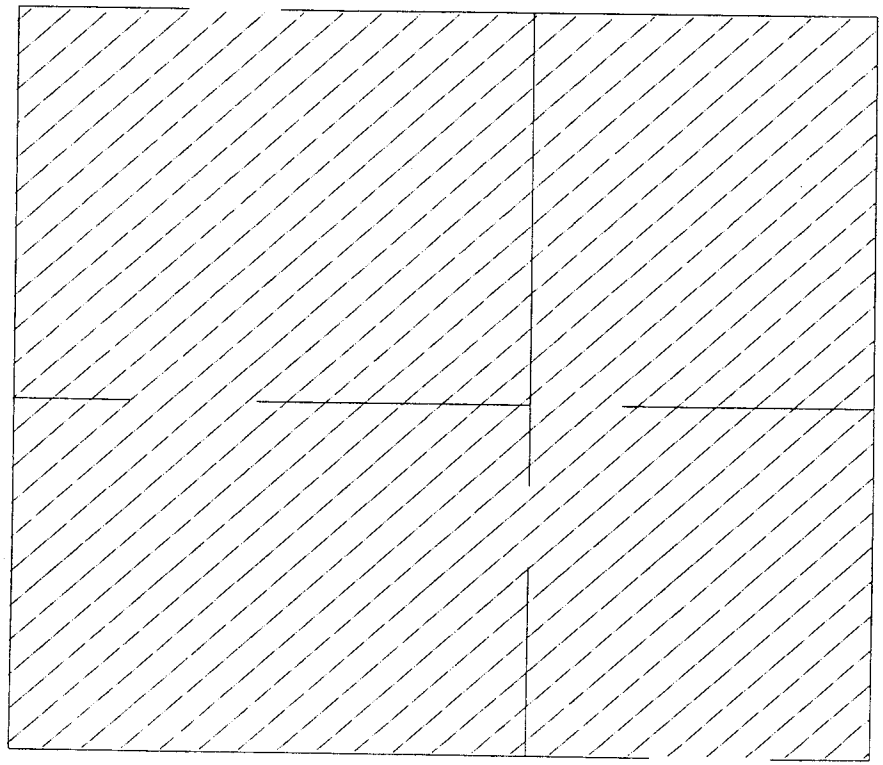


FIG. 1 LAYOUT PLAN SCALE: 1"=10'

12X12 TILE

BUILDING: 66	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



12X12 FLOOR TILE (CARPET LAID OVER IN MOST AREAS)

BUILDING: 184	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

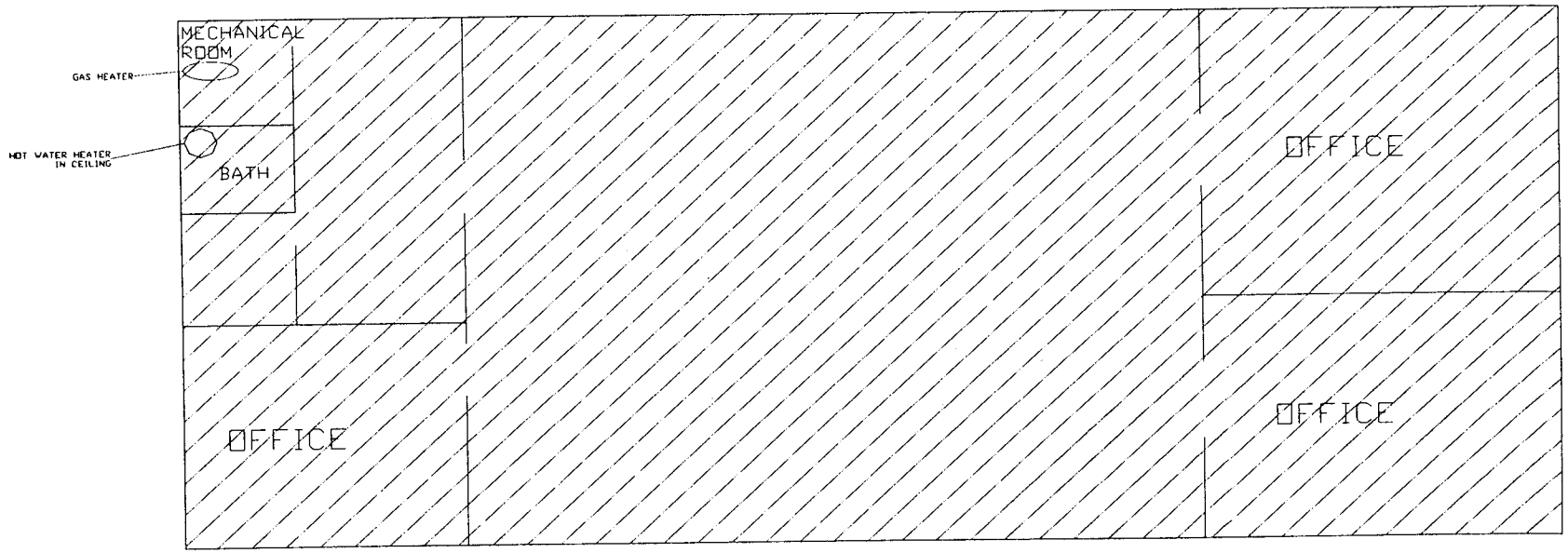


FIG. 1 LAYOUT PLAN SCALE: 1"=10'

12X12 TILE

BUILDING: 698	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

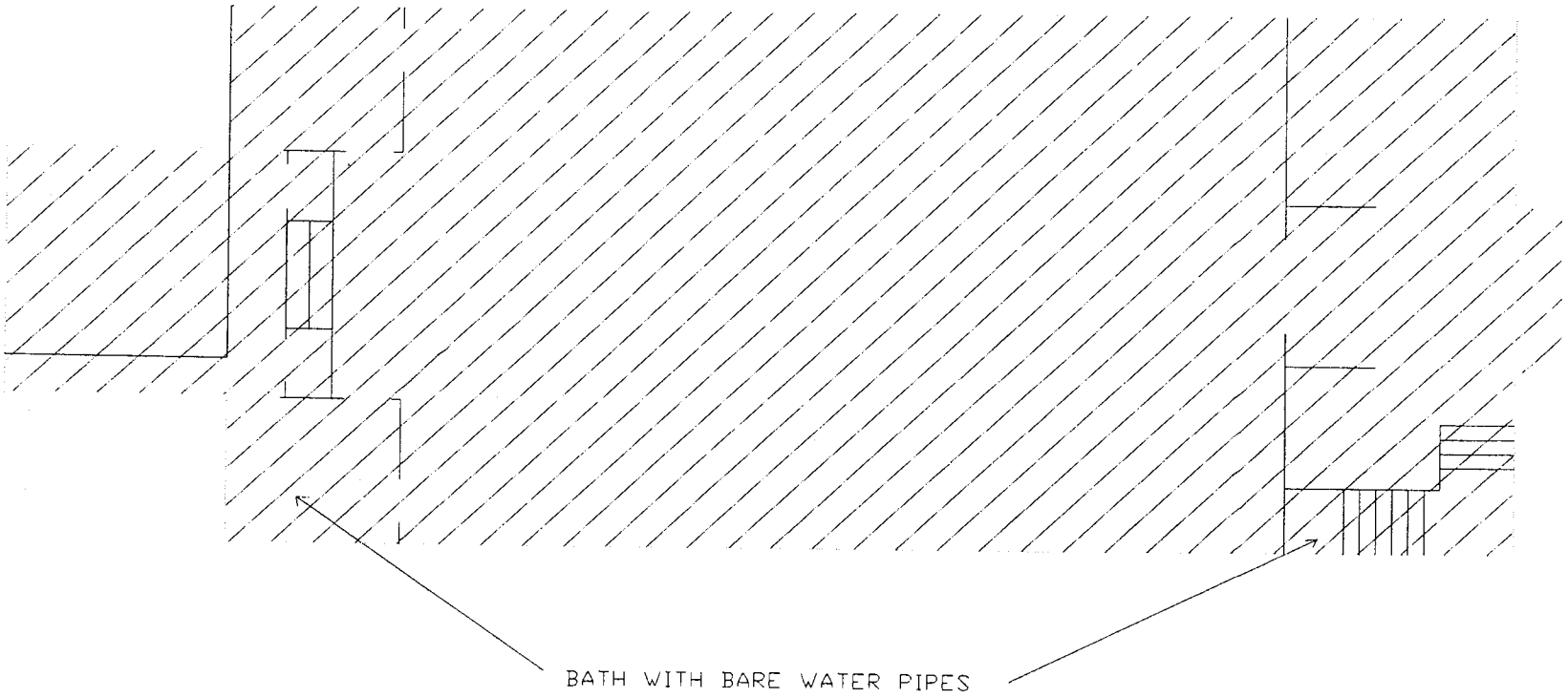


FIG. 1 LAYOUT PLAN SCALE: 1"=10'

12X12 TILE

BUILDING: 793	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

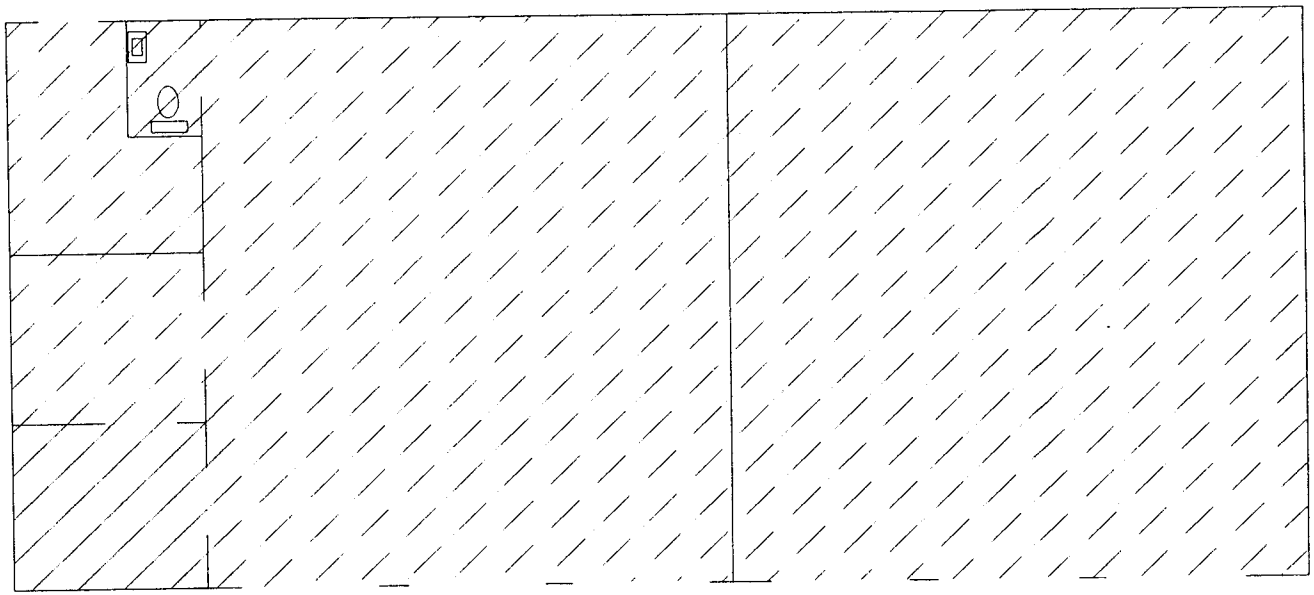


FIG. 1 LAYOUT PLAN

12X12 TILE

CONCRETE

BUILDING: 888	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

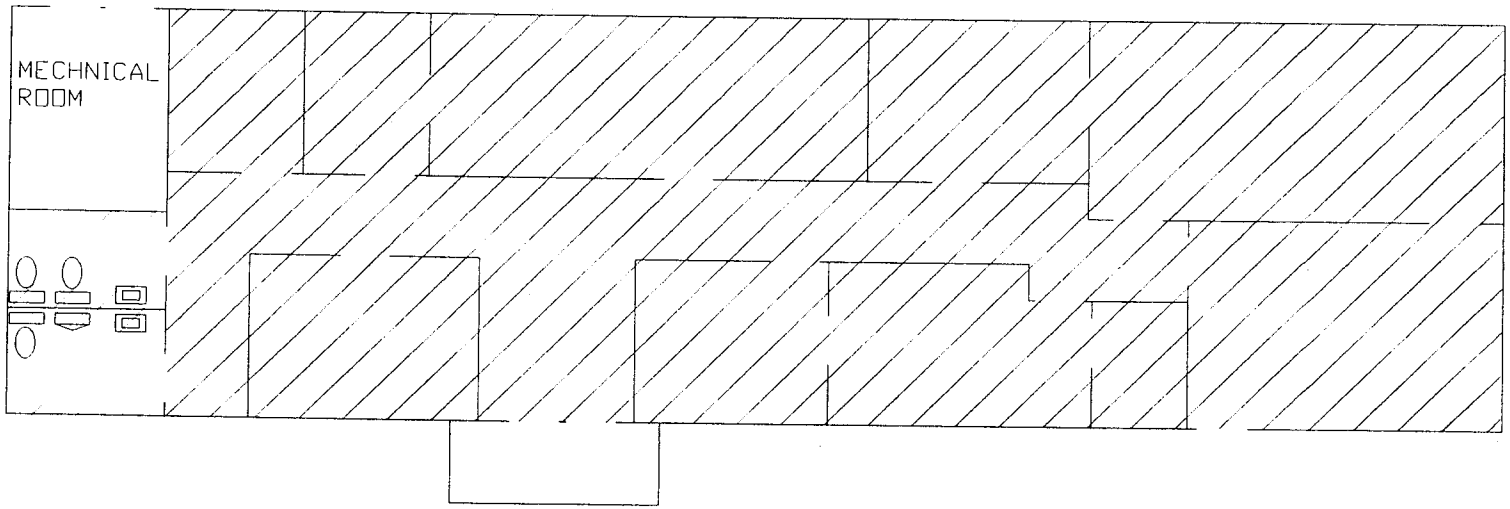


FIG. 1 LAYOUT PLAN SCALE: 1" = 10'

12X12 TILE

BUILDING: 891	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

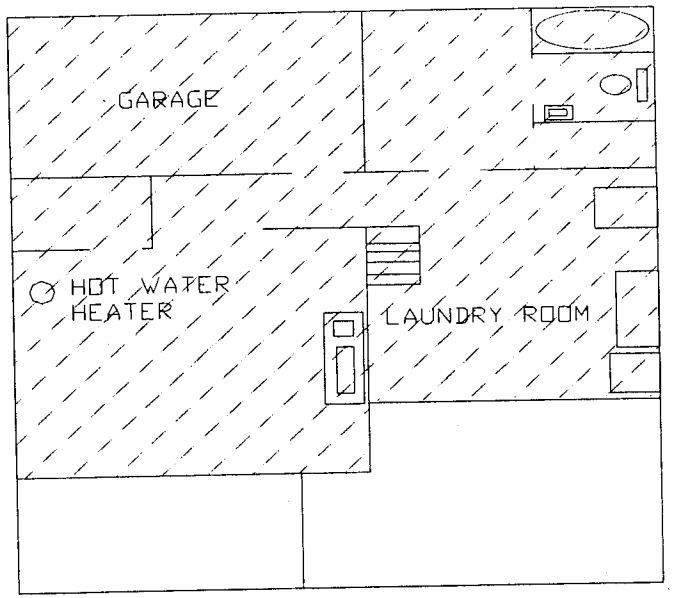


FIG. 1 BASEMENT PLAN

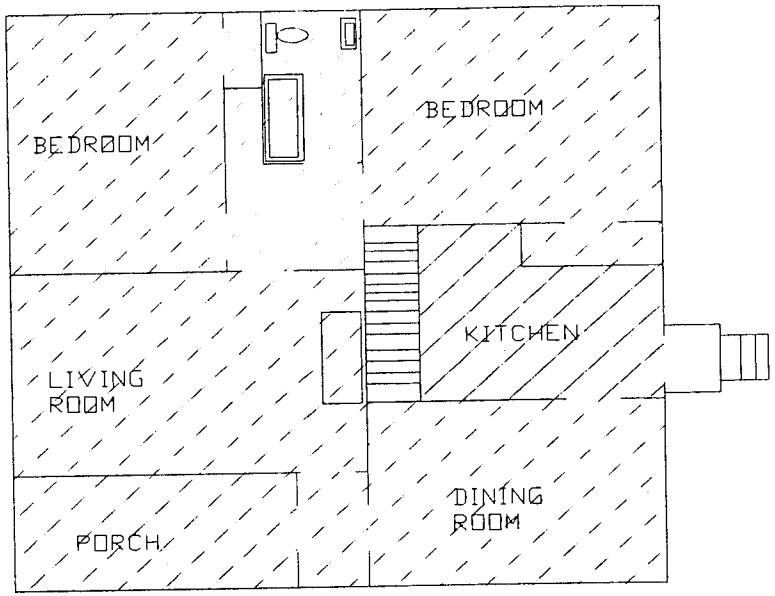


FIG. 2 FLOOR PLAN

SCALE: 1" = 10'

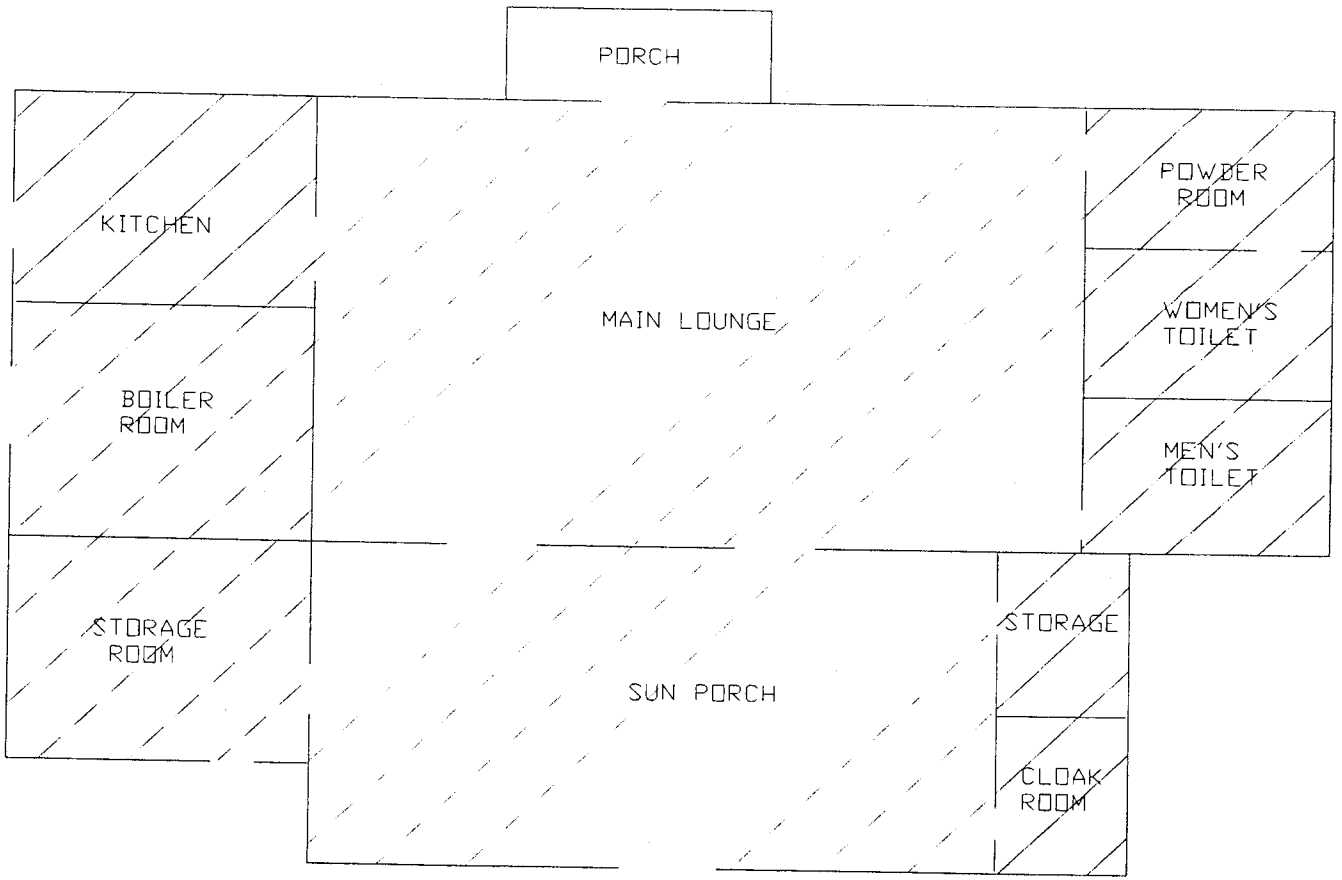
CONCRETE

CARPET

PAINTED CONCRETE

12X12 TILE

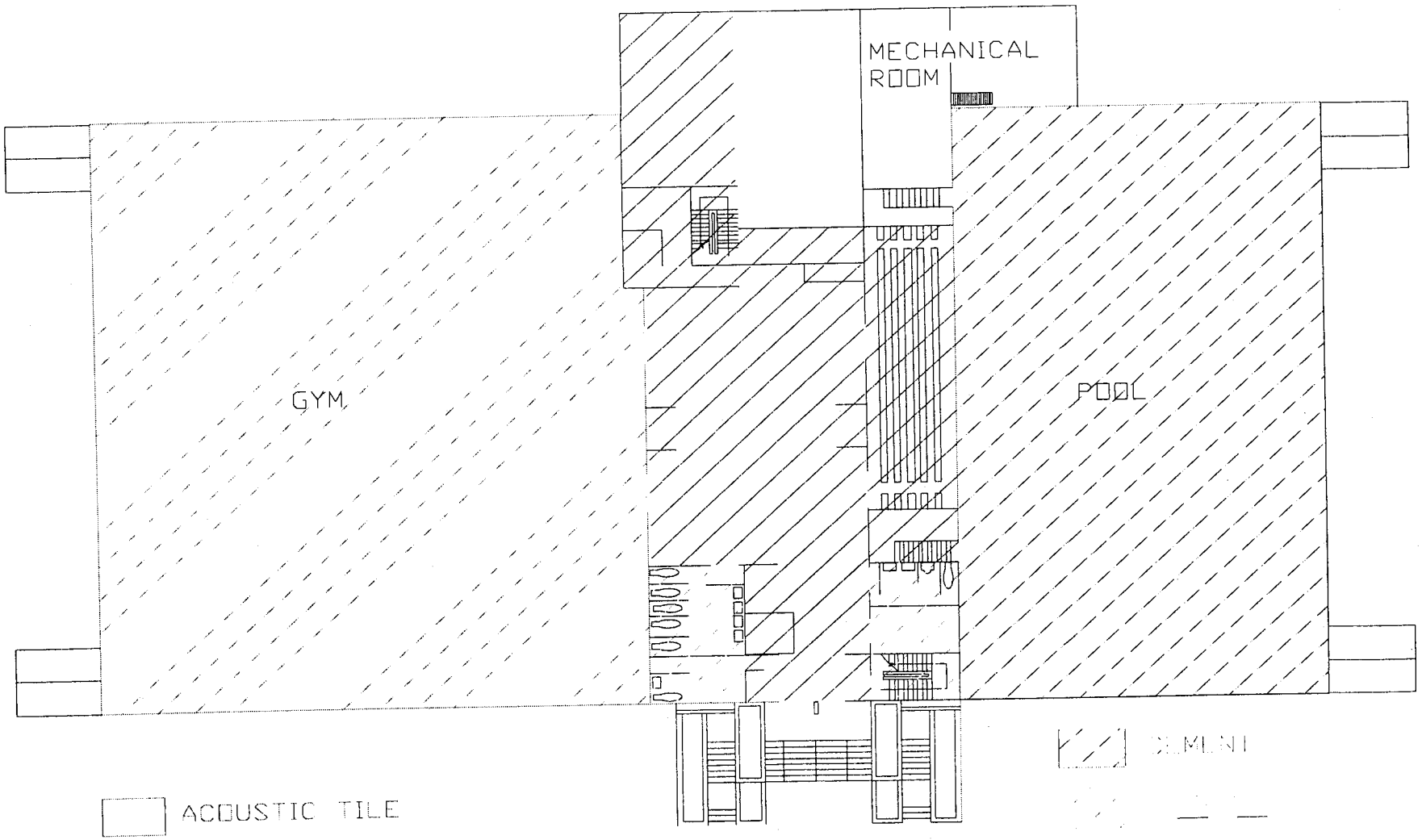
BUILDING: 900	FIG. 1 BASEMENT FIG.2 FLOOR PLAN	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



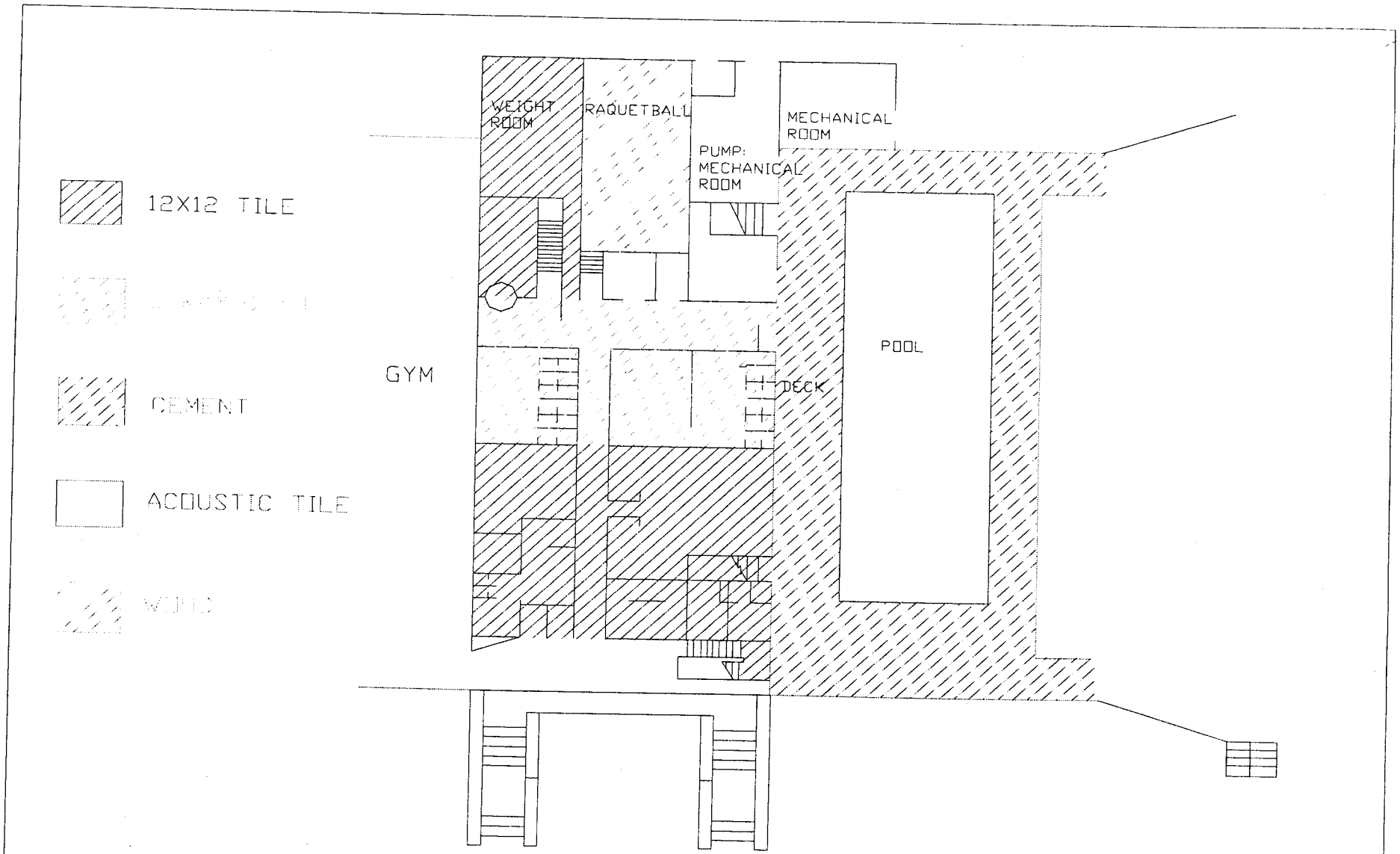
12X12 FLOOR TILE

CERAMIC TILE

BUILDING: 992	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



BUILDING: 1012	FIG. 2 Second Floor	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



BUILDING: 1012	FIG. 1 First Floor	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

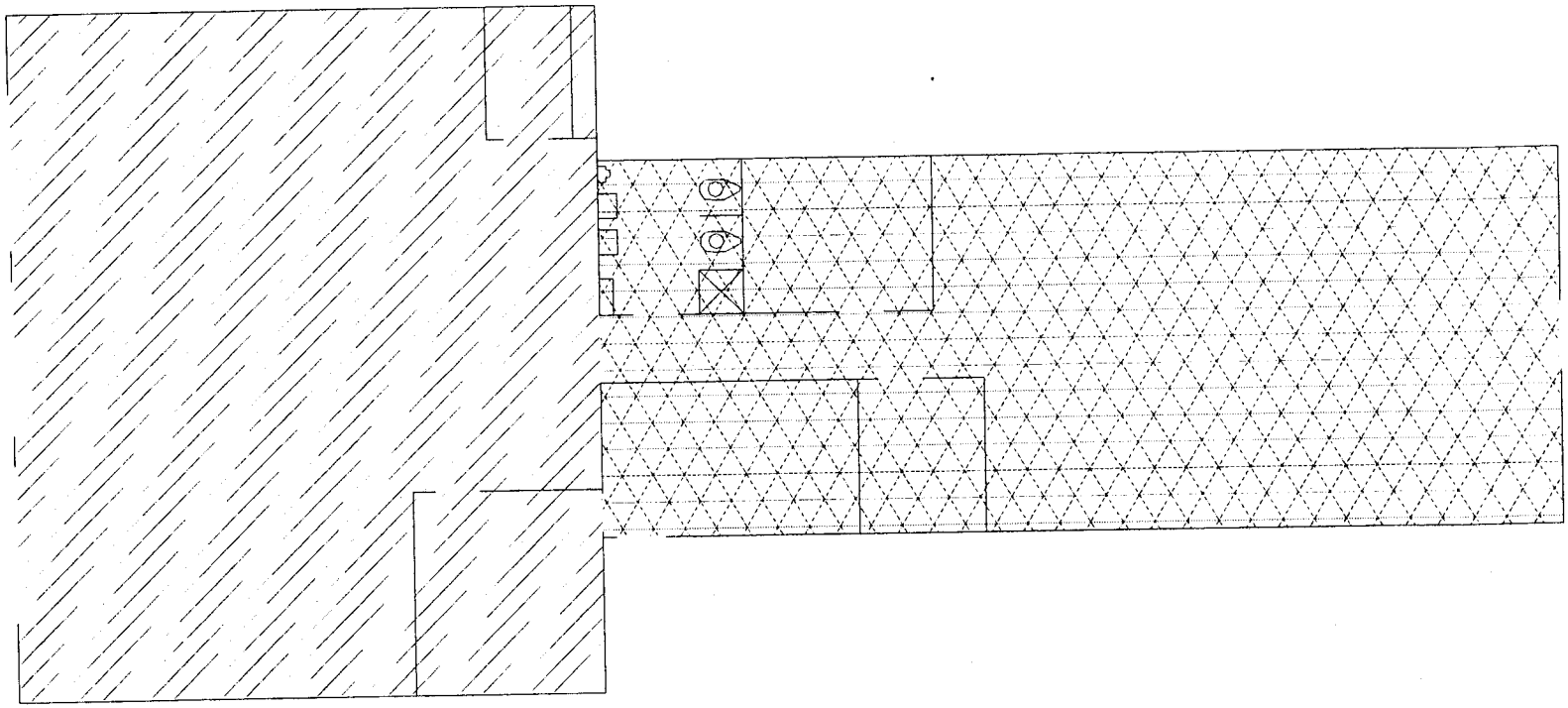


FIG. 1 LAYOUT PLAN SCALE: 1"=40'

BUILDING: 1108	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

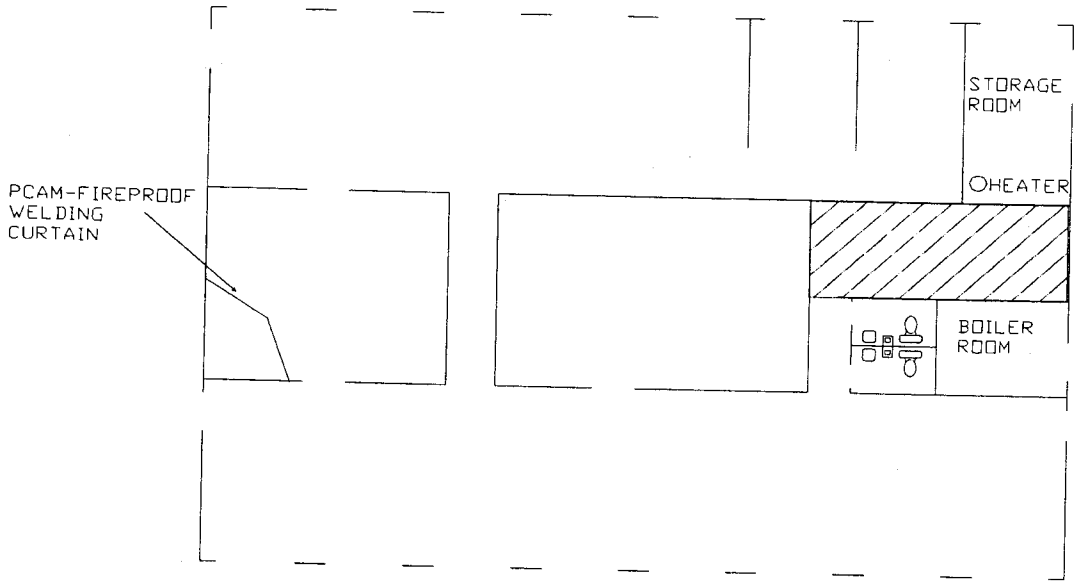
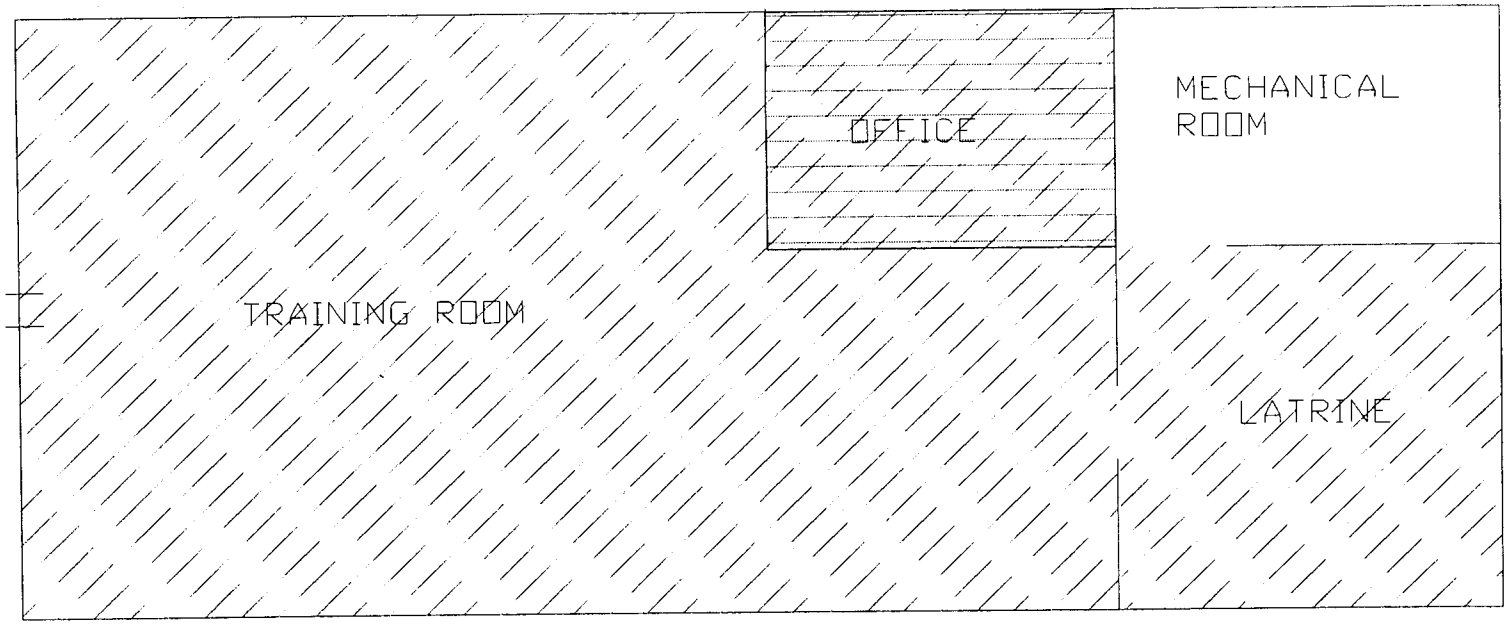


FIG. 1

LAYOUT PLAN

12X12 TILE

BUILDING: 1800	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

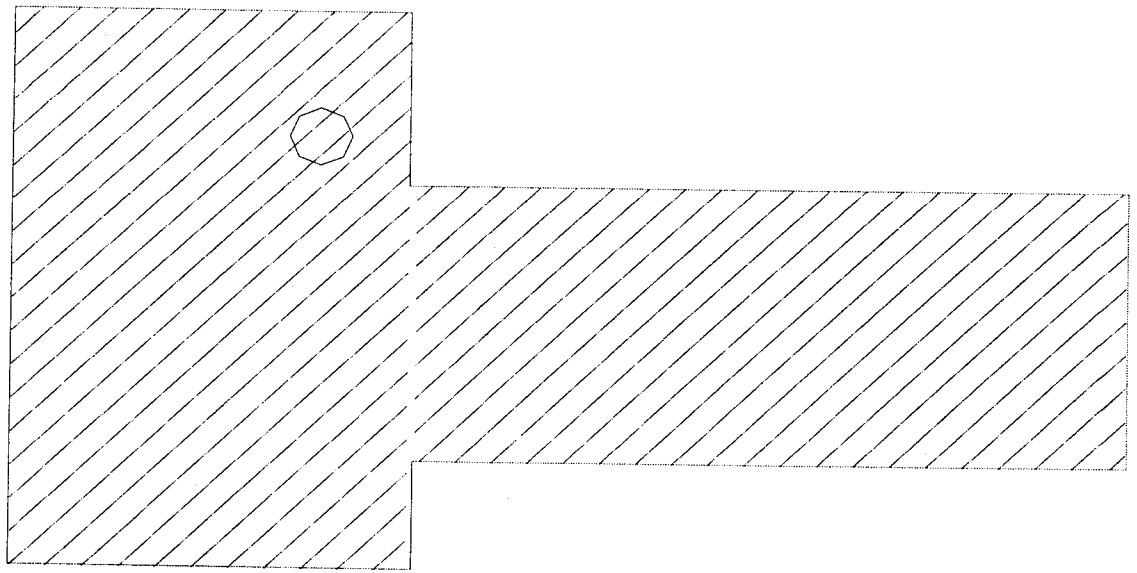


9x9 TILE

ACOUSTIC TILE ON CEILING

12X12 ACOUSTIC TILE

BUILDING: 1919	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



12X12 TILE

ACOUSTIC TILE ON CEILING AND WALLS THROUGHOUT

HOT WATER HEATER (HAS TRANSITE PIPE LEADING INTO THE ATTIC)

BUILDING: 1920	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

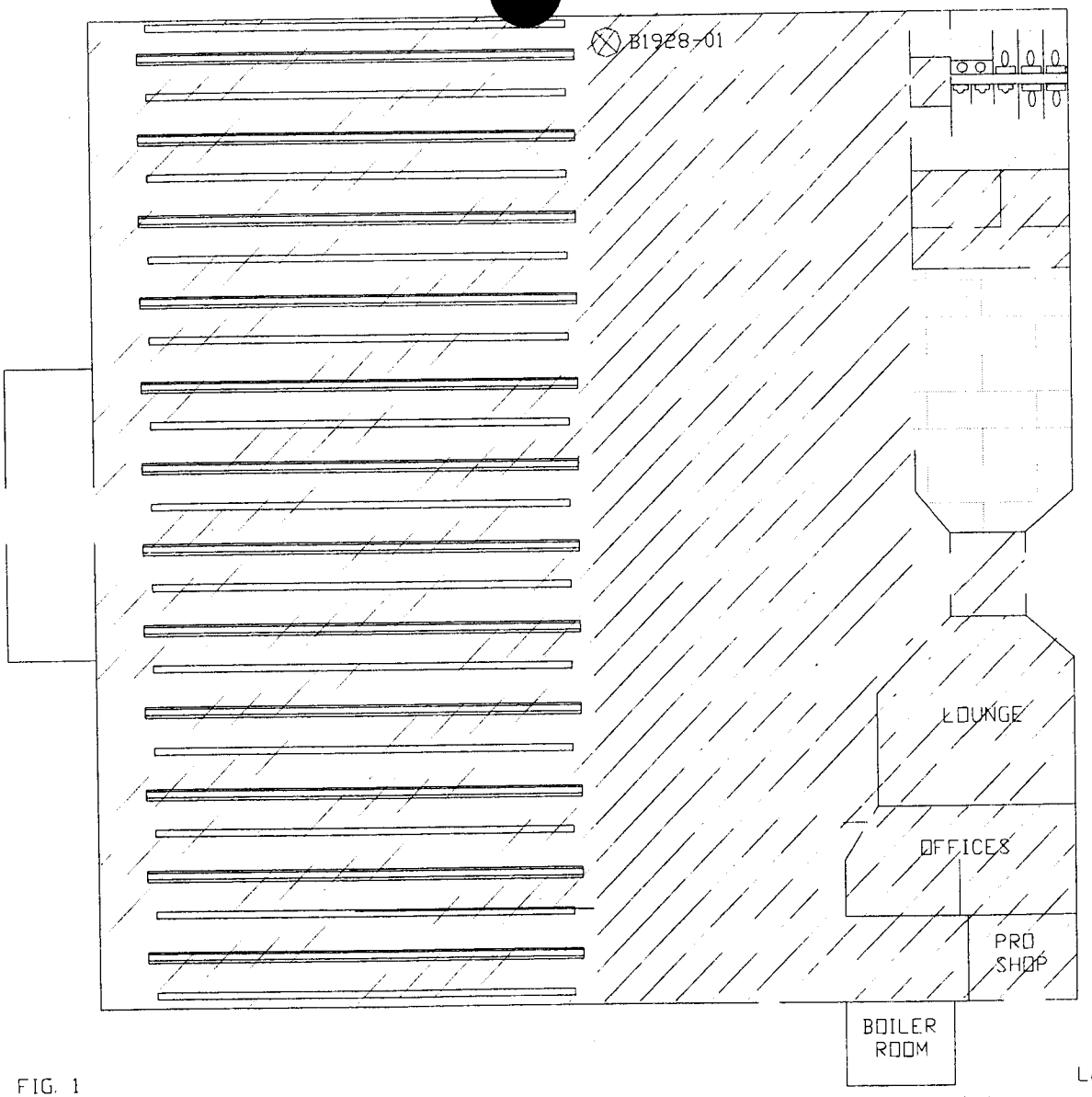
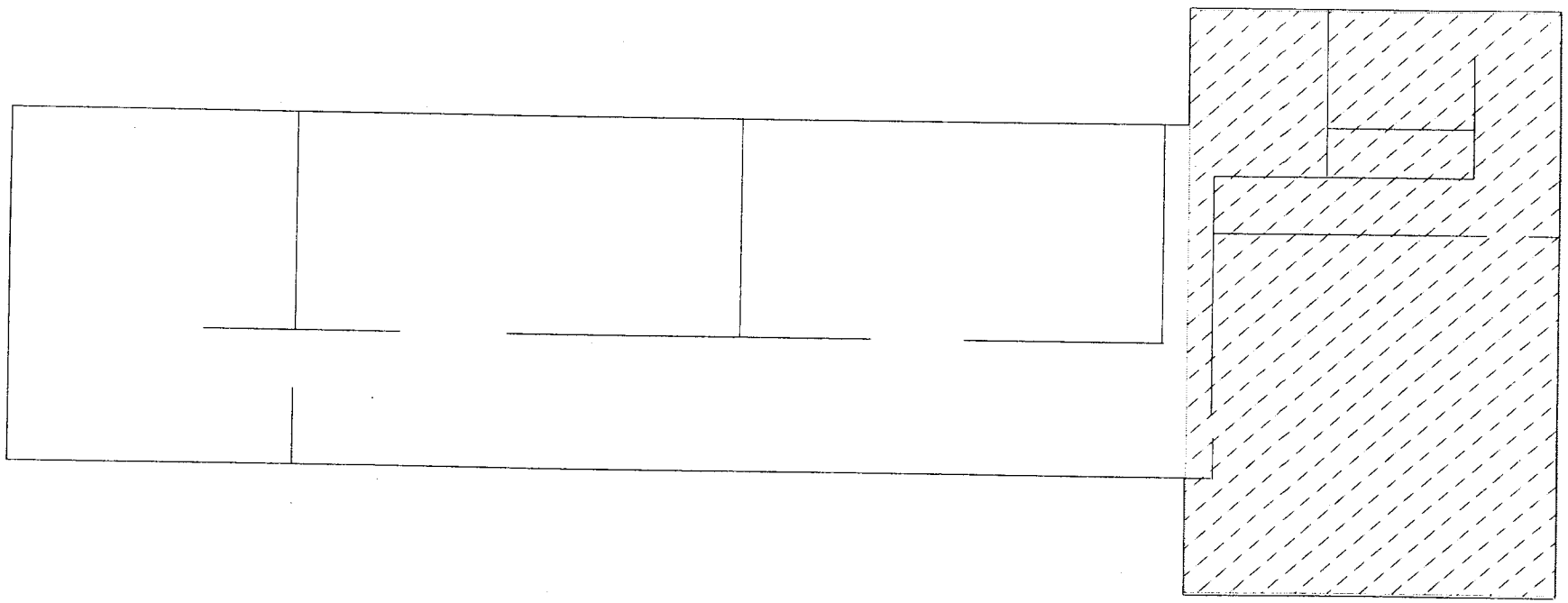


FIG. 1 LAYOUT PLAN

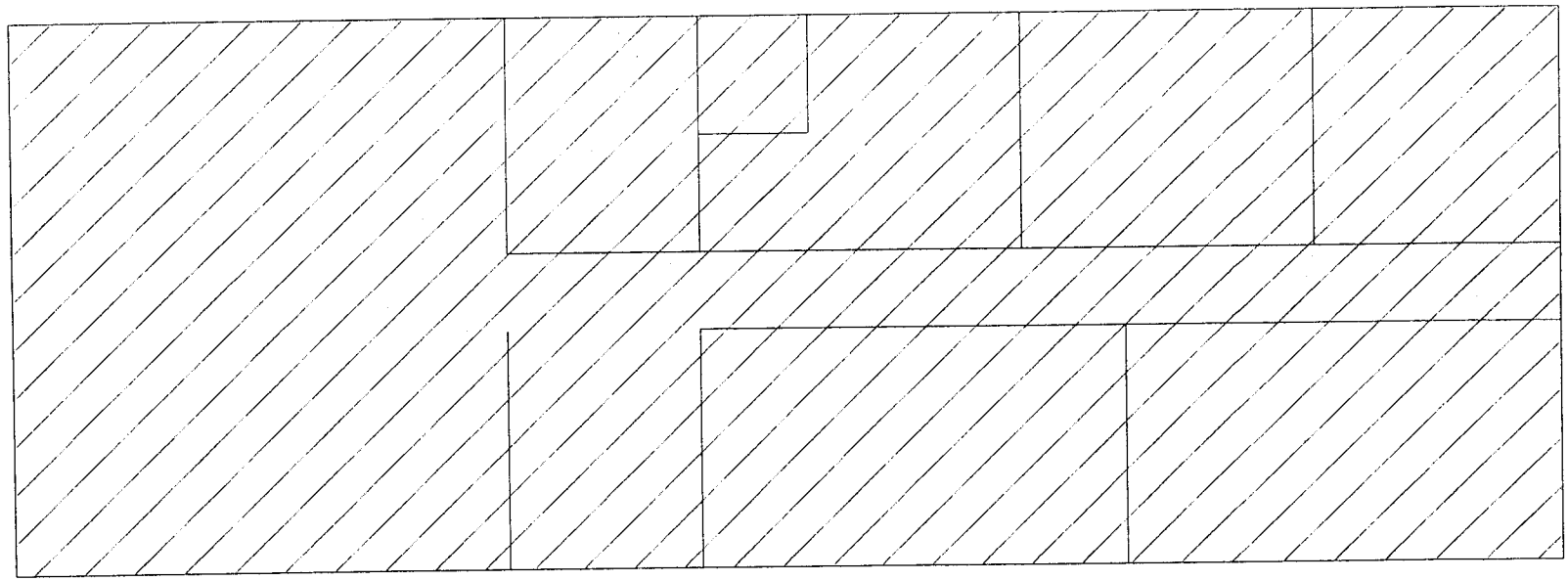
WHITE
BROWN ROCK 12X12 TILE
REGULAR 12X12 TILE
CARPET

BUILDING: 1928	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



9 X 9 TILE

BUILDING: 2020	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



12X12 FLOOR TILE

BUILDING: 2090	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

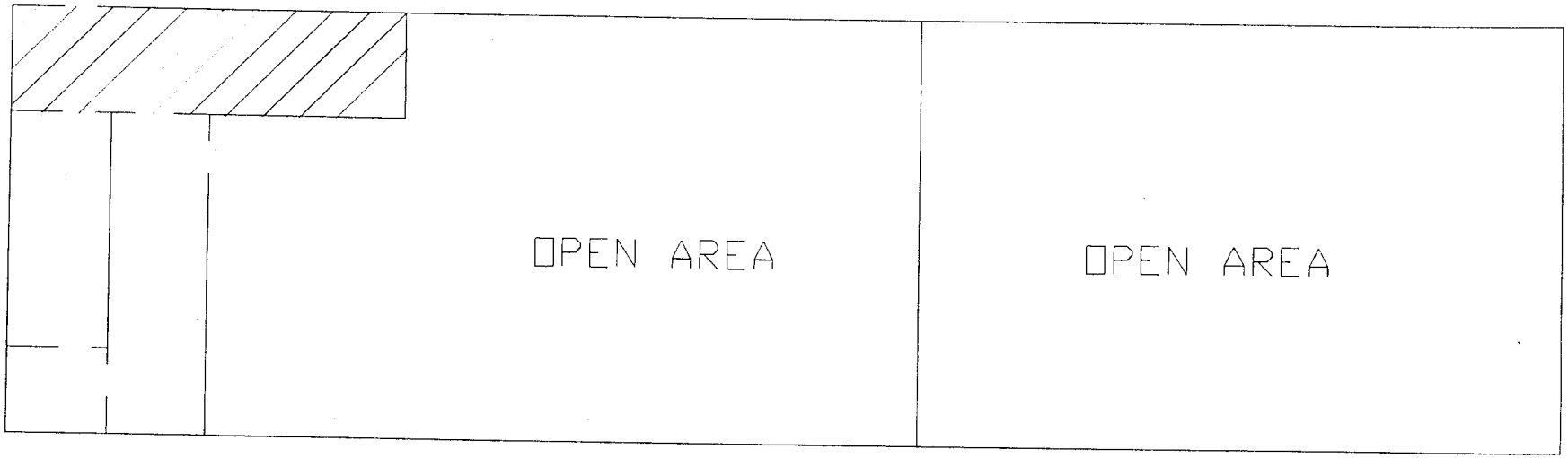
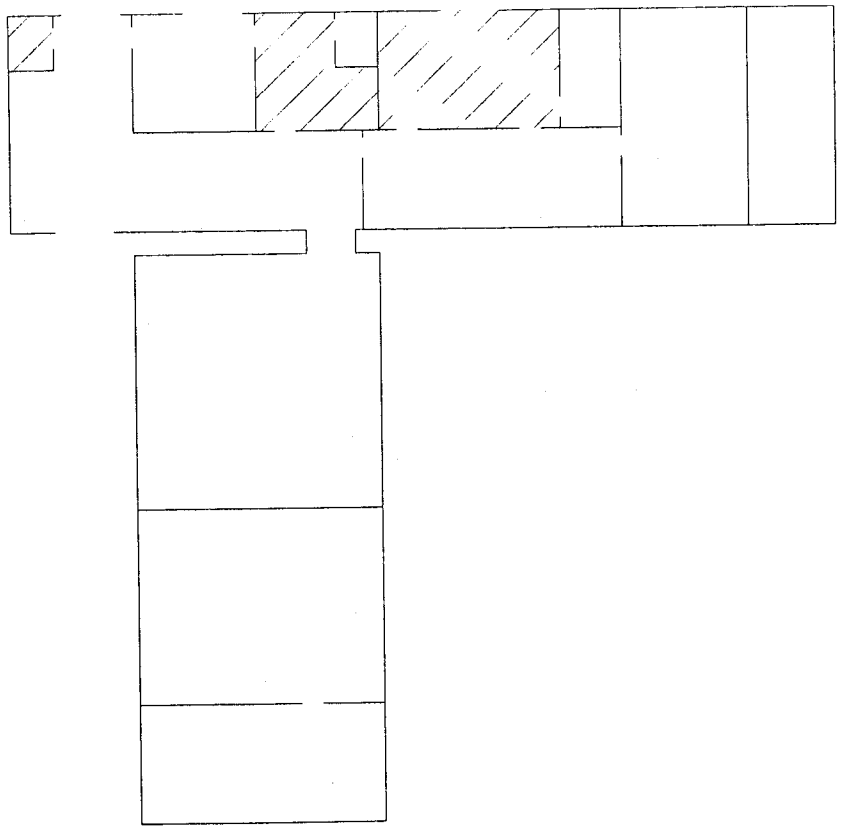


FIG. 1 LAYOUT PLAN SCALE: 1"=40'

9X9 TILE

BUILDING: 2115	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM70[illegible]	**REISZ ENGINEERING**

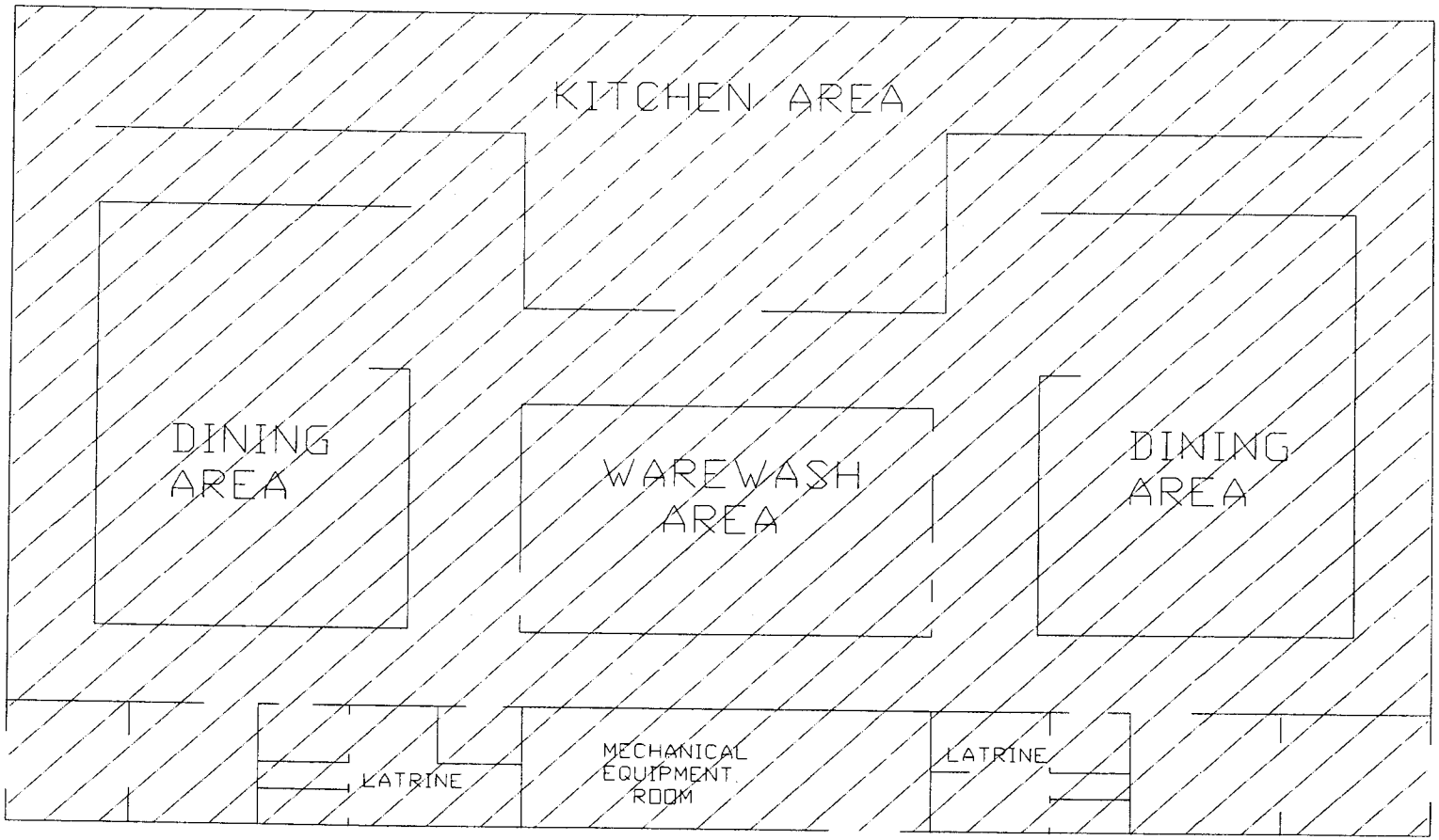


12X12 TILE

9X9 TILE

FIG. 1 LAYOUT PLAN

BUILDING: 2116	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



BUILDING: 2202	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

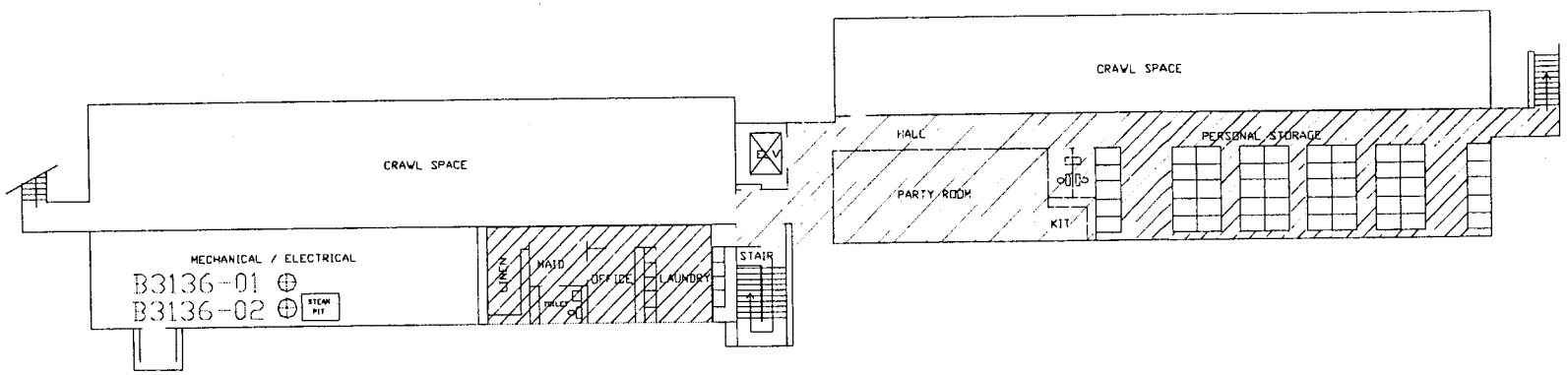


FIG. 1 LOWER FLOOR 3136 SCALE: 1"=30'

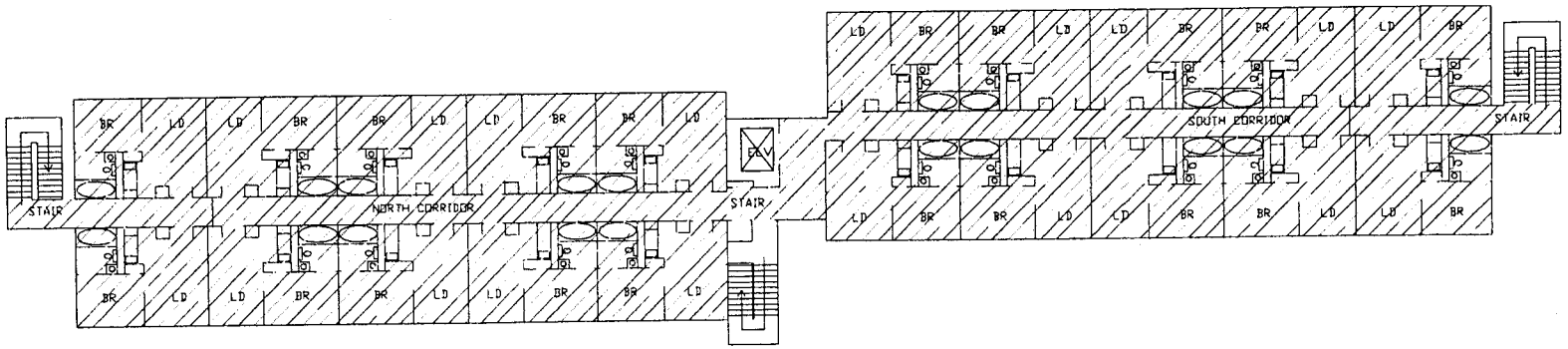


FIG. 2 SECOND FLOOR 3136 SCALE: 1"=30'

12X12 TILE

CARPET

CEMENT

CERAMIC TILE

NOTE: ALL CEILINGS ARE DROP-IN TILE WITH SHEET ROCK ABOVE TILE.
NOTE: ALL ROOMS ARE CARPETED WITH LANOLIUM IN BATH AND KITCHEN.

BUILDING: 3136	FIG. 1 LOWER FLOOR FIG. 2 SECOND FLOOR	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

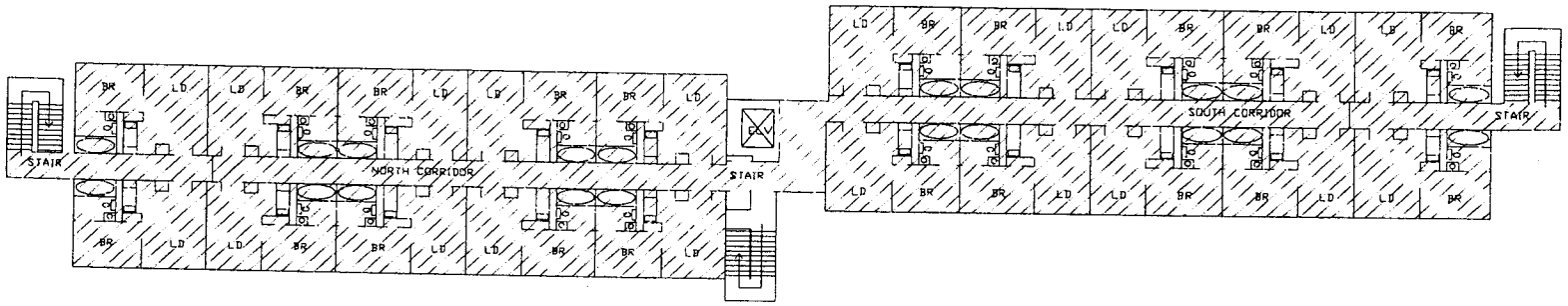


FIG. 1 THRID FLOOR SCALE: 1"=30'

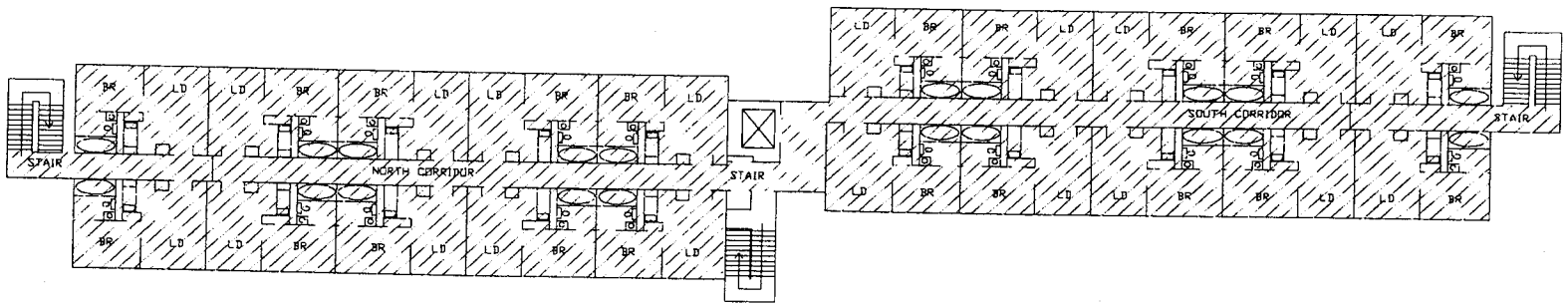


FIG. 2 FOURTH FLOOR SCALE: 1"=30'

CARPET

LAMINATE

BUILDING: 3136	FIG. 1 THIRD FLOOR FIG. 2 FOURTH FLOOR	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

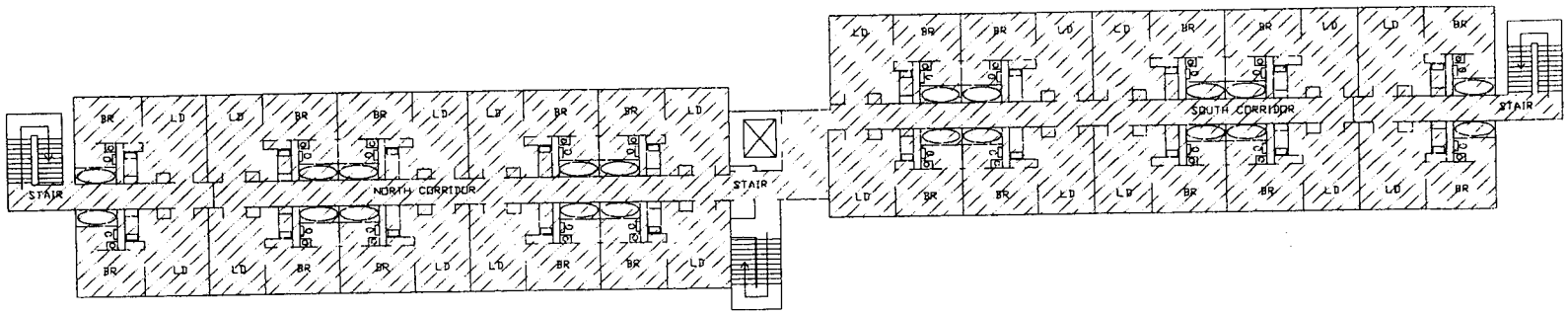


FIG. 1 FIFTH FLOOR SCALE: 1"=30'

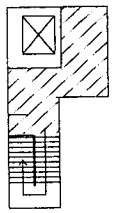


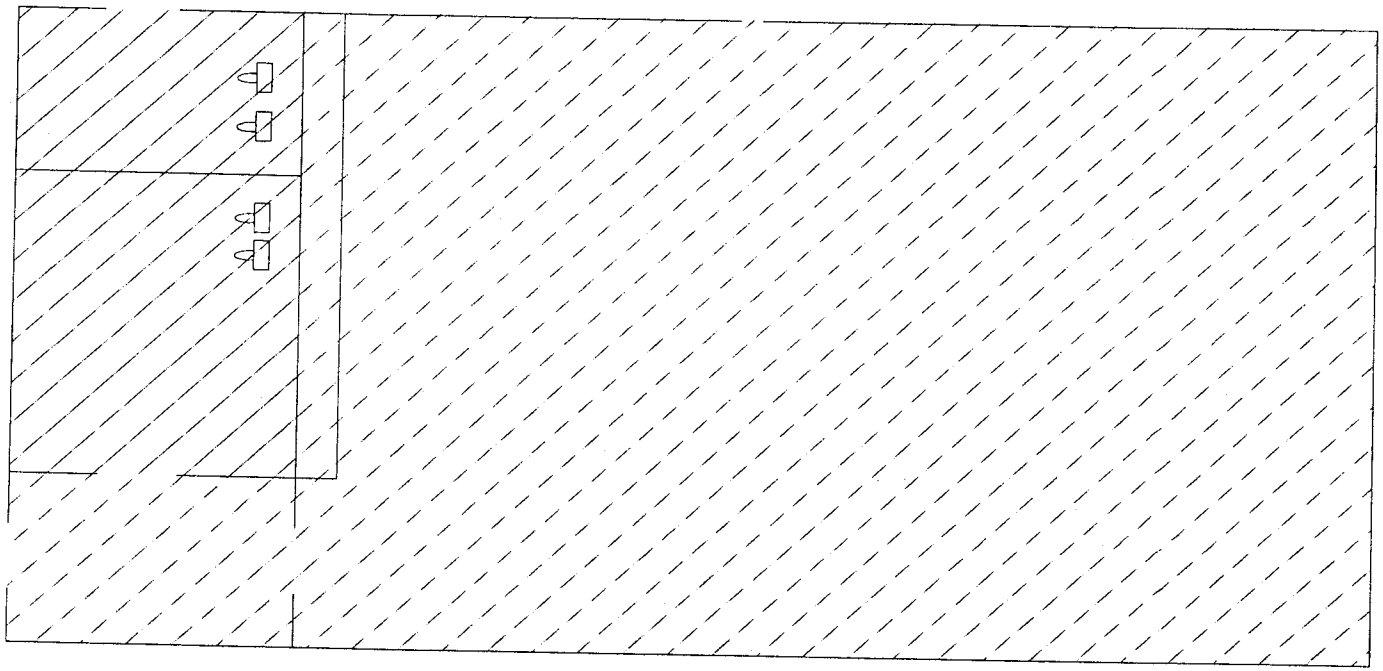
FIG. 2 PENTHOUSE SCALE: 1"=30'

LINOLEUM

CARPET

CEMENT

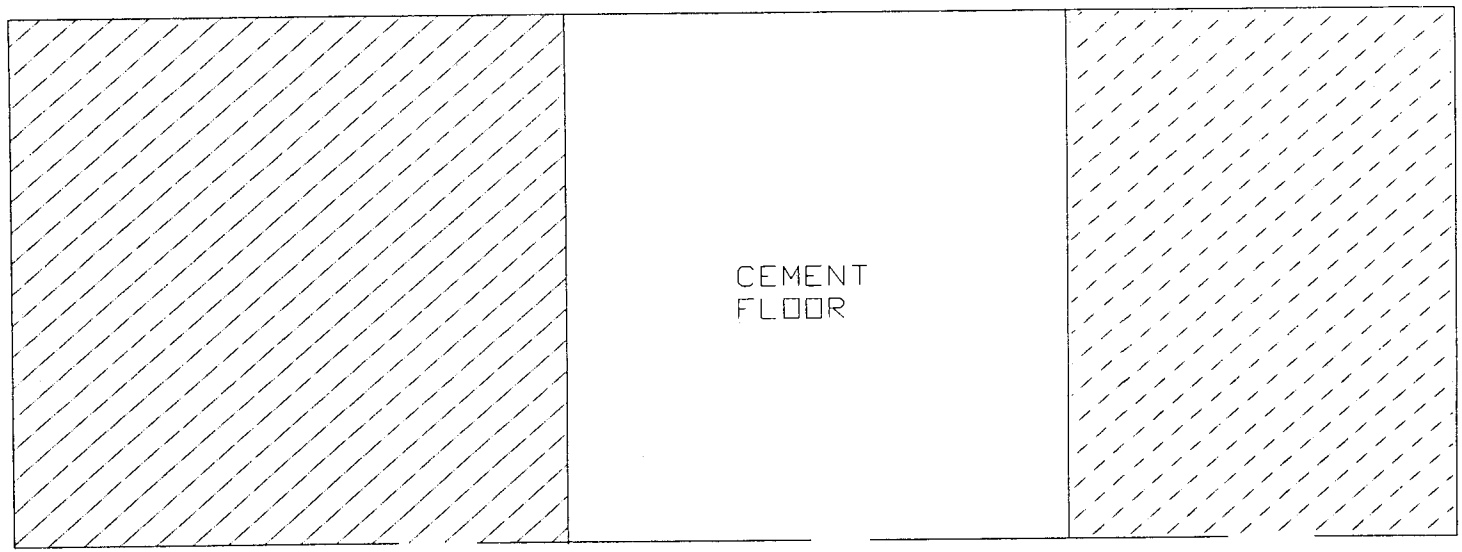
BUILDING: 3136	FIG. 1 FIFTH FLOOR FIG. 2 PENTHOUSE	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



CONCRETE

12X12 TILE

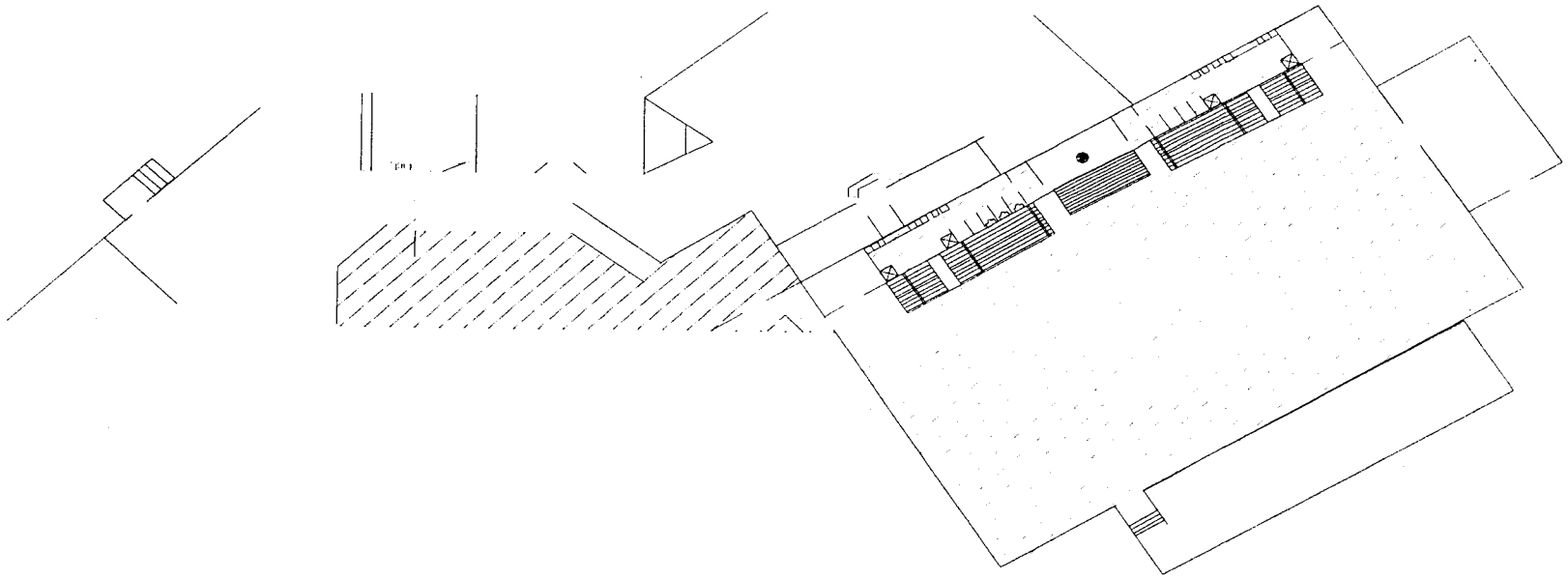
BUILDING: 3189		ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



12X12 TILE

9X9 TILE

BUILDING: 3297	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



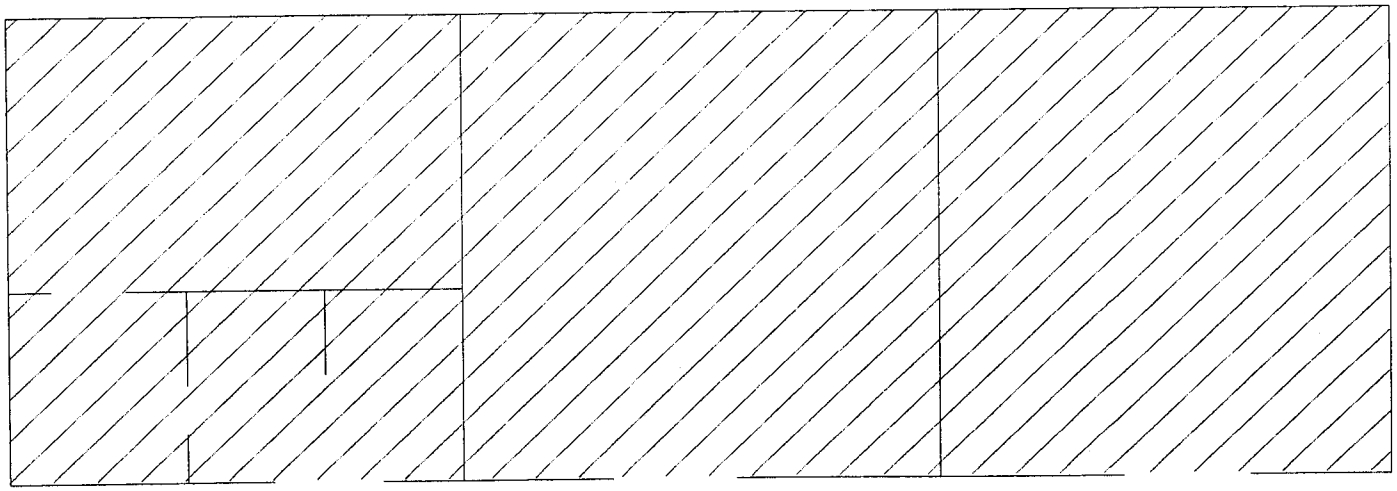
12" X 12" Floor Tile

SCALE: 1" 30'

BUILDING 3600

ASBESTOS SURVEY
DAB102-96-D-0005
FM705

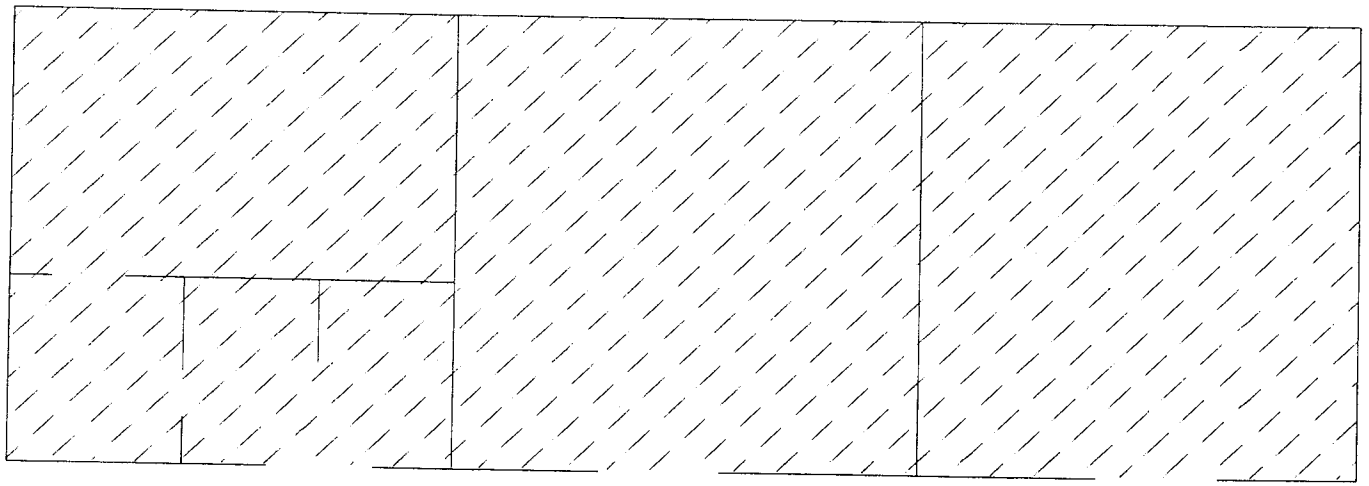
REISZ ENGINEERING



12X12 TILE

SCALE: 1"=30'

BUILDING: 4434		ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**



CEMENT

SCALE: 1"=30'

BUILDING: 4437		ASBESTOS SURVEY DABT02-96-D-0005 FM705	**REISZ ENGINEERING**

APPENDIX D

SUMMARY TABLE OF PACM AND COST ESTIMATES

Building Number	PACM Material	Quantity	Estimated Abatement Cost*
B66	12x12 vinyl floor tile and mastic	6446 ft^2	$14,825.00
		Total	**$14,825.00**
B184	12x12 vinyl floor tile and mastic	576 ft^2	$1,400.00
		Total	**$1,400.00**
B698	12x12 vinyl floor tile and mastic	3108 ft^2	$7,150.00
		Total	**$7,150.00**
B793	12x12 vinyl floor tile and mastic	3,700 ft^2	$8,510.00
	Asbestos Siding	5890 ft	$10,315.00
		Total	**$18,825.00**
B888	12x12 vinyl floor tile and mastic	168 ft^2	$525.00
		Total	**$525.00**
B891	12x12 vinyl floor tile and mastic	2000 ft^2	$4,600.00
		Total	**$4,600.00**
B900	12x12 vinyl floor tile and mastic	216 ft^2	$650.00
		Total	**$650.00**
B992	12x12 vinyl floor tile and mastic	432 ft^2	$1,080.00
		Total	**$1,080.00**
B1012	12x12 vinyl floor tile and mastic	10,000 ft^2	$23,000.00
		Total	**$23,000.00**
B1108	9x9 vinyl floor tile and mastic	1420 ft^2	$3,550.00
		Total	**$3,550.00**
B1800	12x12 vinyl floor tile and mastic	240 ft^2	$725.00
		Total	**$725.00**
B1919	9x9 vinyl floor tile and mastic	1080 ft^2	$2,700.00
		Total	**$2,700.00**
B1920	12x12 vinyl floor tile and mastic	2136 ft^2	$4,925.00
	Transite pipe	10 ft	$100.00
		Total	**$5,025.00**
B1928	12x12 vinyl floor tile and mastic	1900 ft^2	$4,750.00
		Total	**$4,750.00**

Building Number	PACM Material	Quantity	Estimated Abatement Cost*
B2020	9x9 vinyl floor tile and mastic	651 ft^2	$1,650.00
		Total	**$1,650.00**
B2090	12x12 vinyl floor tile and mastic	1716 ft^2	$3,950.00
		Total	**$3,950.00**
B2115	9x9 vinyl floor tile and mastic	500 ft^2	$1,250.00
		Total	**$1,250.00**
B2116	12x12 vinyl floor tile and mastic	300 ft^2	$750.00
	9x9 vinyl floor tile and mastic	920 ft^2	$2,300.00
		Total	**$3,050.00**
B2202	12x12 vinyl floor tile and mastic	7800 ft^2	$17,940.00
		Total	**$17,940.00**
B3136	12x12 vinyl floor tile and mastic	675 ft^2	$1,690.00
		Total	**$1,690.00**
B3189	12x12 vinyl floor tile and mastic	200 ft^2	$600.00
		Total	**$600.00**
B3600	12x12 vinyl floor tile and mastic	300 ft^2	$750.00
		Total	**$750.00**
B4434	12x12 vinyl floor tile and mastic	800 ft^2	$2,000.00
		Total	**$2,000.00**
B4437	Thermal system insulation	6 ft^2	$75.00
		Total	**$75.00**
		Grand Total	**$184,790.00**

*Includes all air monitoring and design fees

BUILDING 3131

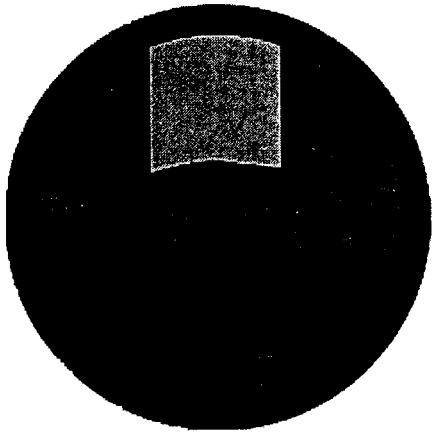
ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
ENLISTED BARRACKS
BUILDINGS 3130 & 3131

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Fort McClellan



Staying Beautiful

Conducted and Prepared by:

REISZ ENGINEERING
P.O. BOX 1349
HUNTSVILLE, ALABAMA 35807

BUILDING 3131

ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
ENLISTED BARRACKS
BUILDINGS 3130 & 3131

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Prepared For:

DIRECTORATE OF ENVIRONMENT
FORT McCLELLAN

APPROVED FOR TRANSMITTAL BY
JAMES R. WRIGHT

Conducted and Prepared by:

REISZ ENGINEERING

June, 1998

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3.0	PROJECT CHARACTERISTICS	3
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APPENDICES

APPENDIX A - REPORT OF LABORATORY ANALYSIS
APPENDIX B - SUMMARY TABLE OF ACM
APPENDIX C - SAMPLE LOCATIONS PLANS
APPENDIX D - SELECTED ACM LOCATIONS PLANS
APPENDIX E - SELECTED ACM PHOTOGRAPHS

1.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this survey was to locate and identify asbestos containing building materials at Building 3130 &3131 located at Fort McClellan, Alabama. Pursuant to the Contract, REISZ Engineering was required to provide the survey in accordance with AHERA (40 CFR Part 763 Subpart E) protocol. AHERA is applicable to interior building products installed prior to October 12, 1988. AHERA does not apply to the exterior of buildings and does not apply to non-building materials (e.g. cabinetry, special equipment and chalkboards). REISZ Engineering has included as part of the survey those readily accesible, suspect friable interior non-building materials (e.g. vibration dampers); but has not included certain items (e. g. interior linings of equipment and special supplies, some non-friables such as transite, ect.). Exterior building materials were not sampled as part of this contract unless those materials were suspected to be of friable nature and continuous with indoor materials (e.g. piping insulation). Specifically, REISZ Engineering was contracted to provide the following services:

1. Identify and collect samples of accessible suspect friable building materials within the referenced project area.
2. Perform a visual inspection to provide information on material condition, material quantities, material locations, and building use.
3. Analysis of all bulk samples for asbestos content utilizing Polarized Light Microscopy and Dispersion Staining Techniques performed in accordance with EPA Bulk Analysis Method
   EPA 600/M4-82-020.
4. Make recommendations as to response actions pertaining to those materials identified as asbestos containing.

5. Compilation of a final report (contained herein) which details all sample results, identifies sample locations, and provides recommendations based upon the results.
6. Preparation of a Building specific Operations & Maintenance (O&M) Plan for buildings containing friable asbestos materials.

2.0 REGULATORY STANDARDS

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) requires the Owner or Operator of a facility to determine the presence or non-presence of asbestos containing materials prior to conducting renovation or demolition activities. The NESHAP Standard for asbestos (40CFR Part 61 Sub-part M) requires the use of engineered control procedures for removal of asbestos materials that are or will become friable during renovation or demolition. The removal must occur before renovation or demolition activities impact those materials.

On October 11, 1994 an OSHA promulgated regulation (29 CFR Part 1926.1101) became effective. This Standard is related to asbestos exposure in construction, renovation and building maintenance work places. Building owners are required, pursuant to the Standard, to notify employees, tenants and prospective employers (contractors) of the presence, location and quantities of ACM in the building. Implementation of the "communication of hazards" provisions in the Standard were originally to be not later than April 10, 1995 but was extended to July 10, 1995 and is now in effect. The OSHA Standard does not apply to work performed by employees of State agencies in states without state run OSHA programs (e. g. Alabama).

In October 1986, the Asbestos Hazard Emergency Response Act (AHERA) was signed into law. Included in this act are provisions directing E.P.A. to establish rules and regulations (40CFR Part 763) addressing asbestos-containing materials in schools. Specifically, the E.P.A. was directed to address the issues of: 1) identifying, 2) evaluating, and 3) controlling asbestos

containing materials (ACM) in schools. AHERA requires schools to perform building inspections and to prepare management plans for ACM control. Although the AHERA regulation does not specifically apply to this project it is generally accepted as the industry standard and was cited by Fort McClellan in the Asbestos Survey Request as the basis of survey methodology. The AHERA inspections must be conducted using specific guidelines which include a minimum number of samples per material type. This survey was conducted in accordance with those guidelines per the Contract requirements.

On November 28, 1992 a law became effective which extended the EPA's Model Accreditation Plan to all public and commercial buildings. Currently the rule extends the accreditation requirements of persons performing asbestos work (inspectors, project designers, abatement supervisors, and workers) in public and commercial buildings, but does not extend the other aspects of AHERA. This project was conducted utilizing EPA accredited personnel.

3.0 PROJECT CHARACTERISTICS

During the month of November 1997, Reisz Engineering accredited asbestos Inspectors performed inspections of Building 3130 & 3131 for the purpose of identifying building materials suspected to contain asbestos. The buildings are constructed of cement blocks and are used as enlisted barracks. Based on information provided by Fort McClellan representatives the buildings were originally constructed in 1954 and contain approximately 82,200 sq. ft. and 81,200 sq. ft. of floor space respectively. Various renovations may have taken place since the buildings were originally constructed but no building plans have been found which can be used to verify specific dates and activities.

The dominant flooring conditions existing in the facility are 1) 12 X 12 vinyl floor tile, 2) 9 X 9 vinyl floor tile, and 3) cement. The buildings were found to contain suspect pipe insulation

consisting of a white cementitious material and brown paper-like material. Both buildings were found to have a suspect 12 X 12 and 9 X 9 inch floor tile.

4.0 SURVEY METHODOLOGY

The building was visually inspected for the presence of material suspected to contain asbestos. Those suspect materials were identified, bulk samples were obtained and placed into individual vials for transportation to the University of Alabama in Huntsville. General areas for sample locations were selected on a random basis with a preference for exact positioning at existing damage. Each sample location is represented by a number on the plans in Appendix C. Those numbers directly correspond with the numbers listed elsewhere in this report.

If any additional suspect materials are identified during renovation or demolition they should be analyzed for asbestos content. Materials visibly identifiable as non-asbestos (fiberglass, foam rubber, wood, etc.) were not sampled. Materials installed after October 12, 1988 (as reported by Fort McClellan staff) were not sampled.

Hazard Assessment Factors

Each time suspect ACM was sampled, it was classified as either a friable or a non-friable material. Friable material may be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is more hazardous than non-friable ACM because friable material can release airborne asbestos fibers more easily. In assessing the fiber release potential, the current condition of all ACM identified was noted. Evidence of deterioration, physical damage, water damage, erosion of ACM due to its' proximity to an air plenum, high vibration, or contact potential was also noted.

5.0 LABORATORY ANALYSIS METHODOLOGY

All bulk samples were analyzed at UAH by polarized light microscopy utilizing dispersion staining or Becke line techniques, in accordance with the EPA's "Interim Method for Determination of Asbestos in Bulk Insulation Samples" (EPA 6OO/m4-82-020). Quality control samples were taken as duplicates at a rate of 1 to 20 and were sent to a second accredited laboratory. This type of analysis requires the microscopist to take a portion of the bulk sample and treat it with an oil of specific refractive index. This prepared slide is then subjected to a variety of optical tests.

Each type of asbestos displays unique characteristics when subjected to these tests. Percentages of the identified types of asbestos are determined by visual estimation. Even though this is an estimation, any material that contains greater than one percent of any type of fibrous asbestos is considered ACM and must be handled according to OSHA and EPA regulations if disturbed during maintenance, renovation, demolition or removal.

The UAH laboratory participates in the American Industrial Hygiene Association (AIHA) quality assurance program for polarized light microscopy and is accredited by the AIHA through their voluntary program.

6.0 SUSPECT MATERIALS

The following is a general list of building materials that were suspected to contain asbestos. A complete and more detailed description of these substances can be found in Appendix B.

Surfacing

- Spray on insulation on ceiling of mechanical room (B3131)

Thermal System Insulation

- Brown paper-like type pipe insulation
- White, cementitious pipe fitting and straight run insulation

Miscellaneous Material

- Vinyl floor tile 12 X 12
- Vinyl floor tile 9 X 9
- Vinyl flooring mastics

7.0 ASBESTOS INSPECTION AND SAMPLING RESULTS

A total of 59 bulk samples were collected and analyzed. Details of all laboratory results can be found in Appendix A. A listing of all suspect materials, their corresponding sample numbers, general location, and asbestos content are indicated in Appendix B. A narrative description of all "Friable Asbestos Containing Material" and "Non-Friable ACM" identified during the survey, is given below.

FRIABLE ACM

Laboratory analysis determined asbestos is present in three types of friable materials: 1) brown paper-like pipe insulation in both buildings, 2) a white cementitious pipe fitting insulation in both buildings, and 3) a white cementitious insulation on a pipe straight runs in both buildings.

NON FRIABLE ACM

Three types of non-friable Presumed ACM's were identified by laboratory testing as follows: 1) 12 X 12 inch floor tile, 2)9 X 9 inch floor tile, 3) mastics associated with 12 X 12 and 9 X 9 inch floor tile

mastic.

1) A suspect 12 X 12 inch floor tile is found in both buildings.
2) A suspect 9 X 9 inch floor tile is found in both buildings.
3) A suspect black mastic is found below the 12 X 12 and 9 X 9 inch floor tile in both of the buildings.

INACCESSIBLE MATERIAI,

Insulation and spray-on compounds associated with inaccessible crawl-space and tunnel areas are assumed as "like" materials cooresponding to materials sampled within the building.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Some of the materials identified within this report are damaged to the extent that significant asbestos fiber release is likely under normal conditions. However, some of the asbestos containing materials, are subject to routine maintenance activities that could involve significant disturbance. Those materials include the pipe fitting insulations and ceiling tiles. Based upon the aforementioned conditions no action is recommended at this time. Reisz Engineering has written a Building Operations & Maintenance Plan for Building XXXX and we suggest that recommendations included in this plan be followed.

9.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions and recommendations expressed in this report are based only on conditions which were observed during the inspections of the buildings during November 1997. Reisz Engineering and this report make no representation or assumptions as to past conditions or future occurrences.

Our inspection was generally non-destructive in nature. Any conditions or material which were not visible on the surface were not inspected and may differ from those observed. It was not within the scope of this investigation to remove surface materials to investigate portions of the structure or materials which lay beneath the surface. Our selection of sample locations and frequency is based upon our observations and the assumption that all materials in the same area are homogeneous.

This report is designed to aid the building owner, architect, construction manager, general contractors, and potential asbestos abatement contractors in locating ACM. Under no circumstances is this report to be utilized as a bidding document or as a project specification document.

APPENDIX A

REPORT OF LABORATORY ANALYSIS FOR ASBESTOS

UAH

The University of Alabama in Huntsville

Environmental Laboratory
Kenneth E. Johnson Research Center

Huntsville, Alabama 35899
Phone: (205) 895-6391
Fax: (205) 895-6376

Re : Bulk Asbestos Analysis EPA 600/R-931116
AIHA: 023601

Receipt Date: 07-07-97

Sample Date : 07/08/97

Microscopist: Tom Canington

Client: Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Sample/Description	Asbestos Fibers(%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	MW	CaSO4	Othr
B3130-01/White chalky insul. On 3" pipe	55	8	25						12
B3130-02/ White chalky insul. On 3" pipe	40	20	25						15
B3130-03/ White chalky insul. On 5" pipe	45	40							
B3130-04/ White chalky insul. On 8" pipe	55	30							15
B3130-05/ White chalky insul. On 8" pipe	20	65							15
B3130-06/ White chalky insul. On 4" pipe	20	50	15						15
B3130-07/ Brown paper insul. On 2-5" pipe	12				75				13
B3130-08/Brown paper insul. On 2-5" pipe	9				78				13
B3130-09/ White chalky insul. On 12" pipe	40	40							20
B3130-10/ White chalky insul. On 4" pipe	40	10	35						15
B3130-11/ White chalky insul. On 5" pipe	50	25							25
B3130-12/ White chalky insul. On 12" pipe	15	60							25
B3130-13/ Brown paper insul. On 5" pipe	8				80				12
B3130-14/ Brown paper insul. On 3" pipe	5				82				13
B3130-15/ Brown paper insul. On 6" pipe	3				85				12

Chry = Chrysotilo
Amos = Amosite
Croc = Crocidolite

Othr = Other
Cell = Cellulose

MW = Mineral Wool
Ca SO4 = Calcium Sulfate
Fbgl = Fiberglass

UAH

The University of Alabama in Huntsville

Environmental Laboratory
Kenneth E. Johnson Research Center

Huntsville, Alabama 35899
Phone: (205) 895-6391
Fax: (205) 895-6376

Re : Bulk Asbestos Analysis EPA 600/R-931116
AIHA: 023601

Receipt Date: 07-07-97

Sample Date : 07/08/97

Microscopist: Tom Canington

Client: Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Sample/Description	Asbestos Fibers(%) Chry	Amos	Croc	Othr	Non-Asbestos Material (%) Cell	Fbgl	MW	CaSO4	Othr
B3130-16/ Brown paper insul. On 5" pipe	35				33	1			31
B3130-17/ Brown paper insul. On 5" pipe	10				78				12
B3130-18/ Brown paper insul. On 6" pipe	10				77				13
B3130-19/ Brown paper insul. On 4" pipe	10				78				12
B3130-20/ Brown paper insul. On 3" pipe	15				74				11
B3130-21/ Brown paper insul. On 6" pipe	50				30				20
B3130-22/ Brown paper insul. On 3" pipe	20				60				20
B3130-23/ Brown paper insul. On 4" pipe	8				80				12
B3130-24/ Brown paper insul. On 6" pipe	10				75				15
B3130-25/ Brown paper insul. On 8" pipe	50				35				15
B3130-26/ White chalky insul. On 12" pipe	50	12	18						20
B3130-27/ White chalky insul. On 3" pipe	50				10		20		20
B3130-28/ White chalky insul. On 3" pipe	40	20	20						20
B3130-29/ White chalky insul. On 3" pipe	30	25	25						20
B3130-30/ White chalky insul. On 6" pipe	55	25	10						10

Chry = Chrysotilo
Amos = Amosite
Croc = Crocidolite

Othr = Other
Cell = Cellulose

MW = Mineral Wool
Ca SO4 = Calcium Sulfate
Fbgl = Fiberglass

UAH

The University of Alabama in Huntsville

Environmental Laboratory
Kenneth E. Johnson Research
Center

Huntsville, Alabama 35899
Phone: (205) 895-6391
Fax: (205) 895-6376

Re : Bulk Asbestos
Analysis EPA
600/R-931116
AIHA: 023601

Receipt Date: 07-07-97

Sample Date : 07/08/97

Microscopist: Tom Canington

Client: Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Sample/Description	Asbestos Fibers(%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	MW	CaSO4	Othr
33130-31/ White chalky insul. On 6" pipe	60	10							30
33130-32/ White chalky insul. On 3" pipe	55	15	15						15
33130-33/ Brown paper insul. On 3" pipe	15				70				1
33130-34/ Brown paper insul. On 3" pipe	12				77				11
33130-35/ Brown paper insul. On 5" pipe	16				66				18
33130-36/ Brown paper insul. On 3" pipe	18				63				20
33130-37/ Brown paper insul. On 4" pipe	10				80				10
33130-38/ White chalky insul. On 14" pipe	35	20							15
33130-39/ White chalky insul. On 3" pipe	25	25							15
33130-40/ White chalky insul. On 3" pipe	40	20							25
33130-41/ Brown paper insul. On 6" pipe	45				30				25
B3130-42/ Brown paper insul. On 3" pipe	27				53				20
B3130-43/ White chalky insul. On 14" pipe	35	45							20
B3130-44/ White chalky insul. On 4" pipe	19				61				20
B3130-45/ White chalky insul. On floor	20				12				88

Chry = Chrysotilo
Amos = Amosite
Croc = Crocidolite

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Ca SO4 = Calcium Sulfate
Fbgl = Fiberglass

A Space Grant Col loge
An Affirmative Action / Equal Opportunity Institution

UAH

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AIHA: 023601

Receipt Date: 07-07-97

Sample Date : 07/08/97

Microscopist: Tom Canington

Client: Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Sample/Description	Asbestos Fibers(%) Chry	Amos	Croc	Othr	Non-Asbestos Material (%) Cell	Fbgl	MW	CaSO4	Othr
B3130-46/ Brown paper insul. On 6" pipe	80								20
B3130-47/ Brown paper insul. On 3" pipe	20				58				22
B[redacted]8/ Brown paper insul. On 3" pipe	15				65				20
B3130-49/ Brown paper insul. On 4" pipe	16				63				21
B3130-50/ Brown paper insul. On 3" pipe	15				65				20
B3130-51/ Brown paper insul. On 3" pipe	15				68				17
B3130-52/ Brown paper insul. On 3" pipe	20				60				20
B3130-53/ White chalky insul. On 4" pipe	40				15		30		15
B3130-54/ White chalky insul. On 3" pipe	32				50				18
B3130-55/ White chalky insul. On 4" pipe	30				50				20
B3130-56/ Brown paper insul. On 4" pipe	20				65				15
B3130-57/ Brown paper insul. On 3" pipe	24				56				20
B3130-58/ Brown paper insul. On 4" pipe	25				60				15
B3130-59/ Brown paper insul. On 4" pipe	18				60				22

[redacted]y = Chrysotilo
Amos = Amosite
Croc = Crocidolite

Othr = Other
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Ca SO4 = Calcium Sulfate
Fbgl = Fiberglass

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Re : Bulk Asbestos Analysis EPA 600/R-931116
AIHA: 023601

Receipt Date: 07-07-97

Sample Date : 07/08/97

Microscopist: Tom Canington

Client: Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Sample/Description	Asbestos Fibers(%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	MW	CaSO4	Othr
33131-01/White chalky insul. 8" o.d.	55	20							25
33131-02/ White chalky insul. 8" o.d.	40	40							20
33131-03/ White chalky insul. 8" o.d.	60	15							25
33131-04/ Brown paper insul. 3"	18						68		14
33131-05/ Brown paper insul. 3"	23						63		14
33131-06/ Brown paper insul. 3"	6						83		11
B3131-07/ White elbow putty On 8" pipe	65	15							20
B3131-08/ White elbow putty On 3" pipe	25	40	10						25
B3131-09/ Brown paper insul. On 8" pipe	65						19		16
B3131-10/ Brown paper insul. On 3" pipe	12						75		13
B3131-11/ Brown paper insul. On 3" pipe	23						60		17
B3131-12/ White chalky insul. On 4" pipe	45	25	15						15
B3131-13/ White chalky insul. On 4" pipe	35	20	25						20
B3131-14/ Brown paper insul. On 3" pipe	14						70		16
B3131-15/ Brown paper insul. On 2" pipe	15						73		12

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Fbgl = Fiberglass

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AIHA: 023601

Receipt Date: 07-07-97

Sample Date : 07/08/97

Microscopist: Tom Canington

Client: Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Sample/Description	Asbestos Fibers(%) Chry	Amos	Croc	Othr	Non-Asbestos Material (%) Cell	Fbgl	MW	CaSO4	Othr
B3131-16/ Brown paper insul. On 4" pipe	18				65				17
B3131-17/ Brown paper insul. On 4" pipe	48				36	2			16
B3131-18/ Brown paper insul. On 2" pipe	16				72				12
B3131-19/ Brown paper insul. On 3" pipe	15				70				15
B3131-20/ White chalky insul. On ceiling							70		30
B3131-21/ White chalky insul. On 6" pipe	45	10	30						15
B3131-22/ White chalky insul. On 6" pipe	45	35							20
B3131-23/ White chalky insul. On 4" pipe	20	50							12
B3131-24/ Brown paper insul. On 2" pipe	25				60				15
B3131-25/ White chalky insul. On 8" pipe									100
B3131-26/ Brown paper insul. On 2" pipe	20				65				15
B3131-27/ White chalky insul. On 6" pipe	40	25	5						30
B3131-28/ White chalky insul. On 8" pipe	60		20						20
B3131-29/ Brown paper insul. On 3" pipe	7				82				11
B3131-30/ Brown paper insul. On 3" pipe	58				25				17

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Re : Bulk Asbestos Analysis EPA 600/R-931116
AIHA: 023601

Receipt Date: 07-07-97

Sample Date : 07/08/97

Microscopist: Tom Canington

Client: Reisz Engineering
Building 32 Suite A2
3322 Memorial Parkway South
Huntsville, AL 35801

Sample/Description	Asbestos Fibers(%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	MW	CaSO4	Othr
B3131-31/ Brown paper insul. On 3" pipe	58				29				13
B3131-32/ Brown paper insul. On 3" pipe	13				75				12
B3131-33/ Brown paper insul. On 3" pipe	25				60				15
B3131-34/ Brown paper insul. On 3" pipe	26				59				15
B3131-35/ Brown paper insul. On 3" pipe	70				15				20
B3131-36/ Brown paper insul. On 4" pipe	60				20				20
B3131-37/ Brown paper insul. On 4" pipe	62				18				20

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Cell = Cellulose

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Ca SO4 = Calcium Sulfate
Fbgl = Fiberglass

APPENDIX B

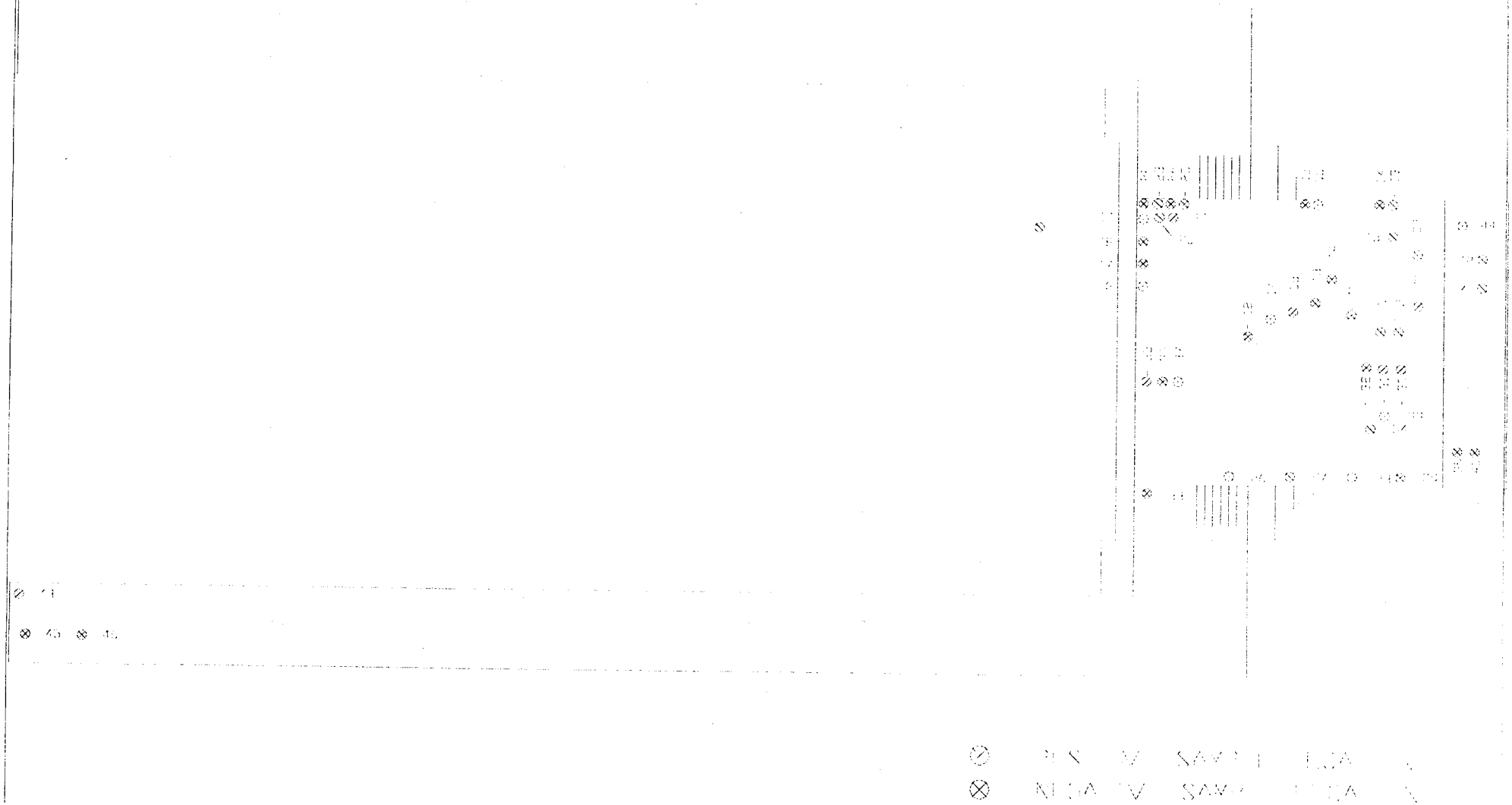
ASBESTOS CONTAINING MATERIALS

SUMMARY TABLE
ASBESTOS CONTAINING MATERIALS
ENLISTED BARRACKS
BUILDINGS 3130 & 3131
FORT McCLELLAN, ALABAMA

SAMPLE #(s)	Description of Material	General Location Of Material	Quantity (approx.)
Multiple samples	White chalky pipe insulation	Throughout both buildings	795 linear ft. B3130 557 linear ft. B3131
B3130-53 B3131-07,08	White chalky pipe fitting insulation	On a few 3 in. and 8 in. pipes	6 fittings B3130 6 fittings B3131
Multiple samples	Brown paper-like pipe insulation	Throughout both buildings	1708 linear ft. B3130 1099 linear ft. B3131
PACM	12x12 inch floor tile and mastic	Throughout majority of both buildings	65,000 sq.ft. B3130 60,000 sq.ft. B3131
PACM	9x9 inch floor tile and mastic	Various locations in both buildings	80 sq. ft. B3130 5000 sq. ft. B3131

APPENDIX C

SAMPLE LOCATIONS PLANS

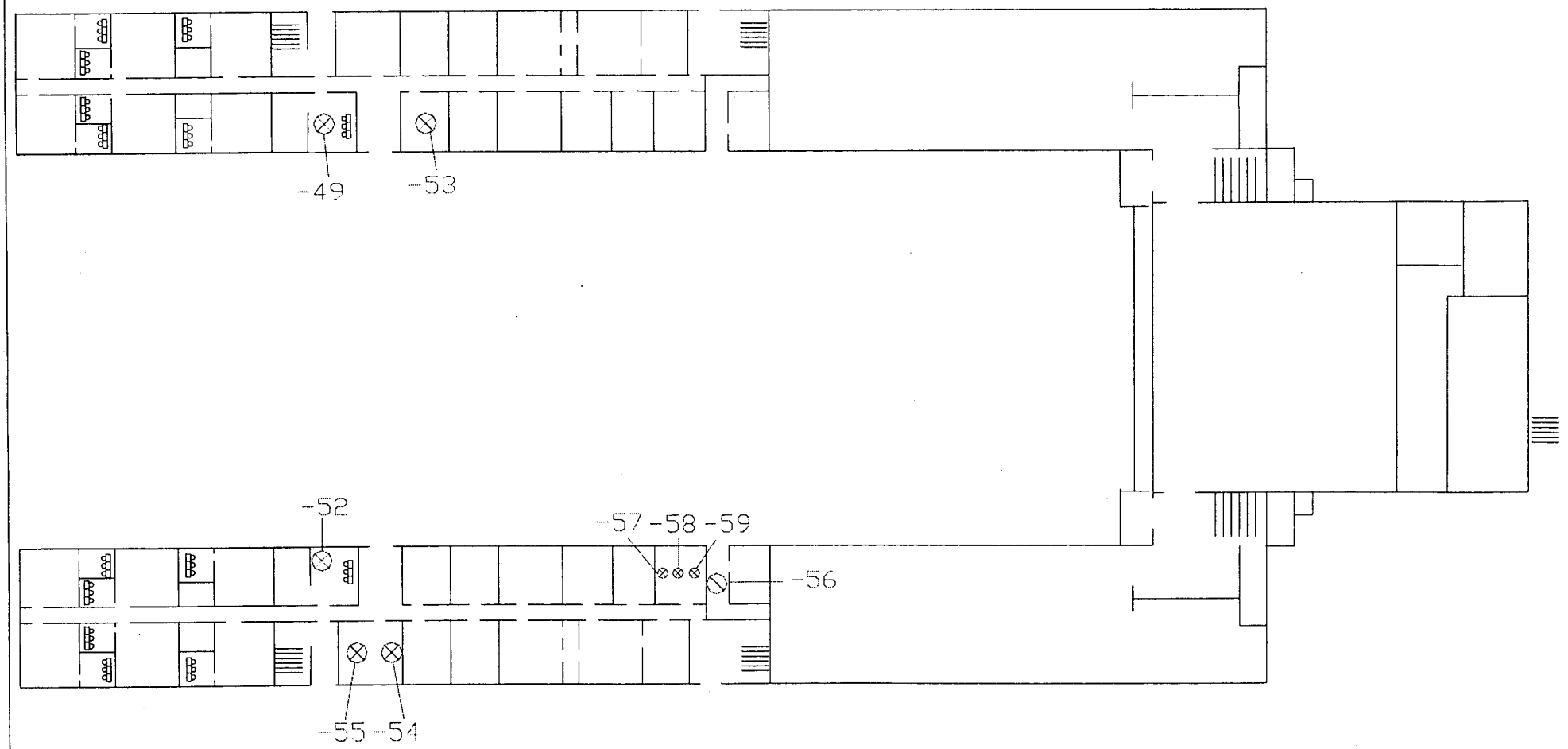


BUIL[illegible]G 3130

FIG 1 Basement

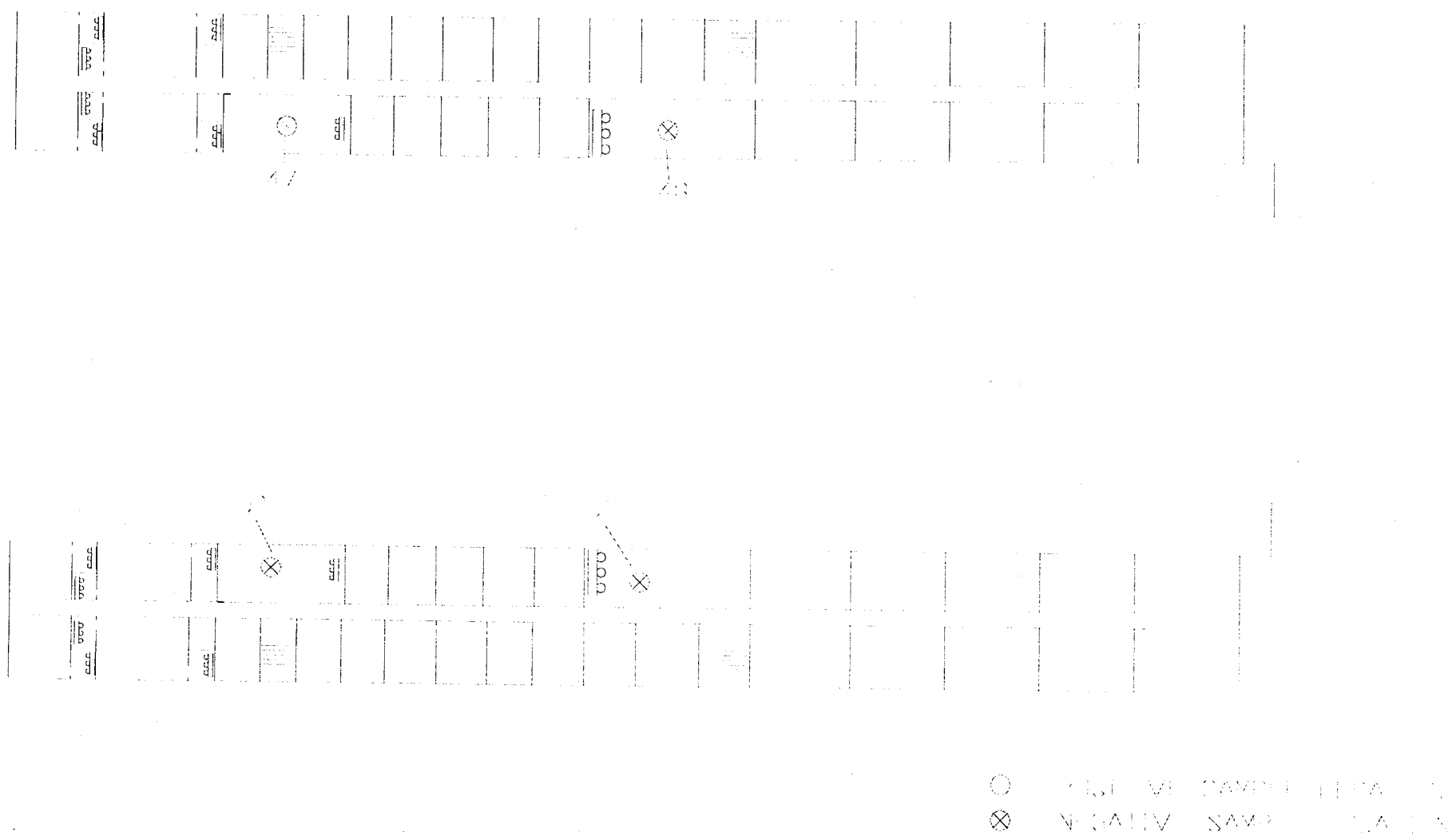
ASBESTOS SURVEY
DABT[illegible]96 D-0005
FM/[illegible]

REISZ ENGINEERING



⊗ - POSITIVE SAMPLE LOCATION
⊗ - NEGATIVE SAMPLE LOCATION

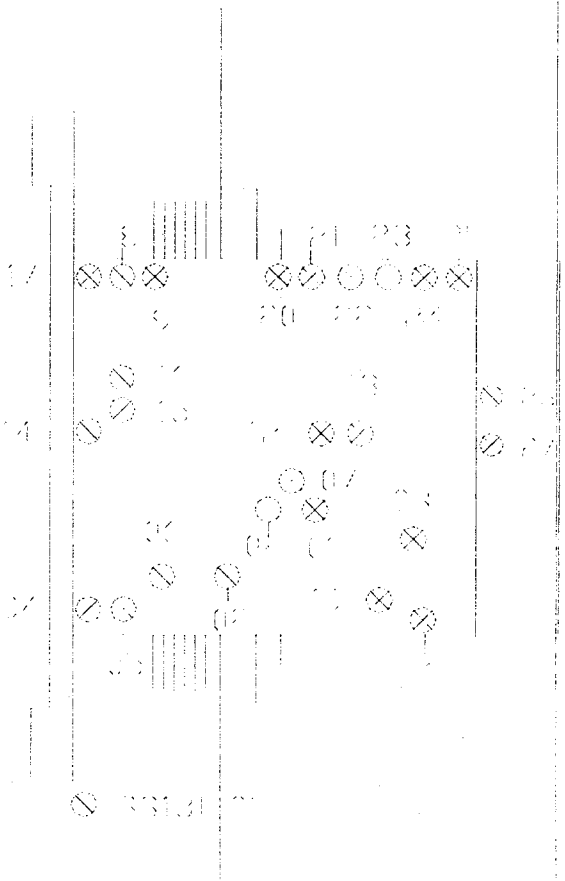
BUILDING: 3130	FIG. 2 First Floor	ASBESTOS SURVEY DABT02-96-D-0005	REIS ENGINEERING



BUILD[illegible] 3130	FIG. 3 Second Floor	ASBESTOS SURVEY DABT02[illegible]-D-0005 FM705[illegible]	REISZ ENGINEERI[illegible]G

⊘ TOTAL SAMPLES TAKEN
⊘ NEGATIVE SAMPLES TAKEN

BUILDING 3130	FIG. 4 Third Floor	ASBESTOS SURVEY BAB102 96 B-0005 EM/DS	**REISZ ENGINEERING**

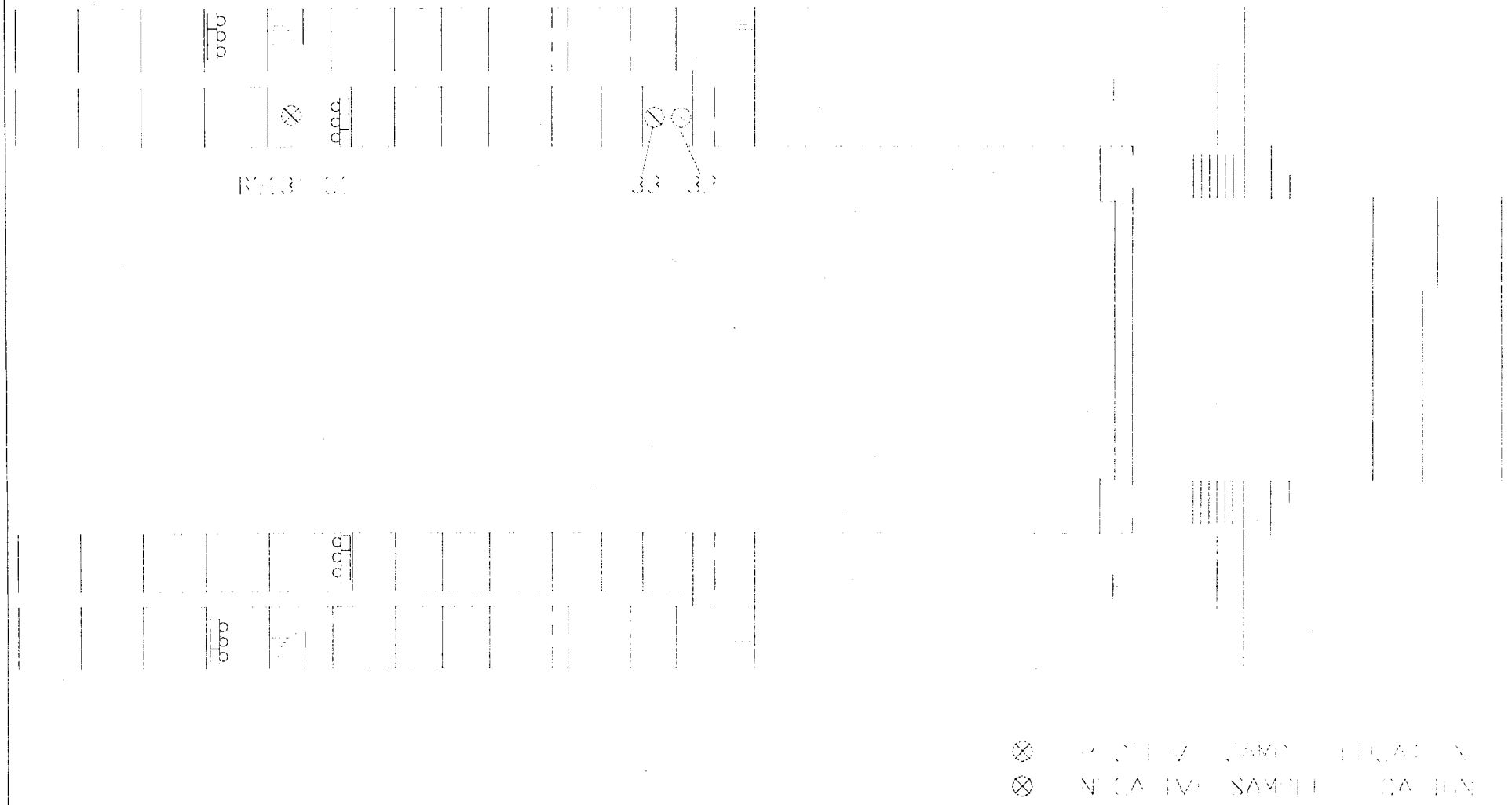


BUI[redacted] 3131

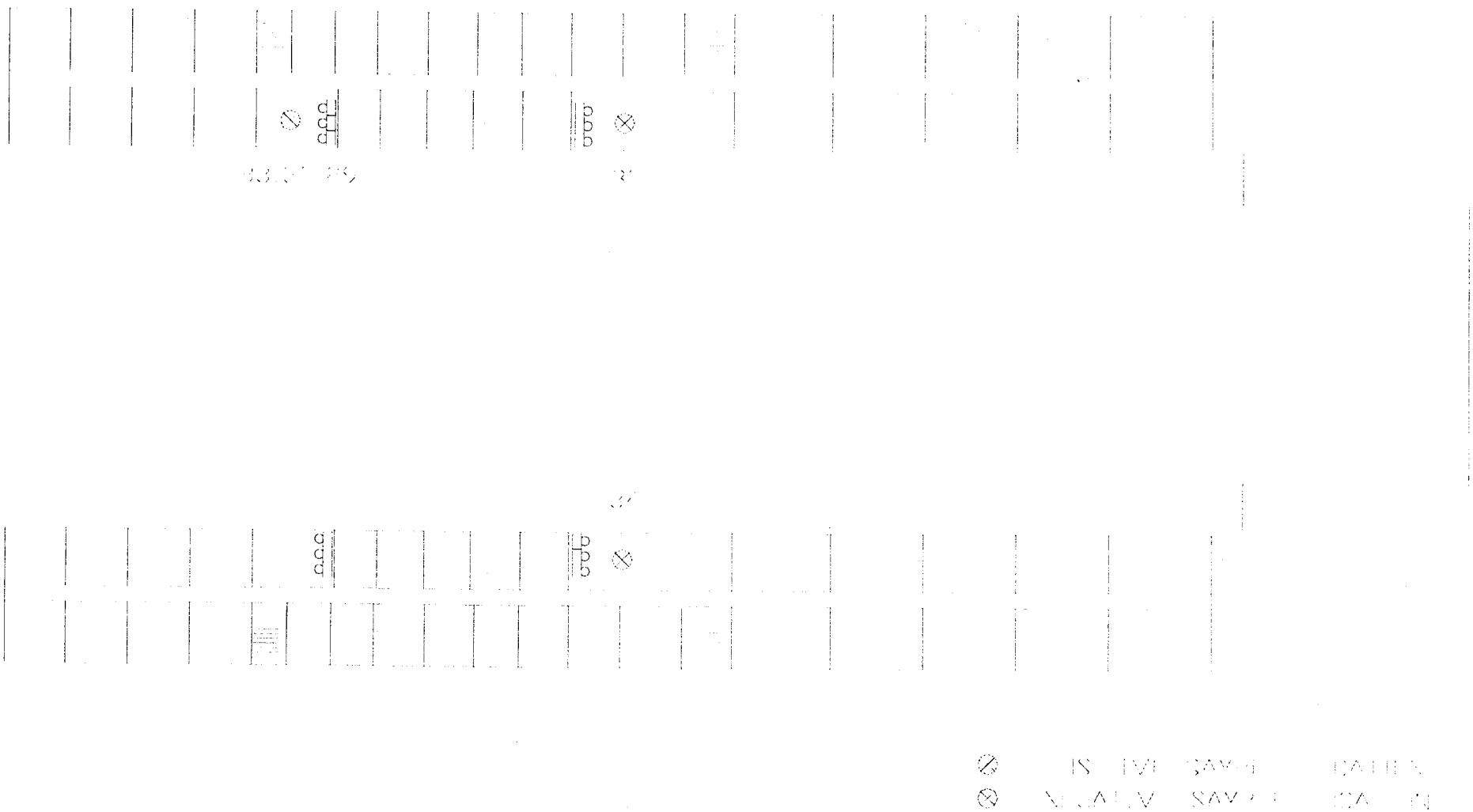
FIG. 1 Basement

ASB[redacted]S SURVEY
DAB[redacted]06 D 0005
FMZ05

REISZ ENGINEE[redacted]G



BUILDING 3131	FIG. 2 First Floor	ASBESTOS SURVEY DAB102-96-D-0005 FM705	**REISZ ENGINEERING**

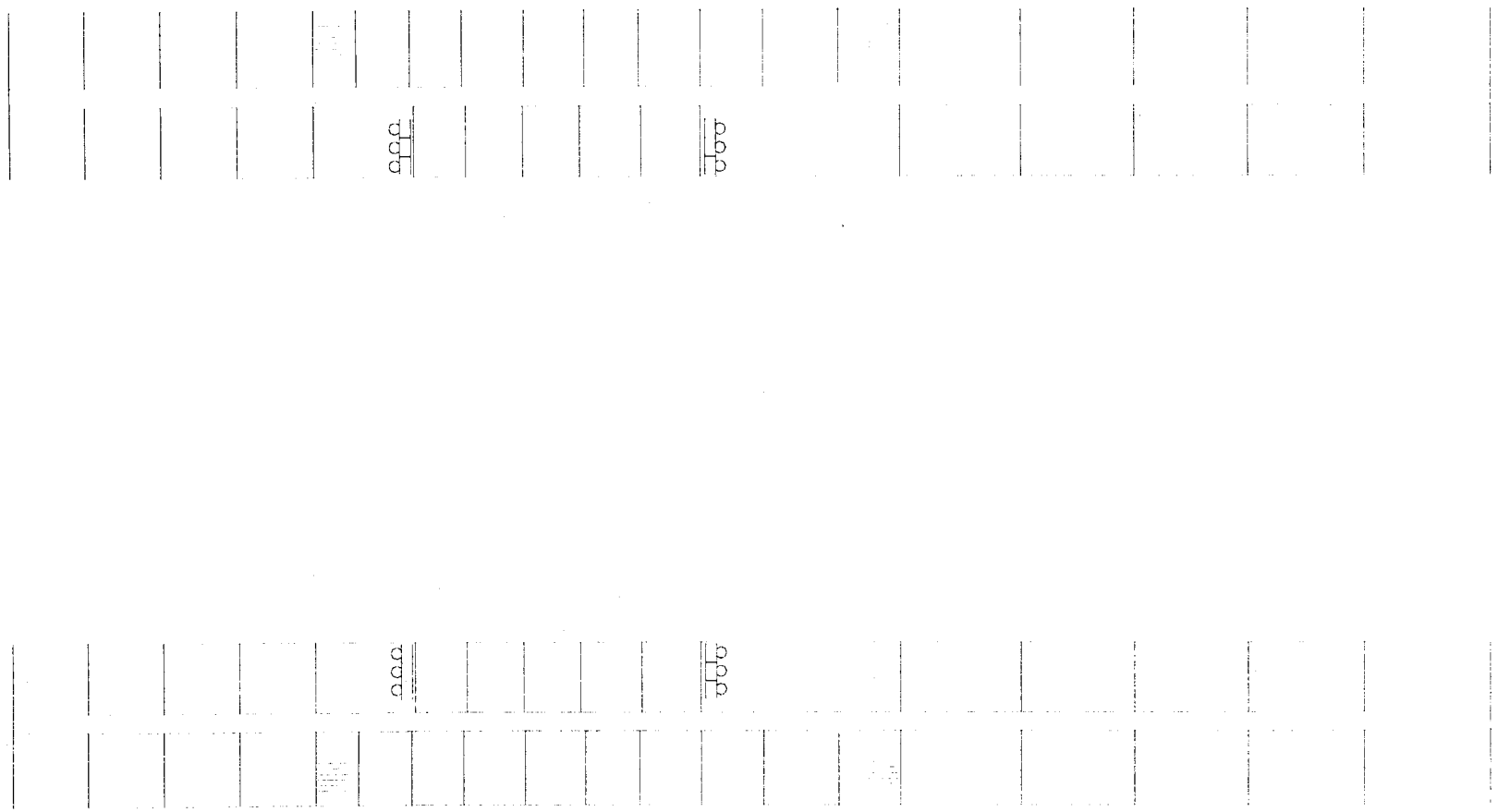


BUILD 3131

FIG. 3 Second Floor

ASBESTOS SURVEY
DAB102 D 0005
FM/05

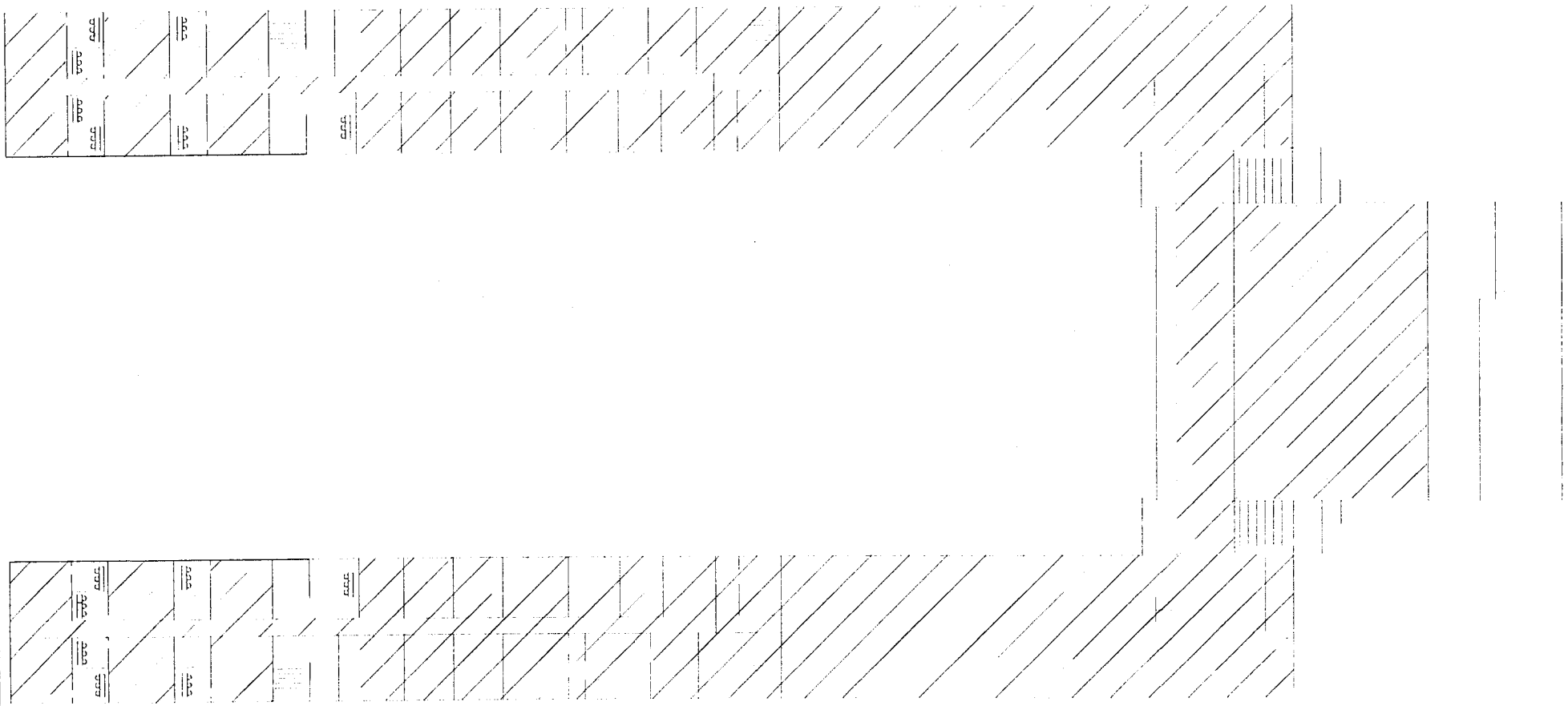
REISZ ENGINEERING



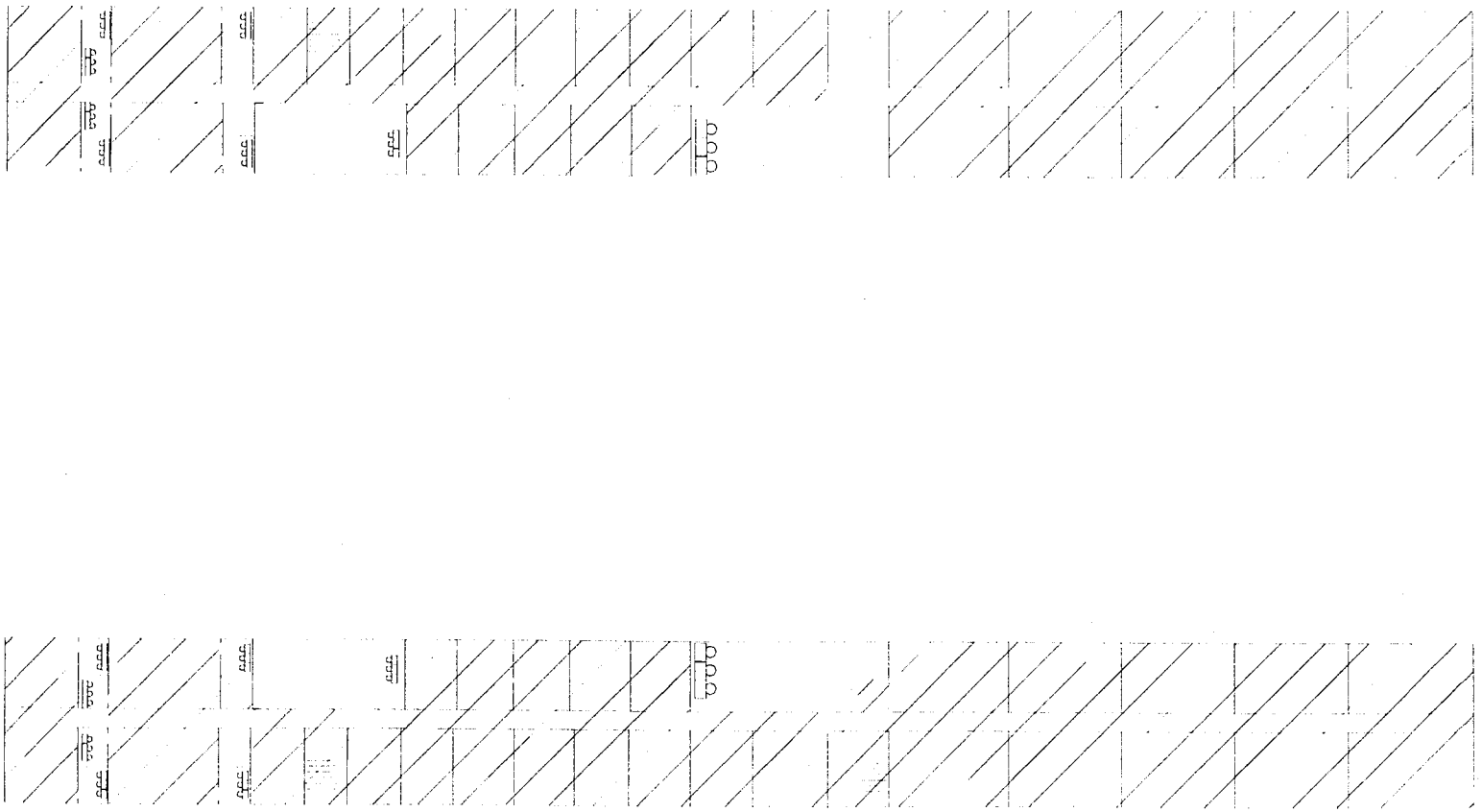
BUILDING 3131	FIG. 4 Third Floor	ASBESTOS SURVEY DAB102 96-D-0005 EM705	REISZ ENGINEERING

APPENDIX D

SELECTED ACM LOCATION PLANS



BUILDING 3130 | FIG. 2 First Floor | ASBESTOS SURVEY DAB102-96-D-0005 FM705 | **REISZ ENGINEERING**

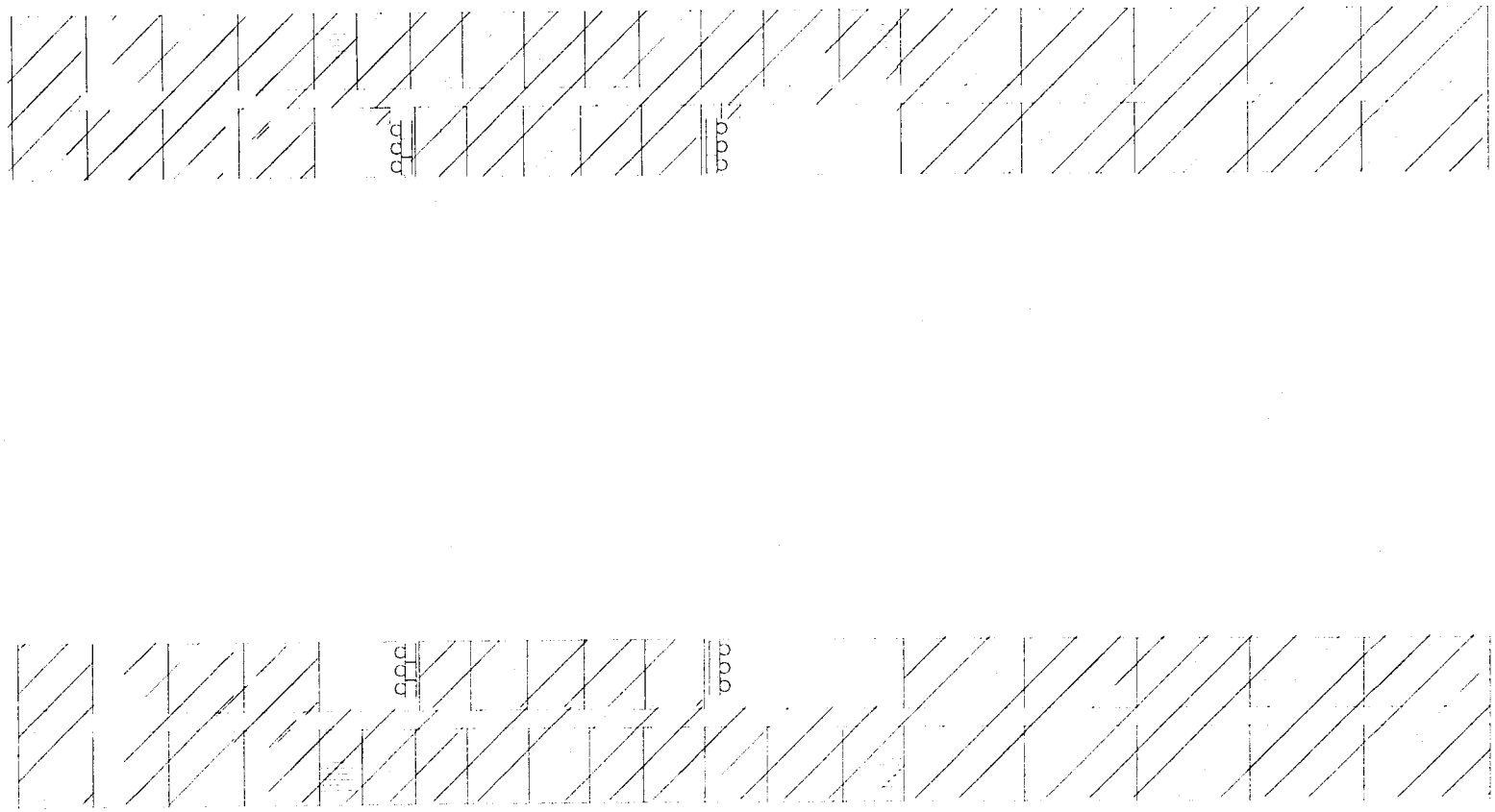


BUILD[redacted]3130

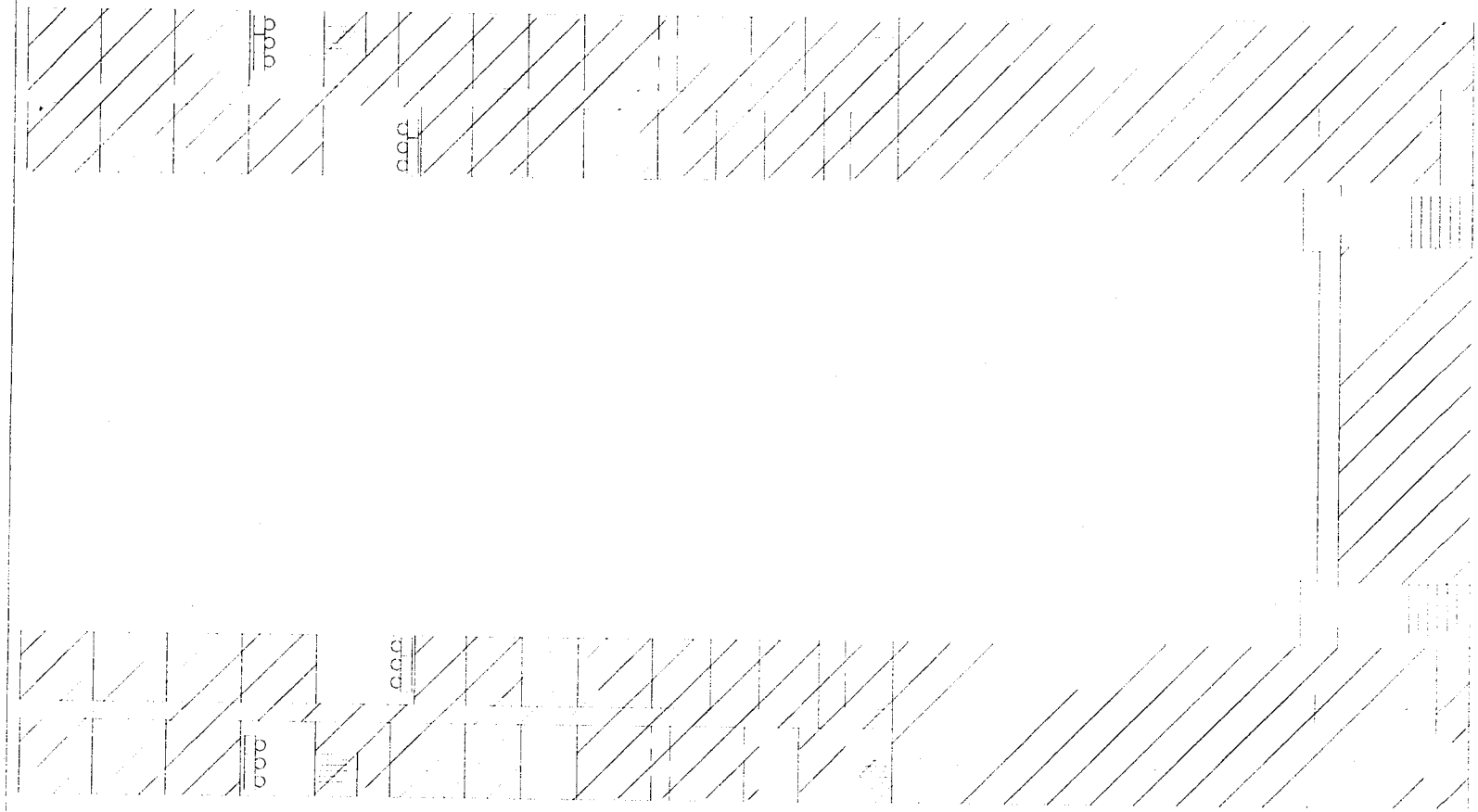
FIG. 3 Second Floor

ASBESTOS SURVEY
DAB[redacted]0005
FM705

REISZ ENGINEERIN[redacted]



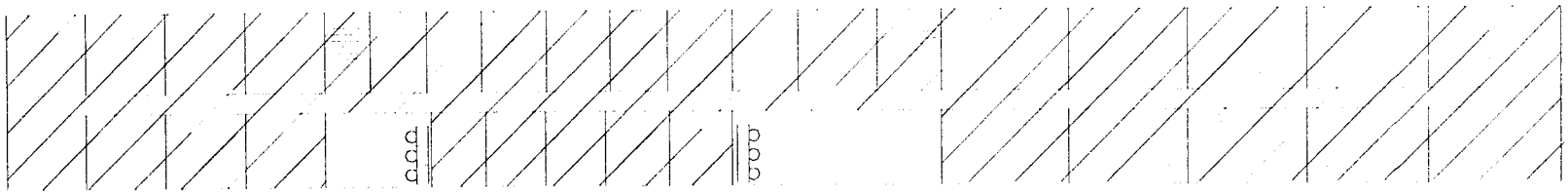
BUILDING 3130	FIG. 4 Third Floor	ASBESTOS SURVEY DAB102-96-D-0005 FM705	**REISZ ENGINEERING**

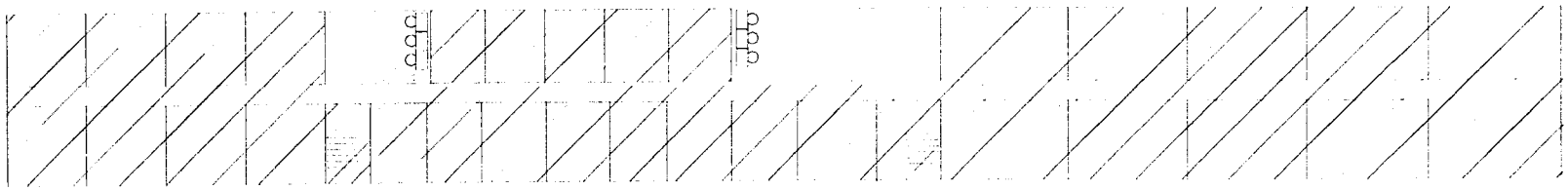


BUILDING 3131

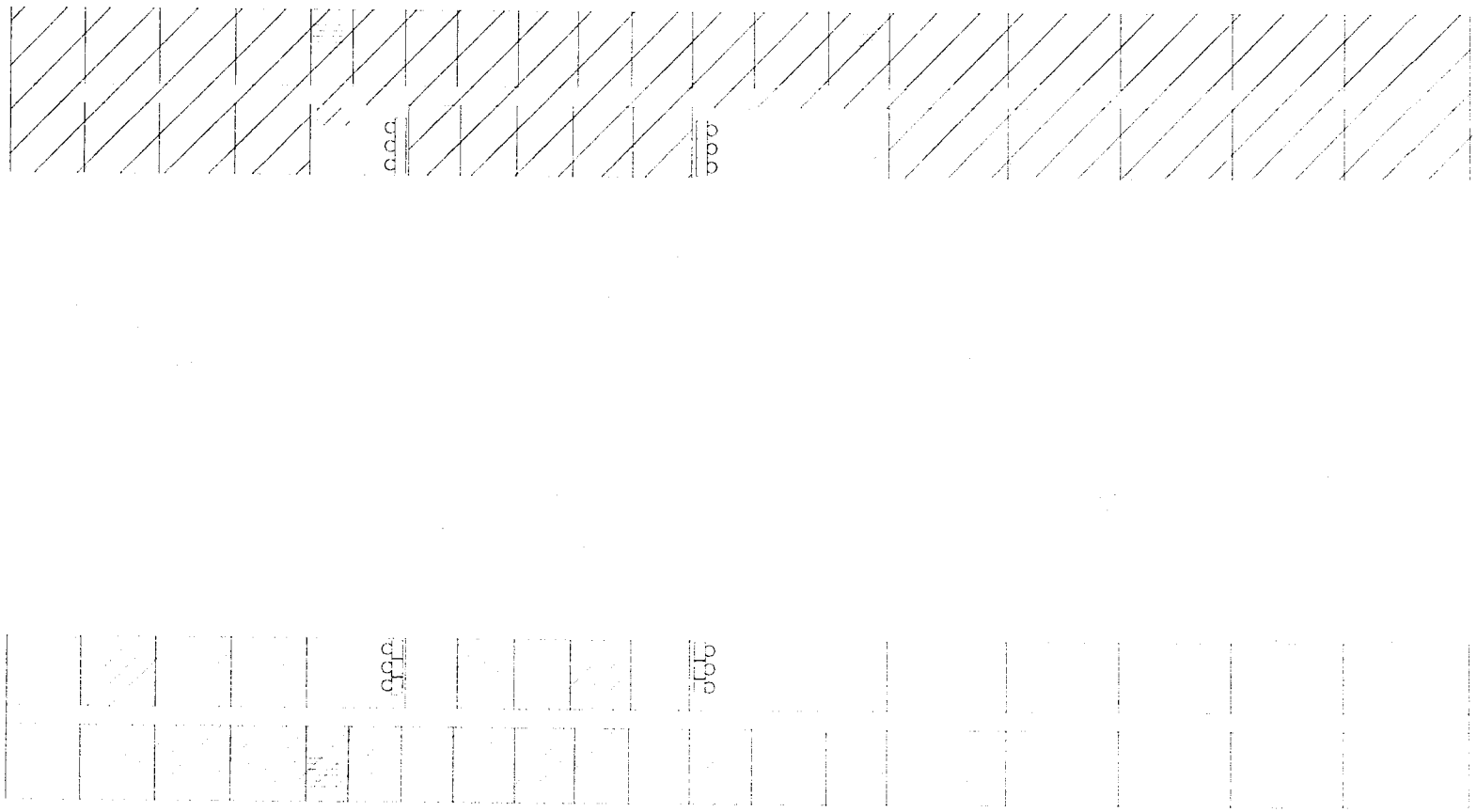
ASBESTOS SURVEY

REISZ ENGINEERING





BUILDING 3131 | FIG. 3 Second Floor | ASBESTOS SURVEY DAB102 96 D 0005 FM705 | **REISZ ENGINEERING**

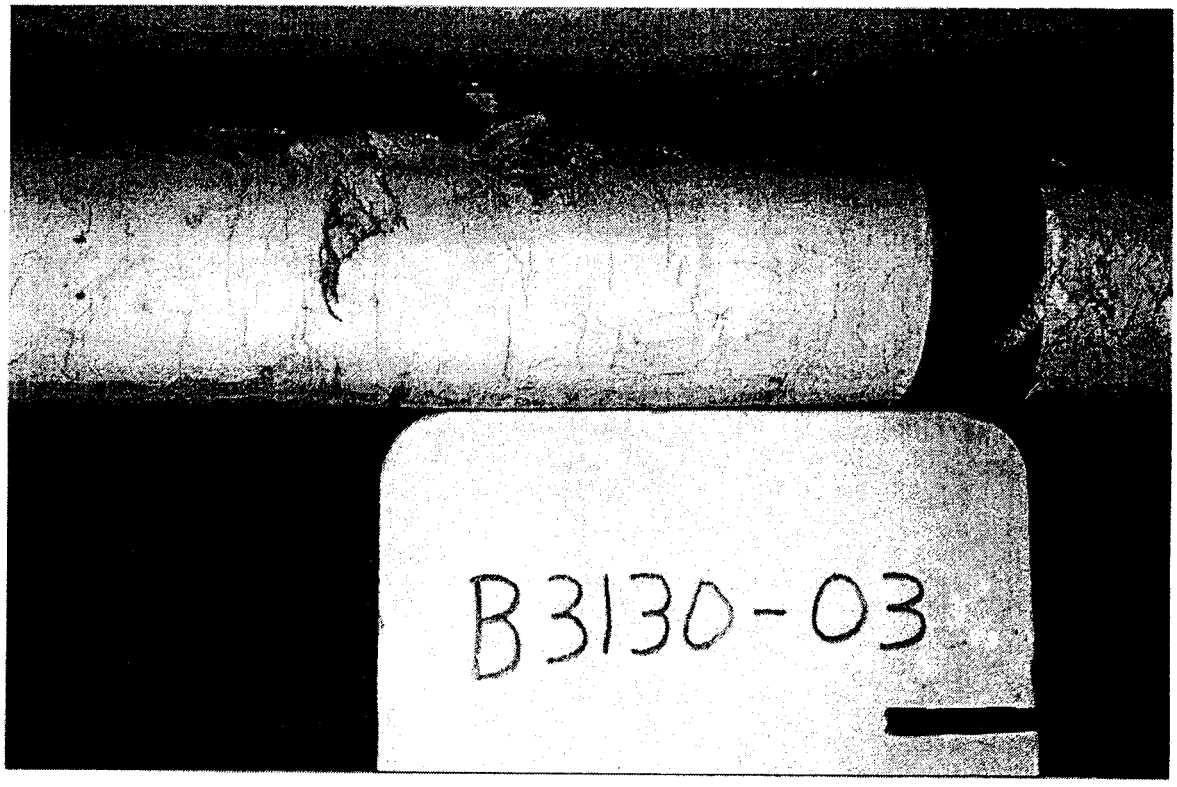


BUI[redacted] 3131 | FIG. 4 Third Floor | ASBESTOS SURVEY DAB[redacted] D 0005 FM[redacted] | REISZ ENGINEER[redacted]G

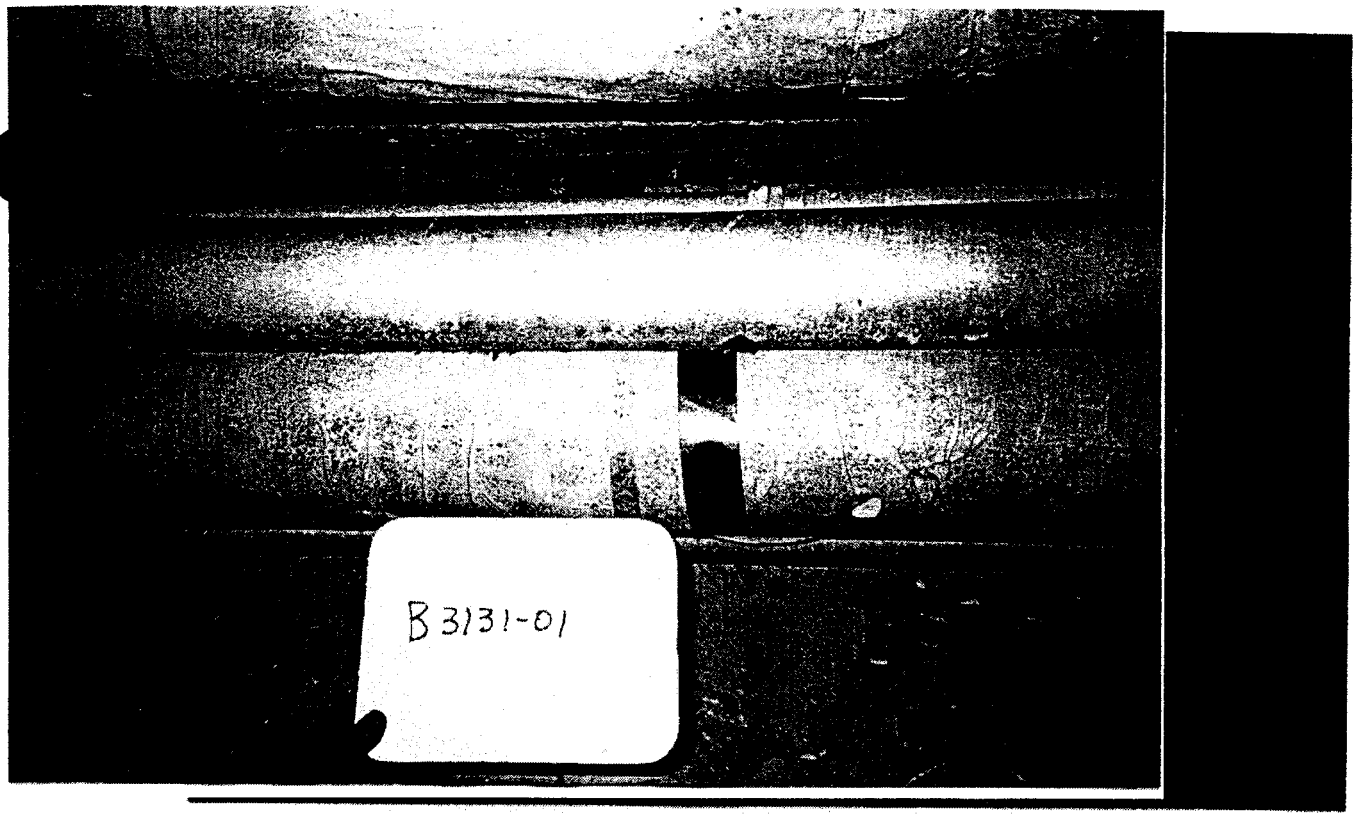
APPENDIX E

SELECTED ACM PHOTOGRAPHS

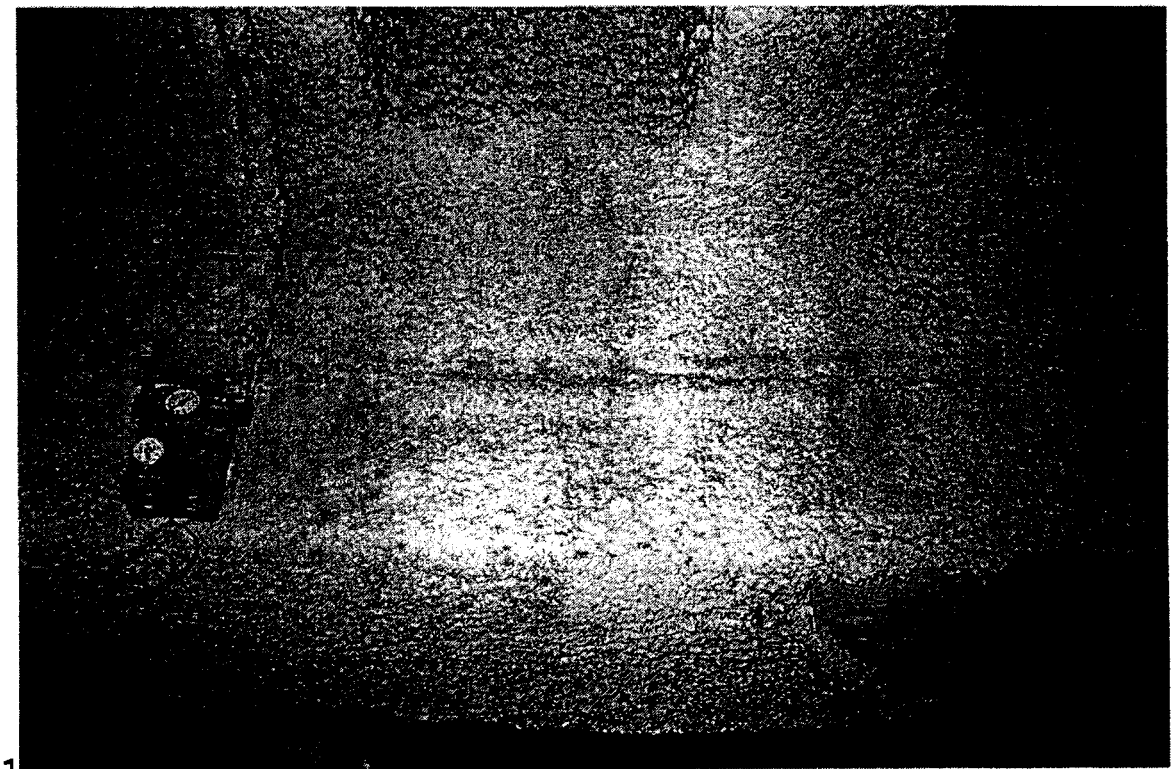
B3130-03: Typical cementious sbestos pipe insulation.



B3130-16,17,18: Typical air-cell type asbestos pipe insulation.

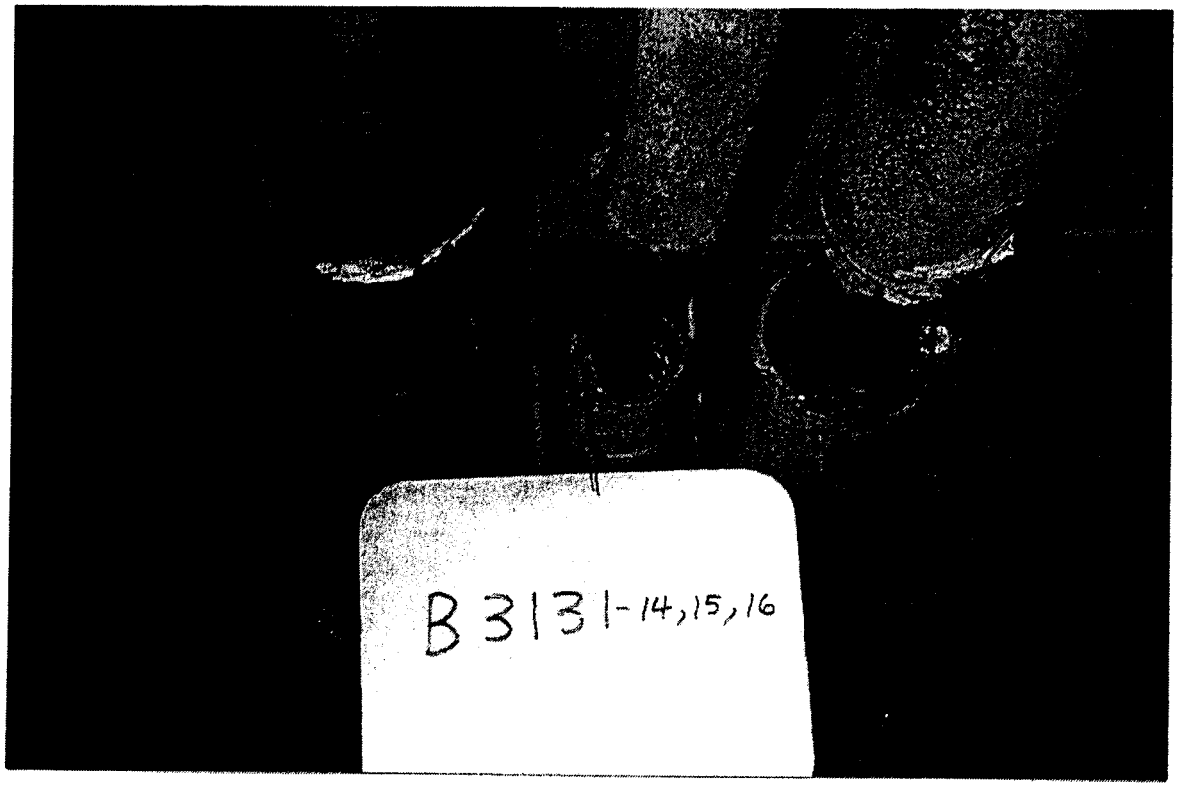


B3131-07,08: Typical cementitious asbestos pipe fitting **Insulation. B3131**



B31[illegible] Non asbestos containing spray on. Mech. Room B3131

B3131-01: Typical cementitious asbestos pipe insulation. B3131



B3131-14,15,16: Typical air-cell type asbestos pipe insulation. B3131

BUILDING 3139

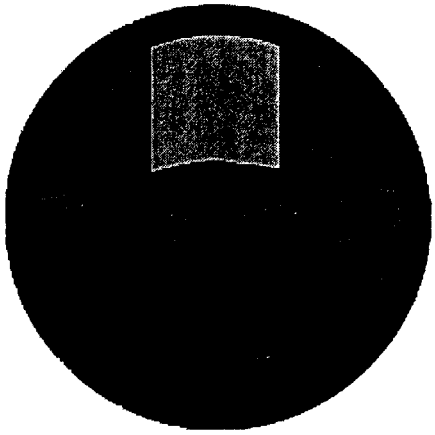
ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
VEHICLE MAINTENANCE SHOPS
BUILDINGS 3138 & 3139

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Fort McClellan



Staying Beautiful

Conducted and Prepared by:

REISZ ENGINEERING
P.O. BOX 1349
HUNTSVILLE, ALABAMA 35807

BUILDING 3139

ACM SURVEY REPORT

ASBESTOS CONTAINING BUILDING MATERIALS SURVEY
VEHICLE MAINTANENCE SHOPS
BUILDINGS 3138 & 3139

FORT McCLELLAN, ALABAMA

U.S. ARMY CONTRACT NO. DABT02-96-D-0005
DELIVERY ORDER 0005

Prepared For:

DIRECTORATE OF ENVIRONMENT
FORT McCLELLAN

APPROVED FOR TRANSMITTAL BY
JAMES R. WRIGHT

Conducted and Prepared by:

REISZ ENGINEERING

June, 1998

TABLE OF CONTENTS

1.0	PURPOSE AND SCOPE OF SERVICES	1
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APPENDICES

APPENDIX A - REPORT OF LABORATORY ANALYSIS
APPENDIX B - SUMMARY TABLE OF ACM
APPENDIX C - SAMPLE LOCATIONS PLANS
APPENDIX D - SELECTED ACM LOCATIONS PLANS
APPENDIX E - SELECTED ACM PHOTOGRAPHS (None)

1.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this survey was to locate and identify asbestos containing building materials at Buildings 3138 & 3139 located at Fort McClellan, Alabama. Pursuant to the Contract, REISZ Engineering was required to provide the survey in accordance with AHERA (40 CFR Part 763 Subpart E) protocol. AHERA is applicable to interior building products installed prior to October 12, 1988. AHERA does not apply to the exterior of buildings and does not apply to non-building materials (e.g. cabinetry, special equipment and chalkboards). REISZ Engineering has included as part of the survey those readily accessible, suspect friable interior non-building materials (e.g. vibration dampers); but has not included certain items (e. g. interior linings of equipment and special supplies, some non-friable materials such as transite, etc.). Exterior building materials were not sampled as part of this contract unless those materials were suspected to be of friable nature and continuous with indoor materials (e.g. piping insulation). Specifically, REISZ Engineering was contracted to provide the following services:

1. Identify and collect samples of accessible suspect friable building materials within the referenced project area.
2. Perform a visual inspection to provide information on material condition, material quantities, material locations, and building use.
3. Analysis of all bulk samples for asbestos content utilizing Polarized Light Microscopy and Dispersion Staining Techniques performed in accordance with EPA Bulk Analysis Method

   EPA 600/M4-82-020.
4. Make recommendations as to response actions pertaining to those materials identified as asbestos containing.
5. Compilation of a final report (contained herein) which details all sample results, identifies

sample locations, and provides recommendations based upon the results.

6. Preparation of a Building specific Operations & Maintenance (O&M) Plan for buildings containing friable asbestos materials.

2.0 REGULATORY STANDARDS

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) requires the Owner or Operator of a facility to determine the presence or non-presence of asbestos containing materials prior to conducting renovation or demolition activities. The NESHAP Standard for asbestos (40CFR Part 61 Sub-part M) requires the use of engineered control procedures for removal of asbestos materials that are or will become friable during renovation or demolition. The removal must occur before renovation or demolition activities impact those materials.

On October 11, 1994 an OSHA promulgated regulation (29 CFR Part 1926.1101) became effective. This Standard is related to asbestos exposure in construction, renovation and building maintenance work places. Building owners are required, pursuant to the Standard, to notify employees, tenants and prospective employers (contractors) of the presence, location and quantities of ACM in the building. Implementation of the "communication of hazards" provisions in the Standard were originally to be not later than April 10, 1995 but was extended to July 10, 1995 and is now in effect. The OSHA Standard does not apply to work performed by employees of State agencies in states without state run OSHA programs (e.g. Alabama).

In October 1986, the Asbestos Hazard Emergency Response Act (AHERA) was signed into law. Included in this act are provisions directing E.P.A. to establish rules and regulations (40CFR Part 763) addressing asbestos-containing materials in schools. Specifically, the E.P.A. was directed to address the issues of: 1) identifying, 2) evaluating, and 3) controlling asbestos

containing materials (ACM) in schools. AHERA requires schools to perform building inspections and to prepare management plans for ACM control. Although the AHERA regulation does not specifically apply to this project it is generally accepted as the industry standard and was cited by Fort McClellan in the Asbestos Survey Request as the basis of survey methodology. The AHERA inspections must be conducted using specific guidelines that include a minimum number of samples per material type. This survey was conducted in accordance with those guidelines per the Contract requirements.

On November 28, 1992 a law became effective which extended the EPA's Model Accreditation Plan to all public and commercial buildings. Currently the rule extends the accreditation requirements of persons performing asbestos work (inspectors, project designers, abatement supervisors, and workers) in public and commercial buildings, but does not extend the other aspects of AHERA. This project was conducted utilizing EPA accredited personnel.

3.0 PROJECT CHARACTERISTICS

During the month of June 1997, Reisz Engineering accredited Asbestos Inspectors performed inspections of Buildings 3138 & 3139 for the purpose of identifying building materials suspected to contain asbestos. Both buildings are identical single story structures used as vehicle maintenance shops and contain approximately 5,300 sq. ft. of floor space each. Based on information provided by Fort McClellan representatives the buildings were originally constructed in 1953. Various renovations may have taken place since the building was originally constructed but no building plans have been found which can be used to verify specific dates and activities. The dominant flooring condition existing in both buildings is bare concrete. Building 3138 has a small section of suspect 12x12 floor tile in the office areas.

4.0 SURVEY METHODOLOGY

The buildings were visually inspected for the presence of material suspected to contain asbestos. Those suspect materials were identified, bulk samples were obtained and placed into individual vials for transportation to the University of Alabama in Huntsville. General areas for sample locations were selected on a random basis with a preference for exact positioning at existing damage. Each sample location is represented by a number on the plans in Appendix C. Those numbers directly correspond with the numbers listed elsewhere in this report.

If any additional suspect materials are identified during renovation or demolition they should be analyzed for asbestos content. Materials visibly identifiable as non-asbestos (fiberglass, foam rubber, wood, etc.) were not sampled. Materials installed after October 12, 1988 (as reported by Fort McClellan staff) were not sampled.

Hazard Assessment Factors

Each time suspect ACM was sampled, it was classified as either a friable or a non-friable material. Friable material may be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACM is more hazardous than non-friable ACM because friable material can release airborne asbestos fibers more easily. In assessing the fiber release potential, the current condition of all ACM identified was noted. Evidence of deterioration, physical damage, water damage, erosion of ACM due to its' proximity to an air plenum, high vibration, or contact potential was also noted.

5.0 LABORATORY ANALYSIS METHODOLOGY

All bulk samples were analyzed at UAH by polarized light microscopy utilizing dispersion staining or Becke line techniques, in accordance with the EPA's "Interim Method for Determination of Asbestos in Bulk Insulation Samples" (EPA 6OO/m4-82-020). Quality control samples were taken as duplicates at a rate of 1 to 10 and were sent to a second accredited laboratory. This type of analysis requires the microscopist to take a portion of the bulk sample and treat it with an oil of specific refractive index. This prepared slide is then subjected to a variety of optical tests.

Each type of asbestos displays unique characteristics when subjected to these tests. Percentages of the identified types of asbestos are determined by visual estimation. Even though this is an estimation, any material that contains greater than one percent of any type of fibrous asbestos is considered ACM and must be handled according to OSHA and EPA regulations if disturbed during maintenance, renovation, demolition or removal.

The UAH laboratory participates in the American Industrial Hygiene Association (AIHA) quality assurance program for polarized light microscopy and is accredited by the AIHA through their voluntary program.

6.0 SUSPECT MATERIALS

The following is a general list of building materials that were suspected to contain asbestos in Buildings 3138 & 3139. A complete and more detailed description of these substances can be found in Appendix B.

Surfacing

- None

Thermal System Insulation

- White cementitious TSI on pipe fittings in both buildings
- White cementitious TSI on various piping straight runs in Building 3138

Miscellaneous Material

- 12x12 inch floor tile in Building 3138
- Mastic associated with 12x12 floor tile

7.0 ASBESTOS INSPECTION AND SAMPLING RESULTS

A total of 8 bulk sample was collected and analyzed. Details of all laboratory results can be found in Appendix A. A listing of all suspect materials, their corresponding sample numbers, general location, and approximate quantity are indicated in Appendix B. A narrative description of all "Friable Asbestos Containing Material" and "Non-Friable ACM" identified during the survey, is given below.

FRIABLE ACM

Laboratory analysis determined asbestos is present in two types of friable materials: 1) a white cementitious TSI on pipe fittings, and 2) white cementitious piping straight run insulation.

1) A friable, white, cementitious asbestos containing insulation is found on pipe fittings located throughout both buildings. This material was found to be in generally Fair condition.

2) A friable, white, cementitious asbestos containing insulation is found on straight runs of various pipes in Building 3138. All straight run insulation in B3139 is fiberglass.

NON FRIABLE ACM

Laboratory analysis determined the presence of one type of non-friable asbestos containing material: 1) mastics associated with 12x12 floor tile.

1) Black, non-friable, asbestos containing mastics are found under 12x12 floor tiles in B3138. B3139 has no floor tile.

INACCESSIBLE MATERIAI,

Insulation and spray-on compounds associated with inaccessible crawl-space and tunnel areas may should be assumed as "like" materials corresponding to materials sampled within the building.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Some of the materials identified within this report are damaged. The asbestos containing materials are subject to routine maintenance activities that could involve significant disturbance.

Those materials include the pipe fitting and straight-run insulation located within both buildings. Based upon the aforementioned conditions, abatement of asbestos containing materials within this building should be considered. Proper management of the material in-place may be acceptable assuming the proper precautions are taken to eliminate exposure of personnel to any airborne asbestos. Reisz Engineering has written a Building Operations & Maintenance Plan for Buildings 3138 and 3139 and we suggest that recommendations included in this plan be followed.

9.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions and recommendations expressed in this report are based only on conditions that were observed during the inspections of Buildings 3138 and 3139 during June, 1997. Reisz Engineering and this report make no representation or assumptions as to past conditions or future occurrences.

Our inspection was generally non-destructive in nature. Any conditions or materials that were not visible on the surface were not inspected and may differ from those observed. It was not within the scope of this investigation to remove surface materials to investigate portions of the structure or materials that may lie beneath the surface. Our selection of sample locations and frequency is based upon our observations and the assumption that all materials in the same area are homogeneous.

This report is designed to aid the building owner, architect, construction manager, general contractors, and potential asbestos abatement contractors in locating ACM. Under no circumstances is this report to be utilized as a bidding document or as a project specification document.

APPENDIX A

REPORT OF LABORATORY ANALYSIS FOR ASBESTOS

UAH

The University of Alabama in Huntsville

Environmental Laboratory
Kenneth E. Johnson Research Center

Huntsville, Alabama 35899
Phone: (205) 890-6391
Fax: (205) 890-6376

Re : Bulk Asbestos Analysis EPA 600/R-93/116
AIHA: 023601

Receipt Date: 06/20/97

Sample Date : 06/19/97

Client: Reisz Engineering
Building 32 Suite, A2
3322 Memorial Parkway South
Huntsville, AL 35801

Microscopist: Tom Canington

Sample/Description	Asbestos Fibers (%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	MW	CaSO4	Othr
B3138-04/ pipe TSI run white powder	35				55	5			55
B3138-05/ 12 X 12 [illegible]oor tile (gray)					5				95
[illegible]-06/ mastic on back gray tile	1				15				84
B3138-07/ 12 X 12 black floor tile									100
B3138-08/ mastic back of black floor tile	10				10				80

[illegible] = Chrysotile
[illegible] = Amosite
Croc = Crocidolite

Othr = Other
Cell = Cellulose

MW = Mineral Wool
Ca **S04=** Calcium Sulfate
Fbgl = Fiberglass

A Space Grant College
An Affirmative Action / Equal Opportunity Institution

UAH

Environmental Laboratory
Kenneth E. Johnson Research Center

The University of Alabama in Huntsville
Huntsville, Alabama 35899
Phone: (205) 890-6391
Fax: (205) 890-6376

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Client: Reisz Engineering
Building 32 Suite, A2
3322 Memorial Parkway South
Huntsville, AL 35801

Sample/Description	Asbestos Fibers (%)				Non-Asbestos Material (%)				
	Chry	Amos	Croc	Othr	Cell	Fbgl	MW	CaSO4	Othr
B3139-01/ pipe TSI elbow white powder	20				50				30
B3139-02/ pipe TSI joint white powder	25				50				25
B3139-03/ pipe TSI joint white powder	20				60				20

Chry = Chrysotile
Amos = Amosite
Croc = Crocidolite

Othr = Other
Cell = Cellulose

MW = Mineral Wool
Ca **SO4=** Calcium Sulfate
Fbgl = Fiberglass

APPENDIX B

ASBESTOS CONTAINING MATERIALS

SUMMARY TABLE
ASBESTOS CONTAINING MATERIALS
VEHICLE MAINTENANCE SHOPS
BUILDINGS 3138 & 3139
FORT McCLELLAN, ALABAMA

SAMPLE #(s)	Description of Material	General Location Of Material	Quantity (approx.)
B3138-04	White piping insulation	Throughout B3138	230 linear ft.
B3138-06,08	Mastic	Under 12x12 floor tile B3138	975 sq. ft.
B3139-01,02,03	Cementitious pipe fitting TSI	Throughout both Buildings	120 fittings

APPENDIX C

SAMPLE LOCATIONS PLANS

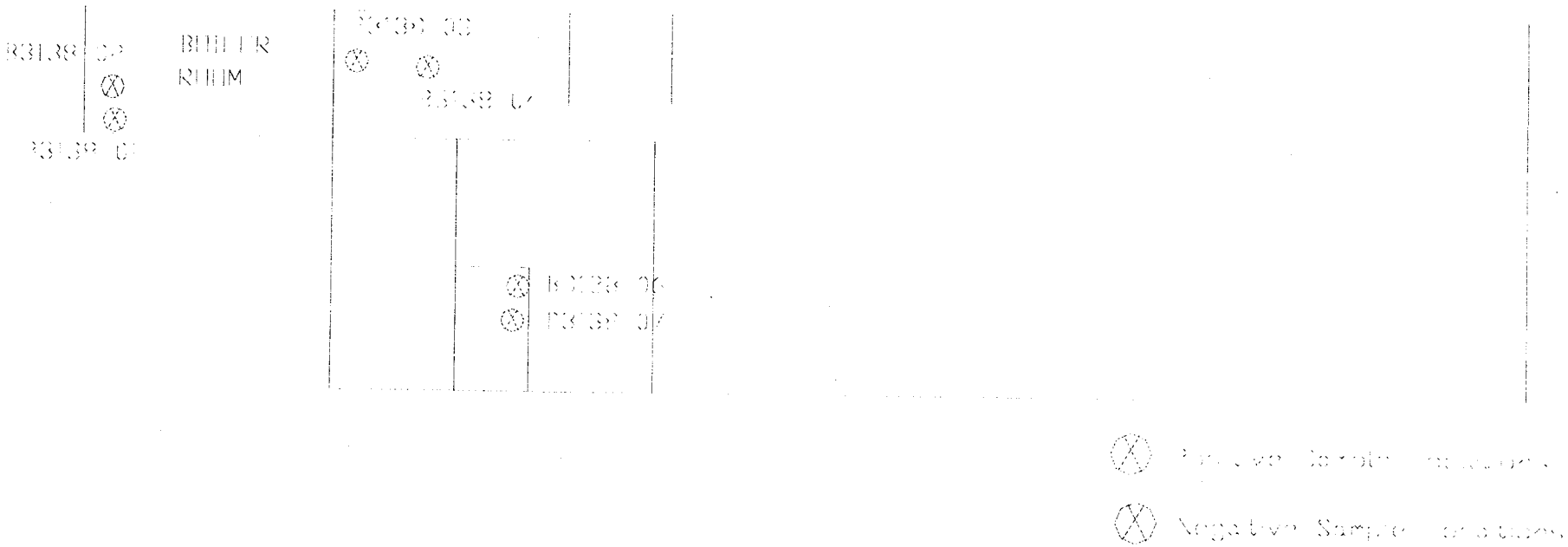

FIG. 1 LAYOUT PLAN

BUILDING 31388	FIG. 1 LAYOUT	ASBESTOS SURVEY DAB1[illegible]06-B 0005 LM/20[illegible]	REISZ ENGINEERING

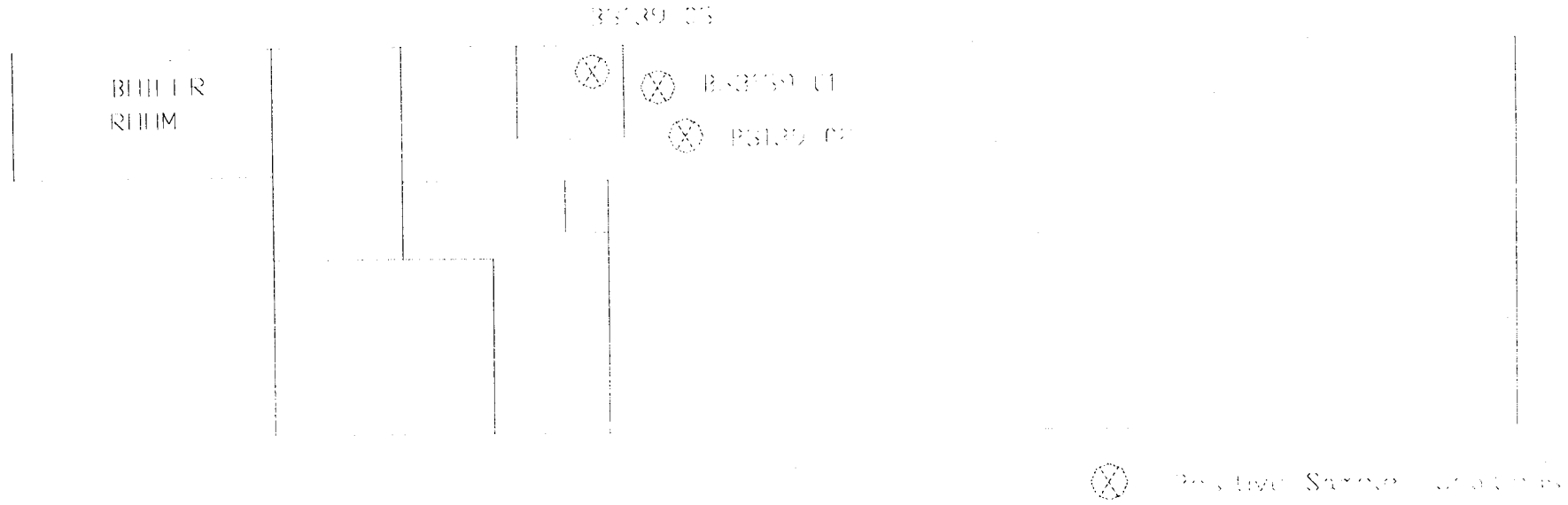

FIG. 1

LAYOUT PLAN

BUILDING 3139	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D 0005 EM705	**REISZ ENGINEERING**

APPENDIX D

SELECTED ACM LOCATION PLANS

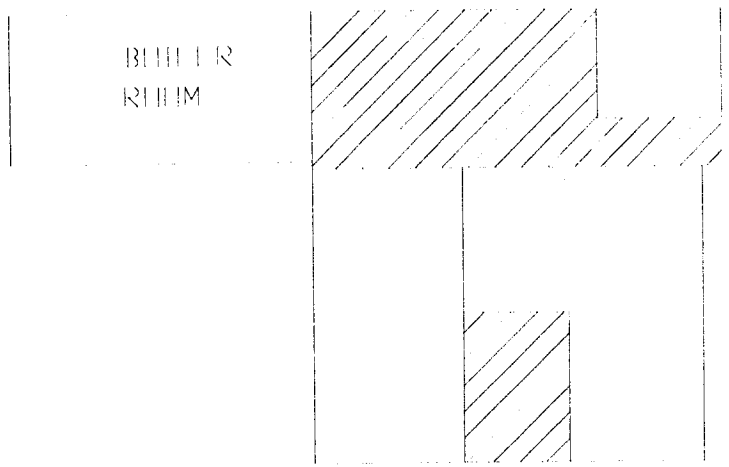

FIG. 1

LAYOUT PLAN

BUILDING 3138	FIG. 1 LAYOUT	ASBESTOS SURVEY DABT02-96-D-0005 TM705	**REISZ ENGINEERING**

APPENDIX E

SELECTED ACM PHOTOGRAP

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ATTACHMENT 3

LBP RISK ASSESSMENT REPORT AND BUILDING SURVEY REPORTS

LBP RISK ASSESSMENT REPORT

Lead-Based Paint
Risk Assessment Report

For:

Ft. McClellan, Alabama

By:

John W. Calvert, P.E., CIH
John Calvert Environmental, Inc.
7741 Kennington Lane
Jonesboro, Georgia 30236
404-471-5302

DATE:

July 17, 1995

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Table of Buildings Where Lead Dust Levels Exceeded Clearance Levels

US COE, South Atlantic Division Laboratory Dust Data (Sampling Results)

US COE, SADL Quality Control Data for Ft. McClellan Dust Samples

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Table of Building Areas Where Soil Lead Concentrations Exceeded 400 ppm

Table, USEPA Recommended Response Activities for Residential Lead-Contaminated Bare Soil

US COE, SADL Soil Sample Data

US COE, SADL Quality Control Data for Ft. McClellan Soil Samples

Appendix E - Table, Summary of Lead-Based Paint Hazards

Appendix F - Part V: In-Place Management, US Dept. of Housing and Urban Develpoment, Lead-Based Paint Risk Assessment Protocol

Appendix G - HUD Standard Reevaluation Schedule

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-Table 6-1 Training Topics, TM5-6XX

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-Appendix B - Model Training Programs- EPA and SOEH, NIBS O & M Work Practices Manual

Appendix I -

- Quality Control for XRF Lead-Based Paint Surveys
- SADL Lead-Based Paint Survey Reports

SUMMARY

A lead-based paint (LBP) risk assessment was conducted for Ft. McClellan, AL by John W. Calvert, P.E., CIH, 7741 Kennington Lane, Jonesboro, GA 30236 (404-471-5302) and the US Army Corps of Engineers South Atlantic Division Laboratory (SADL) personnel, 611 South Cobb Drive, Marietta, GA 30060-3112 (404-919-5271). The risk assessment report was prepared by John Calvert based on field and laboratory data collected by SADL personnel.

Twenty-six individual buildings (including 2 family housing quarters) and 171 family housing units representing 12 groups and/or subgroups of building were surveyed. These buildings and units were selected by Ft. McClellan and SADL personnel. SADL personnel grouped together family housing units (buildings) based on similarities in construction, age, and paint history (based on XRF (X-Ray Fluorescence) spectrum analyzer LBP survey results).

LBP was found to some degree in most of the buildings surveyed. LBP hazards identified included LBP in deteriorated condition; LBP present on friction surfaces, impact surfaces, and surfaces accessible to mouthing or chewing by children; leaded dust; and isolated soil lead contamination.

LBP hazard control options have been presented. Ft. McClellan staff must decide which hazard control option is appropriate. Ongoing monitoring will be required. Reevaluation type and frequency will depend on options selected.

Staff and occupant education/training has been discussed and recommended training topics/issues provided.

LEAD-BASED PAINT RISK ASSESSMENT REPORT
for FT. McCLELLAN, AL

I. Introduction.

A. Identifying Information. This Lead-Based Paint (LBP) Risk Assessment report for Ft. McClellan, AL was prepared by John W. Calvert, P.E., CIH from field and laboratory data collected by US Army Corps of Engineers, South Atlantic Division Laboratory (SADL) personnel. The table in Appendix A is a list of the buildings or groups of buildings surveyed and their respective use or activity. This information was extracted from SADL survey reports. Twenty-six individual buildings (including 2 family housing quarters, #s 2242 & 2271) and 171 family housing units representing 12 groups and/or sub-groups of buildings were surveyed. These buildings and units were selected by Ft. McClellan and SADL personnel. SADL personnel grouped together family housing units (buildings) due to similarities in construction, age, and paint history (based on XRF (X-Ray Fluorescence) spectrum analyzer LBP survey results). Two site visits were made to observe the LBP surveys using the XRF instruments (spectrum analyzers) and to observe and instruct the surveyors in dust sampling techinques and procedures.

This risk assessment report was written following the guidance published in the Federal Register dated 29 June 1992, Department of Housing and Urban Development, "NOFA for Lead-Based Paint (LBP) Risk Assessment; Notice." Subsequent to the initiation of this project, the US Environmental Protection Agency published on July 14, 1994 a Memorandum, Subject: Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil. This guidance serves as the updated standard of care and has been used in determining lead hazards from dust and soil.

B. Lead-Based Paint Health Hazards. Lead when swallowed or inhaled, can be harmful to human beings. It can be especially harmful to small children, pregnant women, men and women during their reproductive years, and people with hypertension.

The lead hazards in buildings come primarily from the past use of LBP. The mere presence of LBP, however, does not constitute a hazard. The risk of adverse human health effects depends on the paint's location and condition and on the way occupants use the building. If circumstances are such that people, especially children, may inhale or ingest lead, then a hazard is present, Public Law 102-550 (Federal "Title X") defines LBP hazard as "any condition that causes exposure to lead from lead-contaminated dust, lead-contaminated soil, lead-contaminated paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human effects as established by the appropriate federal agency." A surface is considered to be accessible for mouthing or chewing by children if it protrudes from the surrounding area to the extent that a child can chew the surface, and is within three feet of the floor or ground (e.g., window sills, railings, and the edges of stair tread). A friction surface is subject to abrasion or friction (e.g., window, floor, and stair surfaces). An impact surface is subject to damage from

repeated impacts (e.g., certain parts of door frames).

If LBP is in poor condition, hazards from dust and debris are more likely. Abrasive action on leaded paint surfaces can create lead-contaminated dust in a building. Lead in bare soil outside a building can increase the lead dust inside. Chips from exterior paint in poor condition often fall into the surrounding soil. This contaminated soil can then be brought indoors by foot traffic. Children frequently contact lead-contaminated dust and soil because they play indoors on the floor and outdoors on the ground.

II. Management, Maintenance, and Environmental Results Forms and Analyses.

A. Management Information. Not provided.

B. Maintenance/Paint Condition Information. Paint condition information for building components tested for LBP with the XRF spectrum analyzer is contained in the lead-based paint survey reports. Those reports are presented in Appendix I. Due to their size they were placed in the back of this report. Building interior and exterior paint conditions are presented in the table in Appendix E.

C. Building Condition. No specific information concerning building condition was provided.

D. Building/Unit Selection Process. The buildings and units were selected by Ft. McClellan and SADL personnel. SADL personnel grouped together family housing units (buildings) due to similarities in construction, age, and paint history (based on XRF (X-Ray Fluorescence) spectrum analyzer LBP survey results.

E. Paint, Dust, and Soil Sampling and Results.

1. Paint. The XRF and scrape sample results for paint and paint condition are contained in the SADL LBP survey reports presented in Appendix I, to the rear of this report. Also included in those survey reports are building descriptions and photos and generalized floor plan plates showing locations of positive LBP readings and/or samples.

The LBP survey was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990) and EPA standard operating procedures (EPA document EPA600/8-91/214) for this instrument. The survey was performed by certified surveyors using a SCITEC MAP 3, X-ray Fluorescence Spectrometer (spectrum analyzer) XRF instrument.

Positive readings (detectable lead above the action level) with the XRF vary depending on the instrument mode selected. The "test" mode is normally used for routine readings. Readings testing "positive" according to the XRF instrument manufacturer in the test mode are those with a lead concentration greater than 1.3

milligrams per centimeter squared (mg/cm^2), whereas, "negative" refers to readings of 0.7 mg/cm^2 or less. According to the HUD guidelines, positive readings for this instrument are greater than 1.3 mg/cm^2. "Inconclusive" readings are those that fall between 0.7 mg/cm^2 and 1.3 mg/cm^2. Scrape (paint chip) samples were taken and analyzed in the laboratory to verify inconclusive readings.

The "action level" defined in the HUD Interim Guidelines is a lead concentration above 1.0 mg/cm^2. Lead concentrations in the survey reports are shown for both K-shell and L-shell. The L-shell XRF reading is essentially for the top 1 or 2 surface paint layers, whereas, the K-shell is total lead applicable for multi-layered paint surfaces. HUD Guidelines specify that the K-Shell results be used for evaluating XRF readings.

In the survey reports paint condition stated as "good" is defined as intact; "fair" as intact but worn (minor chips from wear and tear but no adhesion or substrate problems); "poor" as severely worn or no longer adhering or, substrate deterioration (e.g., peeling, flaking, cracking, etc.).

Quality control procedures for the SADL XRF LBP surveys is presented in the front of Appendix I. These procedures were being followed during the site visits. A random check of the survey reports indicates these procedures were followed. Following these procedures increases the confidence of the XRF data.

A list of buildings and components identified with LBP is presented in Appendix B, Table 1. For the individual buildings, components with LBP were identified from positive XRF readings and/or positive scrape sample analysis in SADL survey reports. For family housing groups, components with LBP were identified from component summary tables in SADL survey reports. The HUD Interim Guidelines set out decision rules depending on the percentages of components classified as positive. The rules are applied to each component separately, and depend on the type of XRF analyzer used. For the XRF spectrum analyzer, if more than 11% of a component are positive, lead is present, and either all such components should be abated, or all should be tested to determine which require abatement and which do not. This assumes the number of units inspected/sampled in each group is in proportion to the number of units in the respective group per the 29 June 1992 Federal Register, Department of Housing and Urban Development, "NOFA for Lead-Based Paint (LBP) Risk Assessment; Notice". Refer to the SADL survey reports for specific building component and paint information.

Table 2, Appendix B is a list by building/unit of interior and exterior components/surfaces with LBP in fair/poor condition.

XRF readings and scrape sample analyses indicate the presence of paint containing lead, other than lead-based paint. These paints contain lead at a concentration less that 0.5 % by weight or 1 mg/cm^2 and those in poor condition may present hazards from dust paint chips. Those in poor condition should be controlled just as the LBP in poor condition.

2. Dust. Dust sampling was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990). A LBP survey using a SCITEC MAP 3, XRF spectrum analyzer was performed prior to dust sampling. Therefore, dust samples were taken in areas where lead contaminated dust was more likely to exist. A copy of the SADL dust sampling results and quality control data for the dust sampling (Tables 3 & 4 of SADL Soil and Dust Sample Data Report, 24 September 1994) are presented in Appendix C.

The number of dust samples analyzed totalled 161. Quality control (QC) for the dust sampling and analyses included preparing and analyzing 21 field spike samples and 42 field blank samples. Also 37 laboratory reference standard samples were analyzed for instrument calibration and control. The number of these QC samples is within acceptable limits which is 5% for field spike and blank samples. The analytical results for these QC samples are also within acceptable limits (± 25% for matrix spikes and ± 20% for laboratory control samples).

A table of buildings/units and locations where dust sampling results exceeded the recommended clearance standards below is presented in Appendix C, prior to the SADL dust sampling results. Current HUD and EPA recommended clearance levels for lead dust are:

Location	Lead Loading
Uncarpeted Floors	100 $\mu g/ft^2$.
Interior Window Sills	500 $\mu g/ft^2$.
Window Wells	800 $\mu g/ft^2$.

3. Soil. Soil sampling was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990). A copy of the SADL soil sampling results and quality control data for the soil sampling (Tables 1 & 2 of SADL Soil and Dust Sample Data Report, 24 September 1994) is presented in Appendix D.

The number of soil samples analyzed totalled 159. Quality control (QC) for the dust sampling and analyses included preparing and analyzing 16 field spike samples and 22 field blank samples. Also 19 laboratory reference standard samples were analyzed for instrument calibration and control. The number of these QC samples is within acceptable limits which is 5% for field matrix spike and blank samples. With the exception of one field matrix spike sample, the analytical results for these QC samples are also within acceptable limits (± 25% for matrix spikes and ± 20% for laboratory control samples)..

A table of building areas where soil lead concentrations exceeded 400 ppm and a copy of the EPA Recommendations for Response Activities for Residential Lead-Contaminated Soil are presented in Appendix D prior to the SADL soil sampling results.

F. List of Location and Type of Actual or Suspected Lead Hazards. Appendix E is a lead hazards summary table listing by building number: interior and exterior paint condition; whether interior and exterior LBP is present; LBP in fair and poor condition; whether LBP is present on friction surfaces, impact surfaces, and surfaces accessible to mouthing or chewing by children; whether lead dust levels exceed clearance standards; and whether soil lead levels exceeded 400 ppm (mg/Kg). This table was compiled from SADL survey reports in Appendix I; Appendix B Table 1, Interior and Exterior Areas with LBP; Appendix B Table 2, Painted Building Components/Surfaces with LBP in Fair/Poor Condition; Appendix C, Buildings Where Lead Dust Sample Results Exceeded Clearance Levels; and Appendix D, Building Areas Where Soil Lead Concentrations Exceeded 400 mg/Kg (ppm). Refer to SADL survey reports for specific building component and condition.

1. Paint. LBP was identified on both interior and exterior surfaces and was found to some extent in/on most of the buildings surveyed. The majority of the LBP in fair and poor conditions was found on exterior surfaces. LBP on friction surfaces were predominately window sashes and were found in a few of the support/community type buildings and in family housing 2242 and Avery Group 1, 3600s, and 3700s Group C. LBP on surfaces mouthable or chewable by children were primarily window sills and possibly shelves, depending on the shelf heights. Closet shelves approximately 5 ft high pose no significant risk to mouthing and chewing by children. Interim and abatement control options for LBP are discussed later in this report.

2. Dust. Based on survey results, lead dust levels exceeding clearance standards appears to be isolated. Five floor, 1 window sill, and 12 window well samples exceeded clearance standards. Ten of the 12 window wells exceeding the standard were in the 3600 series family housing. Only 1 unit (3319A) from the 3310-3343, Avery Family Housing was sampled for dust. It had high dust levels on a bedroom floor and window sill and in a kitchen window well.

Family quarters 3319A has been grouped in Avery Family Housing Group 1 (3310-3331). Dust sampling was conducted only in unit 3319A which has high lead dust levels as mentioned above (bedroom floor and window sill and kitchen window well). All paint surveyed was judged to be in good condition. LBP was identified on window sashes in the kitchens and bedrooms and exterior window casings, sills, and aprons in this group. The lead dust is suspected to come from the friction surfaces surrounding the window sashes. Either more extensive dust sampling is needed to confirm this conclusion or assume all similar units (Avery Group 1) to have high dust levels. Frequent cleaning with a high phosphate detergent and treatment to reduce friction are recommended interim controls, which are discussed later in this report.

The 3600 Family Housing Group also had high dust levels in the window wells. Window components were identified as being painted with LBP judged to be good condition with a few in fair condition. Frequent cleaning with a high phosphate detergent and treatment to reduce friction are recommended interim controls.

Either more extensive dust sampling is needed in those buildings not sampled or assume that areas with LBP on friction and impact surfaces identified in the table in Appendix E would have high dust levels and perform the recommended interim controls.

3. Soil. Five soil samples (Bldgs: 129, 893, 1740, 2242, 2293) exceeded 400 mg/Kg (ppm), which requires control if children frequent the areas. One of the five samples, Bldg 893 (Chapel) exceeded 4000 ppm, which requires control in areas where contact by children is less likely or infrequent. None of the sampled areas had soil lead concentrations exceeding 5000 ppm which would require abatement.

For workshop building 129, all exterior wood components were considered positive for LBP which was judged to be in poor/fair condition. This is probably the source of the lead in the soil. Hazard controls for deteriorated LBP are discussed later. No dust sampling was performed in this building.

Building 893, Chapel, had the highest soil lead concentration. Its exterior paint is considered LBP and was judged to be in poor condition. This is the probable source of the lead.

Building 2242, family housing, also had extensive exterior LBP judged to be in poor condition. This is the probable source of the lead.

Building 2293, WAC Chapel, had exterior LBP judged to be in poor/fair condition. The lead concentration in the soil sample taken near the building (0-3 ft) was less than 400 ppm and in the sample taken 10-20 ft from the building was greater than 532. If children are not expected to frequent this location, the soil lead concentration does not pose a significant risk.

III. Lead Hazard Control Options.

A. Lead-Based Paint Policy Statement. Not provided in scope of this report.

B. Name of Individual in Charge of Lead-Based Paint Hazard Control Program. Not provided in scope of this report.

C. Recommended Changes to Work Order System and Property Management. Not provided in scope of this report.

D. Control Options. There are two basic approaches to managing LBP hazards in family housing and family support facilities; interim control (also referred to as in-place management) of LBP and LBP selective or full-scale abatement. Most often, a combination of the two approaches will best suit all parties involved in terms of lead hazard management effectiveness and cost effectiveness. Chapter 5, Technical Manual,TM 5-6XX, Managing Lead-Base Paint (LBP) in Family Housing and Family Support Facilities, Final Draft suggested issues to be considered in determining

specific substrate abatement/control decisions. Ft. McClellan personnel should consider these issues in deciding which hazard control option is appropriate. They are:

- Long- and -short-term objective of the plan.
- Future planned use of the structures.
- The degree of risk to exposure (occupants) to lead poisoning hazards.
- Availability of funding.
- The estimated cost of interim controls versus LBP abatement.
- The condition of substrates on which hazards are identified.
- The amount of time that abate will take.
- Availability of alternative housing for displaced residents.
- The estimated cost to relocate occupants prior to and after abatement.
- The predicted amount of hazardous waste that may be generated.
- The amount of occupant training that will be necessary to perform limited interim controls versus the training of workers.
- The number of skilled and properly trained in-house workers or abatement contractors that are available.
- The amount of available equipment and materials.

E. Interim Control. Interim control techniques or in-place management techniques include the following:

- Training and education of occupants and maintenance personnel regarding the hazards of LBP and the appropriate maintenance practices on lead-containing surfaces. This training may be conducted at a formal training center or through installation personnel such as the Environmental Officer.

- Washing/cleaning with Trisodium Phosphate (TSP) or other high phosphate detergent designed to cleanup lead dust can be used to reduce lead dust exposure. This is an effective interim control technique.

- Stabilizing all LBP surfaces by removing defective paint and repainting.

- Repairing all defective and rotted substrates that could lead to rapid paint deterioration.

- Treating friction and impact surfaces, such as door, floors, steps, handrails, and windows, when there is concern that these objects are responsible for generating LBP chips or lead-bearing dust.

- Treating protruding, accessible surfaces where LBP may be present, such as window sills and shelves, that children might chew or mouth.

- Inspect periodically to ensure the continued integrity of LBP containing surfaces.

- Document all interim control actions.

- Conduct scheduled maintenance.

INTERIM CONTROL FOR LBP HAZARDS:

Hazard No. 1: Deteriorated LBP.

a. Stabilizing all LBP surfaces by removing defective paint and repainting with non-LBP on surfaces such as metal and wood using methods prescribed in Part V, In-Place Management, HUD Lead-Based Paint Risk Assessment Protocol, September 1992. A copy of Part V is provided in Appendix F.
b. Surfaces such as plaster may require encapsulation or enclosure.
c. Educate occupants and maintenance and custodial personnel of the presence of LBP.
d. Request occupants report deteriorating paint so that it can be repaired quickly and safely.
e. Inspect periodically.
f. Conduct scheduled maintenance.

Hazard No. 2: LBP on Friction and Impact Surfaces.

a. Educate occupants and maintenance and custodial personnel concerning the generation of lead dust from these surfaces and the proper cleaning technique.
b. Treat to reduce friction and impact and encapsulate with durable liquid encapsulant if possible.
c. Monitor for dust generation.
d. Inspect periodically.

Hazard No. 3: LBP on Surfaces Mouthable or Chewable by Children.

a. Educate occupants of the presence of LBP on these surfaces so adults can deter mouthing and chewing by children.
b. Treat surfaces.
c. Inspect periodically.

Hazard No. 4: Lead Dust.

a. Dust removal following procedures recommended in Appendix F and paint film stabilization.
b. Educate occupants and maintenance and custodial personnel.
c. Monitor for dust.
d. Inspect periodically.

Hazard No. 5: Lead in Soil.

Follow interim controls for EPA recommended response activities for lead-contaminated bare soil. These recommendations are presented in Appendix D.

F. Abatement. Abatement techniques found in Chapter 5, TM 5-6xx, Final Draft, include the following:

- Chemical Removal: caustic strippers, non-caustic strippers, on-site stripping, off-site stripping.

- Abrasive Removal: vacuum blasting, needle gun, HEPA sanding.

- Component Removal & Replacement.
- Heat Gun Removal.
- Encapsulation: flexible wall covering, elastomeric surface coating, epoxy coating, acrylic/stucco coating.
- Training: occupants and workers.
- Enclosure: gypsum wall board; plywood/paneling; prefabricated metal; wood, metal, vinyl siding.
- Periodic Inspections.

ABATEMENT OF LBP HAZARDS:

Hazard No. 1: Deteriorated LBP.

a. Replace doors.
b. Chemically remove paint from doors and repaint.
c. Replace windows and exterior trim.
d. Chemically remove paint from windows and trim and repaint.
e. Remove paint from trim using head guns.

Hazard No. 2: LBP on Friction and Impact Surfaces.

a. Component replacement for friction and/or impact surfaces.
b. Encapsulation for impact surfaces.

Hazard No. 3: LBP on Surfaces Mouthable or Chewable by Children.

a. Remove and replace component.
b. Encapsulate.

Hazard No. 4: Lead Dust.

Remove and replace windows.

Hazard No. 5: Lead in Soil.

Soil sampling and analysis did not identify any soil lead concentrations that would require abatement per EPA Recommendations for Response Activities for Residential Lead-Contaminated Bare Soil.

Note on cost for LBP Hazards - Approximate Costs of LBP Abatement Alternatives can be found in Table 5-3 of TM 5-6XX, Managing Lead-Based Paint (LBP) in Family Housing and Family Support Facilities, Final Draft. Costs for interim controls are not provided. An estimate and a full lead hazard control plan should be obtained from a certified lead-based paint abatement contractor.

G. Ongoing Monitoring. If LBP is not in a hazardous condition, no hazard is present and no active control measures are necessary. However, paint can

deteriorate through normal use and maintenance activity, thereby releasing dust and contaminating soil. Therefore, ongoing monitoring is necessary in all buildings in which LBP is known or suspected to be present. Reevaluations and annual visual inspections are necessary due to the potential for LBP hazards to develop since hazard control methods can fail, previously intact LBP can become deteriorated, and leaded dust can reaccumulate through friction, impact, or the introduction of exterior dust and soil.

A reevaluation, in general terms, is a risk assessment that includes more limited soil and dust sampling, and a detailed visual examination of paint films and any existing lead hazard controls (such as enclosures, encapsulants). Reevaluations are performed only in buildings where LBP hazards have been found to be nonexistent, either through a risk assessment, a risk assessment/inspection combination, or a clearance examination following abatement or interim control work. Reevaluation occurs at intervals recommended by the HUD Standard Reevaluation Schedule; a copy is provided in Appendix G.

Annual visual surveys are conducted by owner staff to confirm that:

- Painted surfaces with known or suspected LBP are not deteriorating.
- Control methods such as encapsulation and enclosure have not failed.
- Structural problems do not threaten the integrity of any remaining known or suspected LBP.

Visual surveys should also be conducted whenever complaints are received by occupants about potential lead hazards, the building becomes vacant, or significant damage occurs that could affect the integrity of control treatments.

Building should be maintained in good condition by following the maintenance and management practices such as:

- High-efficiency particulate air (HEPA) vacuuming, wet mopping, and cleaning floors, window troughs, and interior window sills at turnover.
- Providing LBP hazard information to new occupants.
- Maintaining ground cover.
- Encouraging occupants to report any signs of paint deterioration or failure of hazard control treatments as soon as they are detected.

IV. Site-Specific Lead Hazard Control Plan.

A. Lead Hazard Control Option To Be Implemented at Ft. McClellan. To be determined by Ft. McClellan staff.

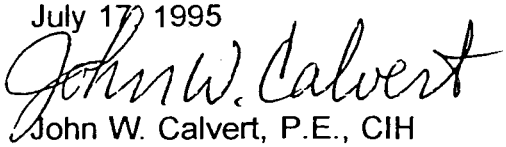
B. Training Plan for Managers, Maintenance Supervisors and Workers. It is essential that Ft. McClellan staff and others directly involved with reducing LBP hazards have instruction provided by qualified trainers to make them aware of the hazards of lead, proper procedures and work practices, and the need for protective equipment and proper hygiene. Great care must be exercised to protect workers from excess lead exposures and to prevent them from taking lead dust home on their

clothing or belongings which could then poison their children. Recommended training topics can be found in TM 5-6XX, Table 6-1. A copy of this is presented in Appendix H. Also included in Appendix H is the table of contents from the National Institute of Building Sciences, Lead-Based Paint, Operations & Maintenance Work Practices Manual for Homes and Buildings, May 1995. The work practices in this document provide good information on safely working with LBP hazards. Appendix B - Model Training Programs - EPA and SOEH from this manual is also provided in Appendix H as an additional reference.

C. Occupant Education. Building occupants should be advised of the LBP hazards identified. Especially housing occupants with small children should be advised that parents have an important role to play in protecting their children from lead poisoning. The importance of wet mopping and wet wiping to control dust levels should be stressed and the importance of washing children's hands should be emphasized. Occupants should be encouraged to call to the attention of facility personnel (staff) any chipping or peeling paint. Informational brochures may be beneficial in educating occupants about what they can do to reduce exposure to the LBP hazards. EPA has such informational brochures, One is Lead-Based Paint, Protect Your Family, Docket No. OPPTS-62133, March 1994, draft; final expected fall 1994. Additional information may be obtained from the National Lead Information Center, call (800) LEAD-FYI.

D. Signature.

Respectfully submitted,
July 17, 1995



John W. Calvert, P.E., CIH

APPENDIX A

Appendix A

Building/Group Number and Use/Activity of Buildings Surveyed

Building or Group Number	Use/Activity
66	Child Development Center
67	Silver Chapel
128	Family Fitness Center
129	Workshop
130	Miller Gym
292	Hospital (portions)
893	Chapel (exterior only)
992	Recreation Center (exterior only)
1012	Truman Gymnasium
1077	W.A.C. Museum
1740	Soldier's Chapel
1928	Bowling Alley
1929	Dental Clinic
2101	Post Theater
2102	Library
2213	Child Development Center
2242	Family Housing
2271	Family Housing
2290	Preventive Medicine Bldg.
2293	W.A.C. Chapel

Building/Group Number and Use/Activity of Buildings Surveyed

Building or Group Number	Use/Activity
2299	Chemical Corps Museum
3182	Military Police Museum
3213	Army Community Service Center
3293	Chapel
3527	Scout Building
3681	Elementary School
Buchner Housing (Qtrs 9 & 13)	Family Housing, 2 units
Baltzell Housing (Qtrs 25B, 27A, 28A, 29A, 30A)	Family Housing, 5 units
Drennen Housing (Qtrs 81,83,85,87,89,90, 103,105,106,107)	Family Housing, 10 units
W.A.C. Circle (Qtrs 2235, 2236)	Family Housing, 2 units
Avery Housing Group (3310-3343)	Family Housing
Group 1 (3310-3331), (Qtrs 3311A, 3313A, 3314A, 3314B, 3316A, 3316B, 3317B, 3319A, 3319B, 3322B, 3324A, 3325A, 3327B, 3328B, 3330A, 3331A)	16 units
Group 2 (3334-3343), (Qtrs 3334A, 3336A, 3337A, 3337B, 3339A, 3340A, 3341B, 3343A, 3343B)	9 units
Littlebrant Housing Group (3400-3411) (Qtrs 3401, 3402B, 3403B, 3407, 3409B)	Family Housing 5 units

Building/Group Number and Use/Activity of Buildings Surveyed

Building or Group Number	Use/Activity
Morton, Church, and Baker Rd Housing Group (3500-3540) (Qtrs 3500A, 3500C, 3501A, 3502B, 3502D, 3503A, 3517B, 3519B, 3520E, 3524A, 3524C,3526B, 3528D, 3529B, 3530C, 3531B, 3531E, 3532D,3533C, 3533E, 3534B, 3534F, 3535B, 3535D, 3536A,3536E, 3536F, 3537A, 3538B, 3538F, 3540E)	Family Housing 31 units
Wirans, Church, & Morton Rds Housing (3600 Series, 3610-3673) (Qtrs 3610B, 3611A, 3612A, 3614B, 3615B, 3616A, 3616B, 3617A, 3617B, 3618A, 3619B, 3620B, 3622B, 3624B, 3626B, 3629B, 3632B, 3635B, 3637B, 3640B, 3643B, 3652A, 3659B, 3662A, 3664A, 3664B, 3665B, 3668B, 3670A, 3671B, 3672B, 3673B)	Family Housing 32 Units
Summerall Housing (3700's Group A) (3700-3718) (Qtrs 3700A, 3700B, 3700D, 3700G, 3702B, 3702E, 3704B, 3704F, 3706D, 3708C, 3710C, 3712B, 3712G, 3714B, 3716A, 3716B, 3718A, 3718D)	Family Housing 18 units
Summerall & Sharp Housing (3700's Group B) (3719-3731) (Qtrs 3719E, 3719H, 3720C, 3721B, 3722C, 3722D, 3724A, 3725A, 3725D, 3726B, 3727A, 3727F, 3728C, 3728H, 3729E, 3731A, 3731F, 3731G, 3732A, 3732E, 3732H)	Family Housing 21 units
Cooper, Bray, Littlebrant (3700's Group C) (3737-3770) (Qtrs 3737A, 3737B, 3738B, 3739A, 3740A, 3741A, 3742B, 3743B, 3744B, 3745B, 3746B, 3761A, 3763A, 3765A, 3766A, 3767A, 3767B, 3768B, 3769B, 3770B)	Family Housing 20units

APPENDIX B

TABLE 1
INTERIOR AND EXTERIOR AREAS WITH LEAD-BASED PAINT

Building No.: Use	Components Where Lead-Based Paint Was Identified, I-Interior, E-Exterior
66 Child Development Center	I-Door components, stall, bookcase, ceiling E-none detected
67 Silver Chapel	I-Doors & components, window components, coat rack, pipes & HVAC duct, railings,ladder E-Railings & basement door & components
128 Family Fitness Center	I-None detected E-Doors & components, awnings, fire hydrant
129 Workshop	I-Concrete walls, windows, wood doors, door components E-doors & components, upper trim, soffits, windows
130 Miller Gym	I- None detected E-Brown metal guide wire cover/yellow paint
292 Hospital	I-None detected in pediatric areas and waiting rooms E-Not tested
893 Chapel	I-not tested per base personnel E-Assume all paint
992 Recreation Center	I-not tested per base personnel E-Assume white painted wood porch components
1012 Truman Gym	I-Metal doors, lockers E-None detected
1077 WAC Museum	I-None detected E-None detected
1740 Soldier's Chapel	I-Concrete walls, doors & components, windows & components, rafters, beams E-Windows & components, doors & components, support pad
1928 Bowling Alley	I-None detected E-None detected
1929 Dental Clinic	I-None detected E-None detected

TABLE 1
INTERIOR AND EXTERIOR AREAS WITH LEAD-BASED PAINT

Building No.: Use	Components Where Lead-Based Paint Was Identified, I-Interior, E-Exterior
2101 Post Theater	I-None detected E-Metal doors & components, railings
2102 Library	I-None detected E-Metal guide wire cover
2213 Child Development Center	I-Wood door components E-Wood doors & components, downspouts, pipes, metal panels
2242 Family Housing	I-Window sash & well E-Consider all outside paint positive, except front porch floor, block foundation, and various trim
2271 Family Housing	I-Window components, doors & trim, baseboards, shelf supports, fireplace mantle E-Porch ceiling & beam, door
2290 Preventive Medicine	I-Screen doors @ entryways E-Doors & frames, support poles, window casings & frames, handrails, downspouts
2293 WAC Chapel	I-None detected E-Soffits, window trim, door and frames, metal pole, concrete threshold, apron & steps
2299 Chemical Corps Museum	I-Window & door components, roll-up door & casing E-Downspout & gutter
3182 MP Museum	I-Metal door & components & windows, metal shelf E-Metal doors & frames & windows, metal awnings
3213 Army Community Service Center	I-Block wall, lower trim E-Window sash & casing, metal pole, door, yellow concrete curb
3293 Chapel	I-Window headers E-Door & components, upper facia

TABLE 1
INTERIOR AND EXTERIOR AREAS WITH LEAD-BASED PAINT

Building No.: Use	Components Where Lead-Based Paint Was Identified, I-Interior, E-Exterior
3527 Scout Building	I-Door casing & jamb, window casing, sheetrock wall, wood column E-Window casing, upper trim, column, soffit, door & jamb
3681 Elementary School	I-Door jambs rear & side entryways E-Window, soffit, door frame
Buchner Family Housing, #'s 9 & 13	I-Doors & components, window components, beadboard wood ceilings, walls, baseboards & moldings, stairway components, bookcase, mantel Newell post E-Porch components & handrails, door components, soffits, rafters, cornerboards, downspout
Baltzell Family Housing, 25B, 27A, 28A, 29A, 30A	I-Doors & components, window components, baseboards, shelves & shelf supports E-Porch components, wood door components, soffits, rafters, cornerboards
Drennen Family Housing, 81, 83, 85, 87, 89 90, 103, 105, 106, 107	I-Window components, baseboards, crown & chair molding, door components, walls, stair components, shelves & supports E-Siding & walls, facia, soffits, cornerboards, door components,
WAC Circle Housing, 2235, 2236	I-Doors & components, plaster ceilings, baseboards, shelves & shelf supports E-Porch components, wood door components, soffits, rafters, cornerboards, screen trim
Avery Family Housing, Group 1, 3310-3331	I-Window sashes, shelves & shelf supports, baseboards, curtain molding, attic scuttles E-Porch components, window components, door components, fences, wood beneath vinyl siding
Avery Family Housing, Group 2, 3334-3343	I-Shelves, shelf supports, baseboards, curtain molding E-Porch ceiling, trim, column, support; wood rail, wood fences, concrete slab

TABLE 1
INTERIOR AND EXTERIOR AREAS WITH LEAD-BASED PAINT

Building No.: Use	Components Where Lead-Based Paint Was Identified, I-Interior, E-Exterior
Littlebrant Family Housing, 3400-3411	I-Baseboards, shelves & shelf supports, attic scuttles E-Porch components, fence components
Morton, Church, & Baker Rd Family Housing, 3500-3540	I-Stairs, risers, thread, handrails, posts E-Facia, soffits, cornerboards; porch frame, trim, floor
Wirans, Church, and Morton Rds Family Housing , 3610-3673	I-Window components, shelves & shelf supports E-Door components, fences; metal electrical conduits, guide wire sleeves, & vents; porch supports, wood porch components, window components
Summerall Family Housing, Group A, 3700-3718	I-Window sills, frames, casings; baseboards, crown & chair molding, shelves & supports; stair stringer, riser; cabinets E-Door headers, casings, frames; porch frame, trim, floor
Summerall/Sharp Family Housing, Group B, 3719-3732	I-Bathroom cabinets (2nd FL), baseboards, shelves & supports, stair risers & stringers E-Door components, window header plate; porch support pole, ceiling, upper trim, back fence
Cooper, Bray, & Littlebrant Family Housing, Group C, 3737-3770	I-Shelves & supports, window sash, frames, casings E-window sills, frames, casings; porch frame, trim, floor; fences, conduit

For the individual buildings, components with LBP were identified from positive XRF readings and/or positive scrape sample analysis in SADL survey reports. For family housing groups, components with LBP were identified from component summary tables in SADL survey reports. The HUD Interim Guidelines set out decision rules depending on the percentages of components classified as positive. The rules are applied to each component separately, and depend on the type of XRF analyzer used. For the XRF spectrum analyzer, if more than 11% of a component are positive, lead is present, and either all such components should be abated, or all should be tested to determine which require abatement and which do not.

TABLE 2
PAINTED BUILDING COMPONENTS/SURFACES
WITH LEAD-BASED PAINT IN FAIR/POOR CONDITION

Building or Unit #	Fair ("I-": Interior; "E-": Exterior)	Poor ("I-": Interior; "E-": Exterior)
66	I-Janitor's closet: Tan metal door jamb.	I-Janitor's closet: White wood ceiling (above dropped tile ceiling)
67	I-Stairwell: Brown metal railing	E-Brown metal railing
128	E-Metal doors & components, beige metal fire hydrant	
129	I-Rm 1: beige upper concrete wall, beige metal door jamb, beige wood door casing, brown wood door jamb, beige wood door, Rm2: Beige metal window frame, Rm 3: Beige wood door, beige metal door jamb, Rm 5: beige wood door E-Brown metal window frame, brown screened door	I-Rm 1: Beige upper concrete wall, Rm 4: Beige concrete wall, Rm 5: beige concrete wall, Rm 6: brown wood door E-Brown wood door
893	E-White wood door	E-White wood clapboard, green concrete foundation, white wood window sill, white wood cornerboard, white wood door, white wood window sash
992	E-White wood porch ceiling	E-White wood upper porch trim
1012	I-Steam room orange metal door	
1740	I-Rm 1: White metal rafter, Rm 2: white metal door & casing, Rm 3: tan concrete wall	I-Rm 1: White metal window sash, Rm 6: White metal window sash E-Brown concrete pad
2101	E-Pink metal door & casing, pink metal dock apron	E-Pink metal rail
2102		E-Brown telephone guide wire cover
2213	E-Tan metal downspout lower section, brown wood door	E- brown metal panel, brown/white metal pipe, brown wood basement door, green wood door jamb
2242	E-White wood door jamb	I-LR brown window sash E-White wood siding, green wood window casing, green wood door, white wood porch ceiling, white wood porch rafter, white wood door

TABLE 2
PAINTED BUILDING COMPONENTS/SURFACES WITH LEAD-BASED PAINT IN FAIR/POOR CONDITION

Building or Unit #	Fair ("I-": Interior; "E-": Exterior)	Poor ("I-": Interior; "E-": Exterior)
2271	E-Green wood door	I-Rm 5 BR: White wood shelf support E-White wood porch ceiling
2290	E-Brown metal railing , brown wood door, tan metal downspout base, brown metal support pole	E-Tan metal downspout
2293	E-Brown metal pole, brown wood door & jamb	E- Brown wood window sash, white concrete threshold , apron, & steps, brown wood door
2299	I-Partition office grey door casing E-Brown rain gutter	I-Rm 6: Green metal door casing, green roll-up door E-Brown metal downspout
3182	I-Rm 3:Tan metal door, Rm 6:white metal shelf E-Brown metal door frames with metal doors, brown metal awnings	
3213	E-Brown metal window casing	E-Brown metal window sash, brown metal pole, yellow concrete curb
3293	E-Brown metal door	E-Brown wood door & header, brown upper facia
3527	I-Rm 1: White metal window casing	E-White wood window casing, white wood upper trim, white wood column, white wood soffit, white door & jamb
Buchner #13	I-Basement: white steel column, green wood screen door, green wood door, Newel post E-Brown wood soffit	E-Brown metal downspout catch
Baltzell, 28A	E-white porch railing, white metal porch support	
Baltzell, 29A	E-white porch rail	
Baltzell, 30A	E-White porch railing, white porch ceiling	

TABLE 2
PAINTED BUILDING COMPONENTS/SURFACES WITH LEAD-BASED PAINT IN FAIR/POOR CONDITION

Building or Unit #	Fair ("I-": Interior; "E-": Exterior)	Poor ("I-": Interior; "E-": Exterior)
Drennen, 81	I-Kitchen plaster ceiling, basement: steel support beam, back door E-White wood door jamb	I-MBR wood baseboard, Basement: stairwell, stair riser E-Creme porch soffit, white window apron, front porch siding, white wood rear door
Drennen, 83	I-Basement:cross beam support, gray creme door E-Upper porch trim	I-Basement: steel support post
Drennen, 85	E-Creme wood siding	
Drennen, 90	I-Basement: gray stair rail & stringer	
WAC Circle, 2236	E-Tan metal post, tan wood screen door, tan wood door casing, tan wood screen trim	E-Tan wood eave
Avery, Group 1, 3314B	E-White metal porch support	
Avery, GP 1, 3325A	I-Rm 4: White wood shelf support E-White wood window apron, white wood window casing	E-White wood door casing
Avery, GP 1 3327B		E-White wood window apron
Avery, GP 1 3331A	E-White wood door casing, white wood window apron	E-White wood fence
Littlebrant, 3401	E-White metal porch support, white wood porch ceiling	E-White wood trim
Littlebrant, 3403B		E-Green metal fence support
Morton, Church, Baker, 3500A	E-White wood door overhang	E-White metal porch support
Morton, Church, Baker, 3503A		E-White wood window apron
Morton, Church, Baker, 3517B	E-White wood window casing, white wood window sill	E-White metal door casing

TABLE 2
PAINTED BUILDING COMPONENTS/SURFACES WITH LEAD-BASED PAINT IN FAIR/POOR CONDITION

Building or Unit #	Fair ("I-": Interior; "E-": Exterior)	Poor ("I-": Interior; "E-": Exterior)
Morton, Church, Baker, 3519B		E-White metal porch support, white door trim
Morton, Church, Baker, 3520E		E-White metal porch support
Morton, Church, Baker, 3524C		E-White wood window divider
Morton, Church, Baker, 3531B		E-White metal column
Morton, Church, Baker, 3532D	E-White metal porch support	
Morton, Church, Baker, 3533E		E-White metal porch support
Morton, Church, Baker, 3534F	E-White wood window casing	E-White wood porch support
Morton, Church, Baker, 3535D	E-White metal porch support, white wood upper trim	
Morton, Church, Baker, 3536A		E-White porch support, white wood window frame
Morton, Church, Baker, 3536F		E-White metal porch post
Morton, Church, Baker, 3537A	E-White wood window casings (2)	
Morton, Church, Baker, 3538B	E-White metal support post	
Morton, Church, Baker, 3540E	E-White metal porch	
Wirans, Church, Morton Rds, 3600s, 3610B	I-Kitchen: white wood window well; MB: white wood window well, child's BR: white wood window well	
Wirans, Church, Morton Rds, 3600s, 3611A	E-White metal porch post	E-White porch ceiling, white wood window sills (2)

TABLE 2
PAINTED BUILDING COMPONENTS/SURFACES
WITH LEAD-BASED PAINT IN FAIR/POOR CONDITION

Building or Unit #	Fair ("I-": Interior; "E-": Exterior)	Poor ("I-": Interior; "E-": Exterior)
Wirans, Church, Morton Rds, 3600s, 3614B	E-White wood porch ceiling, white wood window casing (2), white metal porch support	
Wirans, Church, Morton Rds, 3600s, 3615B	E-White metal porch support, white wood upper trim	E-White wood window sill
Wirans, Church, Morton Rds, 3600s, 3616A	E-White wood porch trim	E-white wood window apron, white metal porch support, white wood porch ceiling
Wirans, Church, Morton Rds, 3600s, 3616B	I-Kitchen: white wood window well E-White wood door header, white wood window apron	E-Red wood fence
Wirans, Church, Morton Rds, 3600s, 3617B	I-Kitchen: white wood window well	I-Child's BR: white wood window well
Wirans, Church, Morton Rds, 3600s, 3618A	E-White metal porch support	E-White wood porch ceiling, white wood window casing, brown wood fence, white wood window sill
Wirans, Church, Morton Rds, 3600s, 3619B	E-White metal porch support	I-MBR: white wood window well, RM 4 BR: white wood window well E-White wood window apron, white wood porch ceiling
Wirans, Church, Morton Rds, 3600s, 3620B		E-White wood window apron, white wood porch ceiling, white wood fence
Wirans, Church, Morton Rds, 3600s, 3622B	I-Rm 1: white wood window well E-White wood upper trim, white wood window casing, white metal conduit, white wood door casing,	E-White metal porch support, white wood window sill, white wood fence
Wirans, Church, Morton Rds, 3600s, 3624B	E-White wood porch ceiling	
Wirans, Church, Morton Rds, 3600s, 3626B	I-Child's BR: white wood window well E-Whie wood window casing, white wood window sill, white metal porch post	

TABLE 2
PAINTED BUILDING COMPONENTS/SURFACES WITH LEAD-BASED PAINT IN FAIR/POOR CONDITION

Building or Unit #	Fair ("I-": Interior; "E-": Exterior)	Poor ("I-": Interior; "E-": Exterior)
Wirans, Church, Morton Rds, 3600s, 3629B	E-White wood fence, white wood door casing, white wood porch ceiling, white wood window apron	
Wirans, Church, Morton Rds, 3600s, 3632B	I-Kitchen: white wood window well E-White wood window casing, white metal porch support	E-White wood fence
Wirans, Church, Morton Rds, 3600s, 3637B	I-Kitchen: white wood window well, child's BR: white wood window well E-White wood window casing, white wood porch ceiling, white wood window sill	E-White wood fence
Wirans, Church, Morton Rds, 3600s, 3643B	E-White wood porch ceiling, white wood window sill, white metal porch support	
Wirans, Church, Morton Rds, 3600s, 3659B	I-MBR: white window well E-White wood window sill	E-white metal porch support
Wirans, Church, Morton Rds, 3600s, 3664A	I-Rm 2: white wood window well, white wood window sash E-White wood porch ceiling, white wood window casing	E-Green wood fence, white wood upper trim
Wirans, Church, Morton Rds, 3600s, 3664B	E-White wood porch ceiling, white wood door casing, white window apron	E-Green wood privacy fence
Wirans, Church, Morton Rds, 3600s, 3665B	I-Kitchen: white wood window well	E-White wood window casing
Wirans, Church, Morton Rds, 3600s, 3670A	I-Rm 2: White wood window well E-white electric conduit, white wood window sill, white metal porch support, white wood upper porch trim, white wood fence, white wood window casing	
Wirans, Church, Morton Rds, 3600s, 3671B	E-White metal porch support	E-white wood fence

TABLE 2
PAINTED BUILDING COMPONENTS/SURFACES WITH LEAD-BASED PAINT IN FAIR/POOR CONDITION

Building or Unit #	Fair ("I-": Interior; "E-": Exterior)	Poor ("I-": Interior; "E-": Exterior)
Wirans, Church, Morton Rds, 3600s, 36172B	E-White wood window casing (2), tan guide wire sleeve	E-White metal porch support, tan wood fence
Summerall, 3700s, Group A, 3700A	E-White metal porch support	
Summerall, 3700s, Group A, 3700G	E-White metal porch support	
Summerall, 3700s, Group A, 3706D		E-White metal porch support
Summerall, 3700s, Group A, 3708C	E-White metal porch support	
Summerall & Sharp, 3700s, Group B, 3719E	E-White metal porch support, white metal window header, white wood porch ceiling, white wood door casing, white wood fence	
Summerall & Sharp, 3700s, Group B, 3719H	E-White metal porch support	
Summerall & Sharp, 3700s, Group B, 3721B	E-White wood door casing, white wood fence	
Summerall & Sharp, 3700s, Group B, 3722D	E-White metal porch post	
Summerall & Sharp, 3700s, Group B, 3724A	E-White metal porch post	
Summerall & Sharp, 3700s, Group B, 3725A	E-White metal porch post	

TABLE 2
PAINTED BUILDING COMPONENTS/SURFACES WITH LEAD-BASED PAINT IN FAIR/POOR CONDITION

Building or Unit #	Fair ("I-": Interior; "E-": Exterior)	Poor ("I-": Interior; "E-": Exterior)
Summerall & Sharp, 3700s, Group B, 3725D	E-White metal porch post, white wood door casing	
Summerall & Sharp, 3700s, Group B, 3727F	E-White metal porch post, white wood door jamb, white wood fence, white metal door casing	
Summerall & Sharp, 3700s, Group B, 3729E	E-White metal porch facia trim, white metal porch post, white metal door header, white wood fence	E-White wood porch ceiling
Summerall & Sharp, 3700s, Group B, 3731A	E-White wood door casing	E-White metal porch post, white metal door header
Summerall & Sharp, 3700s, Group B, 3732A	E-White metal porch post, white metal window header, white wood fence, white wood door casing	
Summerall & Sharp, 3700s, Group B, 3732E	E-White metal porch support, white wood fence	
Cooper, Bray, Littlebrant, 3700s, Group C, 3740A	E-White wood porch ceiling, white wood window casing, white metal porch support, white wood porch trim	E-White wood fence
Cooper, Bray, Littlebrant, 3700s, Group C, 3742B	E-White metal porch support	E-White wood window sill

APPENDIX C

BUILDINGS/UNITS WHERE LEAD DUST SAMPLE RESULTS EXCEEDED CLEARANCE LEVELS

Building/Unit #	Floor	Window Sill (WS)	Window Well (WW)	Comment
67	134			Stairwell Floor
2299	445			Enrty Area Floor
3319A (3310-3343)	933	4600	7632	BR Floor, Kit WW, BR WS
3530C (3500-3542)	198			Kit Floor
3610B (3610-3673)			1242 1193	DR Bathroom
3626B (3610-3673)			1076 824	Kitchen Child's BR
3640B (3610-3673)			2044 3841	BR Teenager's BR
3659B (3610-3673)			936	Master BR
3664B (3610-3673)			892	Bathroom
3665B (3610-3673)			934 2093	Kitchen BR
3708C (3700-3818)	125			BR
3731H (3719-3732)	109			Stairwell
3737B (3737-3770)			1789	Master BR

Recommended Clearance Levels:

Location	Lead Loading
Uncarpeted Floors	100 $\mu g/ft^2$.
Interior Window Sills	500 $\mu g/ft^2$.
Window Wells	800 $\mu g/ft^2$.

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24 September 1994

SOIL AND DUST SAMPLE DATA FOR
LEAD RISK ASSESSMENT
FORT McCLELLAN AND ANNISTON ARMY DEPOT
ALABAMA

1. Enclosed are the sample results and quality control data for soil and dust (wipe) samples taken for lead risk assessment at Ft. McClellan and Anniston Army Depot Alabama.

2. Soil and dust sampling was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990). A lead-based paint (LBP) survey using a SCITEC MAP 3, X-ray Fluorescence Spectrometer (XRF spectrum analyzer) was performed just prior to dust sampling. Therefore, dust samples were taken in areas where lead contaminated dust was more likely to exist.

3. The data is grouped according to the type of sample (soil or dust) and area sampled. Each building is treated as a separate area. Family housing is divided into areas similar in; type and time of construction, location and LBP survey results. For example, Units 25 - 30 on Baltzell Rd. were built in the mid 1950's and have similar floorplans and LBP survey results.

4. This report consists of:

Table 1:	Soil Sample Data for Ft. McClellan
Table 2:	Laboratory Quality Control Data for Ft. McClellan Soil Samples
Table 3:	Dust Sample Data for Ft. McClellan
Table 4:	Laboratory Quality Control Data for Ft. McClellan Dust Samples
Table 5:	Soil, Dust and Quality Control Data for Anniston Army Depot

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Table 3
FORT McCLELLAN DUST DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	Lab #		Result	Units	Location of Wipe Sample
BUILDINGS							
Building 67 (Silver Chapel)							
7094.67.1D	94/02/02	850	18876		58.1	ug/Ft^2	Kitchen - Window Sill
7094.67.2D	94/02/02	850	18877		44.6	ug/Ft^2	Basement Entry Area - Floor
7094.67.3D	94/02/02	850	18878		235.0	ug/Ft^2	Basement Entry Area - Top of HVAC Duct
7094.67.4D	94/02/02	850	18879		33.6	ug/Ft^2	Chapel - Floor
7094.67.5D	94/02/02	850	18880		37.6	ug/Ft^2	Chapel - Top of Wall Paneling near Podium
7094.67.6D	94/02/02	850	18881		134.0	ug/Ft^2	Stairwell - Landing Floor
7094.67.7D	94/02/02	850	18882		89.3	ug/Ft^2	Basement Office - Floor
Building 1740 (Soldier's Chapel)							
7094.1740.2D	94/02/25	1715	19468		78.9	ug/Ft^2	Main Chapel - Window Sill
7094.1740.3D	94/02/25	1720	19469	<	25.0	ug/Ft^2	Main Chapel - Floor
7094.1740.4D	94/02/25	1722	19470		156.0	ug/Ft^2	Large Storage Room - Window Sill
7094.1740.5D	94/02/25	1725	19471		41.7	ug/Ft^2	Large Storage Room - Floor
Building 2299 (Chemical Museum)							
7094.2299.2D	94/03/15	1545	19533		445.0	ug/Ft^2	Entry Area - Floor
7094.2299.3D	94/03/15	1550	19534		15.3	ug/Ft^2	Office Area - Window Sill
7094.2299.4D	94/03/15	1555	19535		30.0	ug/Ft^2	Office Area - Floor
7094.2299.5D	94/03/15	1600	19536	<	33.8	ug/Ft^2	Artifact Storage - Window Sill
7094.2299.7D	94/03/15	1610	19538		23.8	ug/Ft^2	Artifact Storage - Window Sill
7094.2299.8D	94/03/15	1615	19539	<	19.8	ug/Ft^2	Artifact Storage - Window Sill
Building 3213 (Army Community Service Center)							
7094.3213.2D	94/02/10	1605	18860		38.8	ug/Ft^2	Children's Playroom - Floor
7094.3213.3D	94/02/10	1606	18861		37.0	ug/Ft^2	Children's Playroom - Floor
7094.3213.4D	94/02/10	1612	18862		27.0	ug/Ft^2	Hallway - Floor
7094.3213.5D	94/02/10	1615	18863	<	25.6	ug/Ft^2	Front Entry - Floor
Building 3293 (Chapel)							
7094.3293.1D	94/02/03	1030	18870	<	40.3	ug/Ft^2	Activity Room - Window Sill
7094.3293.2D	94/02/03	1036	18871		44.6	ug/Ft^2	Activity Room - Floor
7094.3293.4D	94/02/03	1040	18873		29.2	ug/Ft^2	Chapel - Window Sill
7094.3293.5D	94/02/03	1045	18874		44.6	ug/Ft^2	Chapel - Floor
Building 3527 (Scout Building)							
7094.3527.1D	94/02/24	1635	19572		17.3	ug/Ft^2	Large Activity Room - Floor
7094.3527.3D	94/02/24	1640	19574	<	18.5	ug/Ft^2	Large Activity Room - Window Sill
7094.3527.4D	94/02/24	1642	19575		21.2	ug/Ft^2	Small Activity Room - Window Sill
7094.3527.5D	94/02/24	1645	19576		29.2	ug/Ft^2	Kitchen - Floor
Building 3681 (Dependent School)							
7094.3681.1D	94/02/05	1410	18865		48.5	ug/Ft^2	Entry - Floor by North Exit Door
7094.3681.2D	94/02/05	1415	18866		74.1	ug/Ft^2	Entry - Floor by West Exit Door
7094.3681.3D	94/02/05	1417	18867		32.5	ug/Ft^2	Entry - Floor by East Exit Door

Table 3 (continued)
FORT McCLELLAN DUST DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	Lab #	Result	Units	Location of Wipe Sample
			FAMILY HOUSING GROUPS			
			Baltzell Rd. (Units 25 - 30)			
7094.25B.1D	94/02/02	1010	18912	< 56.8	ug/Ft^2	Kitchen - Window Sill
7094.25B.3D	94/02/02	1020	18914	50.0	ug/Ft^2	Living Room - Floor
			Drennen (Units 81 - 107)			
7094.106.5.1D	94/02/09	1030	18907	< 64.1	ug/Ft^2	Bedroom - Floor
7094.106.5.2D	94/02/09	1030	18908	< 58.8	ug/Ft^2	Bedroom - Window Sill
7094.106.5.4D	94/02/09	1035	18910	< 56.8	ug/Ft^2	Bedroom - Floor
7094.106.5.5D	94/02/09	1040	18911	54.9	ug/Ft^2	Kitchen - Window Well
			WAC Circle (Units 2235 - 2240)			
7094.2235.2D	94/03/17	917	19437	< 32.9	ug/Ft^2	Bedroom - Floor
7094.2235.3D	94/03/17	920	19438	< 26.9	ug/Ft^2	Kitchen - Window Sill
			Avery (Units 3310 - 3343)			
7094.3319A.2.4D	94/02/09	0	18885	7632.0	ug/Ft^2	Kitchen - Window Well
7094.3319A.3.1D	94/02/09	1131	18887	< 40.0	ug/Ft^2	Living Room - Floor
7094.3319A.4.7D	94/02/09	1139	18893	< 50.0	ug/Ft^2	Master Bath - Floor
7094.3319A.4D	94/02/09	1138	18890	147.0	ug/Ft^2	Master Bath - Window Well
7094.3319A.5.2D	94/02/09	1144	18892	< 100.0	ug/Ft^2	Bedroom - Window Sill
7094.3319A.5D	94/02/09	1142	18891	< 41.0	ug/Ft^2	Bedroom - Closet Floor
7094.3319A.6.3D	94/02/09	1135	18889	933.0	ug/Ft^2	Bedroom - Floor
7094.3319A.6.4D	94/02/09	1134	18888	4600.0	ug/Ft^2	Bedroom - Window Sill
			Morton/Church/Baker (Units 3500 - 3542)			
7094.3519B.1D	94/02/22	1627	19427	< 26.0	ug/Ft^2	Kitchen - Window Well
7094.3519B.2D	94/02/22	1632	19428	< 25.0	ug/Ft^2	Kitchen - Floor
7094.3519B.3D	94/02/22	1633	19429	< 25.0	ug/Ft^2	Living Room - Floor
7094.3519B.5D	94/02/22	1642	19431	< 29.1	ug/Ft^2	Living Room - Window Well
7094.3519B.6D	94/02/22	1645	19432	< 25.0	ug/Ft^2	Baby Bedroom - Floor
7094.3519B.7D	94/02/22	1647	19433	< 28.4	ug/Ft^2	Baby Bedroom - Window Well
7094.3519B.8D	94/02/22	1650	19434	< 25.0	ug/Ft^2	Child's Bedroom - Floor
7094.3519B.9D	94/02/22	1655	19435	< 28.4	ug/Ft^2	Child's Bedroom - Window Well
7094.3520E.1D	94/02/23	1147	19299	< 12.4	ug/Ft^2	Kitchen - Floor
7094.3520E.2D	94/02/23	1150	19300	< 19.1	ug/Ft^2	Kitchen - Door
7094.3520E.4D	94/02/23	1153	19302	15.2	ug/Ft^2	Stairwell - Railing Support
7094.3526B.2D	94/02/24	930	19313	< 25.0	ug/Ft^2	Laundry Room - Floor
7094.3530C.2D	94/02/25	1005	19346	198.0	ug/Ft^2	Kitchen - Floor
7094.3530C.3D	94/02/25	1010	19347	< 59.5	ug/Ft^2	Stairwell - Tread
7094.3533E.1D	94/02/26	1215	19356	< 17.6	ug/Ft^2	Floyer - Floor
7094.3533E.2D	94/02/26	1216	19357	< 15.2	ug/Ft^2	Stairwell - Railing Support
7094.3533E.3D	94/02/26	1217	19358	< 28.4	ug/Ft^2	Kitchen - Window Well
7094.3534B.2D	94/02/28	1002	19342	< 59.5	ug/Ft^2	Kitchen - Floor
7094.3534B.3D	94/02/28	1004	19343	< 71.4	ug/Ft^2	Stairwell - Floor

Table 3 (continued)
FORT McCLELLAN DUST DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	Lab #		Result	Units	Location of Wipe Sample
			FAMILY HOUSING GROUPS (continued)				
			Wirans/Church/Morton (Units 3610 - 3673) (continued)				
7094.3664B.2D	94/03/07	922	19417		26.3	ug/Ft^2	Kitchen - Window Well
7094.3664B.3D	94/03/07	925	19418	<	36.2	ug/Ft^2	Kitchen - Floor
7094.3664B.4D	94/03/07	927	19419		120.0	ug/Ft^2	Living Room - Window Sill
7094.3664B.5D	94/03/07	930	19420	<	36.2	ug/Ft^2	Living Room - Floor
7094.3664B.6D	94/03/07	935	19421		60.0	ug/Ft^2	Bedroom - Window Sill
7094.3664B.8D	94/03/07	940	19423	<	40.3	ug/Ft^2	Bedroom - Floor
7094.3664B.9D	94/03/07	942	19424		892.0	ug/Ft^2	Bathroom - Window Well
7094.3664B.10D	94/03/07	945	19425	<	40.3	ug/Ft^2	Bathroom - Floor
7094.3665B.1D	94/03/07	1046	19489		941.0	ug/Ft^2	Kitchen - Window Well
7094.3665B.2D	94/03/07	1047	19490	<	25.0	ug/Ft^2	Kitchen - Floor
7094.3665B.3D	94/03/07	1050	19491		196.0	ug/Ft^2	Living Room - Window Well
7094.3665B.4D	94/03/07	1052	19492	<	24.0	ug/Ft^2	Living Room - Floor
7094.3665B.6D	94/03/07	1056	19494		613.0	ug/Ft^2	Child's Bedroom - Window Well
7094.3665B.7D	94/03/07	1058	19495	<	15.2	ug/Ft^2	Child's Bedroom - Floor
7094.3665B.8D	94/03/07	1102	19496		2093.0	ug/Ft^2	Bedroom - Window Well
7094.3665B.9D	94/03/07	1104	19497	<	13.7	ug/Ft^2	Bedroom - Floor
			Summerall (Units 3700- 3718)				
7094.3700A.2D	94/03/08	1001	19379	<	18.1	ug/Ft^2	Kitchen - Window Sill
7094.3700A.3D	94/03/08	1005	19380	<	36.2	ug/Ft^2	Dining Room - Floor
7094.3700A.4D	94/03/08	1007	19381	<	56.8	ug/Ft^2	Stairwell - Tread
7094.3700A.5D	94/03/08	1010	19382	<	36.2	ug/Ft^2	Bedroom - Floor
7094.3700A.6D	94/03/08	1011	19383	<	45.4	ug/Ft^2	Bathroom - Window Sill
7094.3700D.1D	94/03/08	1022	19475	<	17.4	ug/Ft^2	Kitchen - Floor
7094.3700D.2D	94/03/08	1025	19476	<	17.1	ug/Ft^2	Kitchen - Window Sill
7094.3700D.3D	94/03/08	1030	19477		20.3	ug/Ft^2	Living Room - Window Well
7094.3700D.4D	94/03/08	1035	19478	<	25.0	ug/Ft^2	Dining Room - Floor
7094.3700D.5D	94/03/08	1118	19479		29.8	ug/Ft^2	Child's Bedroom - Window Well
7094.3700D.6D	94/03/08	1120	19480		32.8	ug/Ft^2	Child's Bedroom - Floor
7094.3700D.7D	94/03/08	1126	19481		20.5	ug/Ft^2	Child's Bedroom - Floor
7094.3700D.8D	94/03/08	1130	19482		25.2	ug/Ft^2	Bathroom - Floor
7094.3706D.1D	94/03/09	932	19513		22.9	ug/Ft^2	Kitchen - Window Well
7094.3706D.2D	94/03/09	935	19514	<	17.2	ug/Ft^2	Kitchen - Floor
7094.3706D.3D	94/03/09	936	19515	<	18.9	ug/Ft^2	Dining Room - Window Sill
7094.3706D.4D	94/03/09	938	19516	<	25.0	ug/Ft^2	Dining Room - Floor
7094.3706D.5D	94/03/09	942	19517	<	13.6	ug/Ft^2	Bedroom - Floor
7094.3706D.6D	94/03/09	945	19518	<	14.9	ug/Ft^2	Child's Bedroom - Closet Floor
7094.3708C.2D	94/03/09	940	19450	<	17.6	ug/Ft^2	Kitchen - Window Sill
7094.3708C.3D	94/03/09	942	19451	<	40.3	ug/Ft^2	Living Room - Floor
7094.3708C.4D	94/03/09	945	19452	<	67.6	ug/Ft^2	Stairwell - Tread
7094.3708C.5D	94/03/09	947	19453		125.0	ug/Ft^2	Bedroom - Floor
7094.3708C.6D	94/03/09	950	19454	<	28.4	ug/Ft^2	Bedroom - Window Well
7094.3718A.2D	94/03/10	900	19562	<	20.3	ug/Ft^2	Kitchen - Window Sill
7094.3718A.3D	94/03/10	902	19563	<	24.0	ug/Ft^2	Kitchen - Floor
7094.3718A.4D	94/03/10	904	19564	<	16.9	ug/Ft^2	Living Room - Window Sill
7094.3718A.5D	94/03/10	904	19565	<	25.0	ug/Ft^2	Living Room - Floor
7094.3718A.6D	94/03/10	908	19566		23.3	ug/Ft^2	Child's Bedroom - Closet Floor
7094.3718A.7D	94/03/10	911	19567	<	21.2	ug/Ft^2	Bathroom - Floor
7094.3718A.8D	94/03/10	914	19568	<	10.7	ug/Ft^2	Child's Bedroom - Floor

APPENDIX D

Table 4
QUALITY CONTROL DATA FOR
FORT McCLELLAN DUST SAMPLES
Buildings and Family Housing Groups

Spike Field ID (1000 ug/Sample Spike)	Sample Date	Sample Time	Lab #	Result	Units	Spike Percent Recovery
7094.106.5.3D	94/02/09	1035	18909	900.0	ug/Sample	90.0 %
7094.3319A.2.D	94/02/09	0	18886	850.0	ug/Sample	85.0 %
7094.3519B.4D	94/02/22	1640	19430	1020.0	ug/Sample	102.0 %
7094.3520E.3D	94/02/23	1153	19301	1010.0	ug/Sample	101.0 %
7094.3610B.6D	94/03/02	1055	19390	985.0	ug/Sample	98.5 %
7094.3616B.1D	94/03/03	932	19621	1010.0	ug/Sample	101.0 %
7094.3626B.5D	94/03/04	1128	19445	970.0	ug/Sample	97.0 %
7094.3640B.1D	94/03/04	1536	19612	965.0	ug/Sample	96.5 %
7094.3652A.6D	94/03/05	935	19400	975.0	ug/Sample	97.5 %
7094.3659B.9D	94/03/05	1054	19415	1005.0	ug/Sample	100.5 %
7094.3664B.7D	94/03/07	937	19422	1005.0	ug/Sample	100.5 %
7094.3665B.5D	94/03/07	1054	19493	1000.0	ug/Sample	100.0 %
7094.3700A.7D	94/03/08	1015	19384	930.0	ug/Sample	93.0 %
7094.3708C.7D	94/03/09	953	19455	935.0	ug/Sample	93.5 %
7094.3718A.1D	94/03/10	858	19561	925.0	ug/Sample	92.5 %
7094.3742B.2D	94/03/15	1034	19596	970.0	ug/Sample	97.0 %
7094.3766A.1D	94/03/16	1022	19605	995.0	ug/Sample	99.5 %
7094.1740.1D	94/02/25	1712	19467	840.0	ug/Sample	84.0 %
7094.3213.1D	94/02/10	1600	18859	900.0	ug/Sample	90.0 %
7094.3293.3D	94/02/03	1038	18872	900.0	ug/Sample	90.0 %
7094.3527.2D	94/02/24	1638	19573	1010.0	ug/Sample	101.0 %

Field Blank ID	Sample Date	Sample Time	Lab #	Result	Units
7094.25B.2D.BLANK	94/02/02	1015	18913	< 50.0	ug/Sample
7094-D1 BLANK	94/02/02	850	18883	< 50.0	ug/Sample
7094.106.BLANK	94/02/09	1020	18906	< 50.0	ug/Sample
7094.2235.1D BLANK	94/03/17	915	19436	< 25.0	ug/Sample
7094.3319A.BLANK	94/02/09	1020	18884	< 50.0	ug/Sample
7094.3519B.BLANK	94/02/22	1625	19426	< 25.0	ug/Sample
7094.3520E.BLANK	94/02/23	1145	19298	< 25.0	ug/Sample
7094.3526B.1D.BLANK	94/02/24	925	19312	< 25.0	ug/Sample
7094.3530C.1D BLANK	94/02/25	1002	19345	< 25.0	ug/Sample
7094.3533E.BLANK	94/02/26	1210	19355	< 25.0	ug/Sample
7094.3534B.1D BLANK	94/02/28	1000	19341	< 25.0	ug/Sample
7094.3536A.D2.BLANK	94/02/01	1440	18895	< 50.0	ug/Sample
7094.3536A.D8.BLANK	94/02/01	0	18901	< 50.0	ug/Sample
7094.3610B.1D BLANK	94/03/02	1030	19385	< 25.0	ug/Sample
7094.3616B.BLANK	94/03/03	930	19620	< 25.0	ug/Sample
7094.3626B.BLANK	94/03/04	1115	19440	< 25.0	ug/Sample
7094.3640B.BLANK	94/03/04	1535	19611	< 25.0	ug/Sample
7094.3652A.1D BLANK	94/03/05	920	19395	< 25.0	ug/Sample
7094.3659B.BLANK	94/03/05	1035	19406	< 25.0	ug/Sample
7094.3664B.1D BLANK	94/03/07	920	19416	< 25.0	ug/Sample
7094.3665B.BLANK	94/03/07	1045	19488	< 25.0	ug/Sample
7094.3700A.1D BLANK	94/03/08	1000	19378	< 25.0	ug/Sample
7094.3700D.9D BLANK	94/03/08	1132	19483	< 25.0	ug/Sample
7094.3700D.BLANK	94/03/08	1020	19474	< 25.0	ug/Sample
7094.3706D.BLANK	94/03/09	930	19512	< 25.0	ug/Sample
7094.3708C.1D BLANK	94/03/09	937	19449	< 25.0	ug/Sample
7094.3718A.BLANK	94/03/10	855	19560	< 25.0	ug/Sample
7094.3718D.1D BLANK	94/03/10	918	19328	< 25.0	ug/Sample
7094.3725A.1D BLANK	94/03/11	930	19499	< 25.0	ug/Sample
7094.3725D.1D BLANK	94/03/11	1045	19485	< 25.0	ug/Sample
7094.3725D.BLANK	94/03/11	1045	19484	< 25.0	ug/Sample
7094.3732H.1D BLANK	94/03/14	1105	19349	< 25.0	ug/Sample
7094.3737B.BLANK	94/03/14	1405	19626	< 25.0	ug/Sample
7094.3742B.BLANK	94/03/15	1030	19594	< 25.0	ug/Sample
7094.3743B.1D BLANK	94/03/15	1045	19367	< 25.0	ug/Sample
7094.3766A.BLANK	94/03/16	1020	19604	< 25.0	ug/Sample
7094.1740.BLANK	94/02/25	1710	19466	< 25.0	ug/Sample
7094.2299.1D BLANK	94/03/15	1545	19532	< 25.0	ug/Sample
7094.3213.BLANK	94/02/10	1600	18858	< 50.0	ug/Sample
7094.3293.BLANK	94/02/03	1025	18869	< 50.0	ug/Sample
7094.3527.BLANK	94/02/24	1632	19571	< 25.0	ug/Sample
7094.3681.BLANK	94/02/05	1410	18864	< 50.0	ug/Sample

Appendix D

BUILDING AREAS WHERE SOIL LEAD CONCENTRATIONS EXCEED 400 mg/Kg (ppm)

Building/Unit #, Use	Soil Lead Concentration mg/KG (ppm)	Comment
129, Workshop	1810	within 3 ft of Bldg
893, Chapel	4158	within 3 ft of Bldg, interim controls
1740, Soldier's Chapel	1590	within 3 ft of Bldg
2242, Family Housing	2472	within 3 ft of Bldg
2293, WAC Chapel	532	12 - 20 ft from Bldg

Table I--EPA Recommendations for Response Activities for Residential Lead-Contaminated Bare Soil		
Area of Concern	Bare Soil Lead Concentration (ppm)	Recommended Response Activities
Areas expected to be used by children, including: ▸ residential backyards, ▸ daycare and school yards, ▸ playgrounds, ▸ public parks, and ▸ other areas where children gather.	400 - 5000	Interim controls to change use patterns and establish barriers between children and contaminated soil, including: ▸ planting ground cover or shrubbery to reduce exposure to bare soil, ▸ moving play equipment away from contaminated bare soil, ▸ restricting access through posting, fencing, or other actions, and ▸ control further contamination of area. Monitor condition of interim controls. Public notice of contaminated common areas by local agency.
	> 5000	Abatement of soil, including: ▸ removal and replacement of contaminated soil, and ▸ permanent barriers. Public notice of contaminated common areas by local agency.
Areas where contact by children is less likely or infrequent	2000 - 5000	Interim controls to change use patterns and establish barriers between children and contaminated soil, including: ▸ planting ground cover or shrubbery to reduce exposure to bare soil, ▸ moving play equipment away from contaminated bare soil, ▸ restricting access through posting, fencing, or other actions, and ▸ control further contamination of area. Monitor condition of interim controls. Public notice of contaminated common areas by local agency.
	> 5000	Abatement of soil, including: ▸ removal and replacement of contaminated soil, and ▸ permanent barriers. Public notice of contaminated common areas by local agency.

Table 1
FORT McCLELLAN SOIL SAMPLE DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	SAD Lab #	Result	Units	Location of Composite Sample
			BUILDINGS			
			Building 66 (Child Development Center)			
66.1	94/03/30	1617	19707	125.0	mg/Kg	0 -3' From Building
66.2	94/03/30	1617	19708	127.0	mg/Kg	10' - 20' From Building
66.3	94/03/30	1620	19709	82.8	mg/Kg	Parking Lot
			Building 67 (Silver Chapel)			
67.1	94/03/30	1600	19794	87.5	mg/Kg	0 - 3' From Building
67.2	94/03/30	1600	19795	37.8	mg/Kg	10' - 20' From Building
			Building 128 (Family Fitness Center)			
128.1	94/03/30	1445	19721	77.3	mg/Kg	0 - 3' From Building
128.2	94/03/30	1450	19722	52.5	mg/Kg	10' - 20' From Building
			Building 129 (Workshop)			
129.1	94/03/30	1452	19796	1810.0	mg/Kg	0 - 3' From Building
129.2	94/03/30	1455	19797	109.0	mg/Kg	10' - 20' From Building
			Building 130 (Miller Gym)			
130.1	94/03/30	1455	19855	219.0	mg/Kg	0 - 3' From Building
130.2	94/03/30	1500	19856	113.0	mg/Kg	10' - 20' From Building
130.3	94/03/30	1505	19857	68.3	mg/Kg	Parking Lot
			Building 292 (Noble Army Hospital)			
292.1	94/03/31	1005	19850	< 25.0	mg/Kg	0 - 3' From Building
292.2	94/03/31	1005	19851	46.9	mg/Kg	10' - 20' From Building
292.3	94/03/31	1005	19852	88.7	mg/Kg	Parking Lots - West Side
			Building 893 (Chapel)			
893.1	94/03/31	945	19830	4158.0	mg/Kg	0 - 3' From Building
893.2	94/03/31	945	19831	215.0	mg/Kg	10' - 20' From Building
			Building 992 (Recreation Center)			
992.1	94/03/31	945	19832	166.0	mg/Kg	0 - 3' From Building
992.2	94/03/31	945	19833	111.0	mg/Kg	10' - 20' From Building
			Building 1740 (Soldier's Chapel)			
1740.1	94/03/31	950	19820	1590.0	mg/Kg	0 - 3' From Building
1740.2	94/03/31	950	19821	90.1	mg/Kg	10' - 20' From Building
			Building 2101 (Post Theater)			
2101.1	94/03/30	1506	19792	142.0	mg/Kg	0 - 3' From Building
2101.2	94/03/30	1510	19793	30.2	mg/Kg	Playground - Near pond
			Building 2102 (Library)			
2102.1	94/03/30	1515	19842	193.0	mg/Kg	Beneath Guide Wire Cover

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24 September 1994

SOIL AND DUST SAMPLE DATA FOR LEAD RISK ASSESSMENT FORT McCLELLAN AND ANNISTON ARMY DEPOT ALABAMA

1. Enclosed are the sample results and quality control data for soil and dust (wipe) samples taken for lead risk assessment at Ft. McClellan and Anniston Army Depot Alabama.

2. Soil and dust sampling was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990). A lead-based paint (LBP) survey using a SCITEC MAP 3, X-ray Fluorescence Spectrometer (XRF spectrum analyzer) was performed just prior to dust sampling. Therefore, dust samples were taken in areas where lead contaminated dust was more likely to exist.

3. The data is grouped according to the type of sample (soil or dust) and area sampled. Each building is treated as a separate area. Family housing is divided into areas similar in; type and time of construction, location and LBP survey results. For example, Units 25 - 30 on Baltzell Rd. were built in the mid 1950's and have similar floorplans and LBP survey results.

4. This report consists of:

Table 1:	Soil Sample Data for Ft. McClellan
Table 2:	Laboratory Quality Control Data for Ft. McClellan Soil Samples
Table 3:	Dust Sample Data for Ft. McClellan
Table 4:	Laboratory Quality Control Data for Ft. McClellan Dust Samples
Table 5:	Soil, Dust and Quality Control Data for Anniston Army Depot

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Table 1 (continued)
FORT McCLELLAN SOIL SAMPLE DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	SAD Lab #	Result	Units	Location of Composite Sample
			BUILDINGS (continued)			
			Building 2213 (Child Development Center)			
2213.1	94/03/31	850	19843	168.0	mg/Kg	0 - 3' From Building
2213.2	94/03/31	850	19844	95.6	mg/Kg	10' - 20' From Building
2213.3	94/03/31	850	19845	55.5	mg/Kg	Parking Lot
2213.4	94/03/31	850	19846	31.7	mg/Kg	Playground
			Building 2290 (Preventative Medicine)			
2290.1	94/03/31	800	19847	142.0	mg/Kg	0 - 3' From Building
2290.2	94/03/31	800	19848	41.4	mg/Kg	10' - 20' From Building
2290.3	94/03/31	800	19849	106.0	mg/Kg	Parking Lot
			Building 2293 (WAC Chapel)			
2293.1	94/03/31	800	19853	260.0	mg/Kg	0 - 3' From Building
2293.2	94/03/31	800	19854	532.0	mg/Kg	10' - 20' From Building
			Building 2299 (Chemical Museum)			
2299.1	94/03/31	835	19840	117.0	mg/Kg	0 - 3' From Building
2299.2	94/03/31	835	19841	58.1	mg/Kg	10' - 20' From Building
			Building 3182 (MP Museum)			
3182.1	94/03/31	912	19785	76.0	mg/Kg	0 - 3' From Building
3182.2	94/03/31	912	19786	54.1	mg/Kg	10' - 20' From Building
			Building 3213 (Army Community Service Center)			
3213.1	94/03/30	1530	19751	84.2	mg/Kg	0 - 3' From Building
3213.2	94/03/30	1535	19752	< 25.0	mg/Kg	10' - 20' From Building
			Building 3293 (Chapel)			
3293.1	94/03/30	1540	19838	33.1	mg/Kg	0 - 3' From Building
3293.2	94/03/30	1540	19839	31.3	mg/Kg	10' - 20' From Building
			Building 3527 (Scout Building)			
3527.1	94/03/30	1035	19723	190.0	mg/Kg	0 - 3' From Building
3527.2	94/03/30	1038	19724	57.3	mg/Kg	10' - 20' From Building
			Building 3681 (Dependent School)			
3681.1	94/03/30	1120	19725	58.6	mg/Kg	0 - 3' From Building
3681.2	94/03/30	1120	19726	35.8	mg/Kg	10' - 20' From Building
3681.3	94/03/30	1120	19727	31.0	mg/Kg	Playground - Behind Main Building
3681.4	94/03/30	1120	19728	< 25.0	mg/Kg	Ballfield
3681.5	94/03/30	1120	19729	31.2	mg/Kg	Playground - Behind Trailers
3681.6	94/03/30	1120	19730	80.8	mg/Kg	Parking Lot

Table 1 (continued)
FORT McCLELLAN SOIL SAMPLE DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	SAD Lab #	Result	Units	Location of Composite Sample
			FAMILY HOUSING GROUPS			
			Buchner Circle (Units 9 and 13)			
9.1	94/03/31	900	19834	78.2	mg/Kg	0 - 3' From Building
9.2	94/03/31	900	19835	76.2	mg/Kg	10' - 20' From Building
13.1	94/03/31	900	19836	68.0	mg/Kg	0 - 3' From Building
13.2	94/03/31	900	19837	55.6	mg/Kg	10' - 20' From Building
			Baltzell Rd. (Units 25 - 30)			
25.1	94/03/30	1615	19753	57.7	mg/Kg	0 - 3' From Building
25.2	94/03/30	1615	19754	75.0	mg/Kg	10' - 20' From Building
27.1	94/03/30	1620	19755	106.0	mg/Kg	0 - 3' From Building
27.2	94/03/30	1620	19756	78.8	mg/Kg	10' - 20' From Building
28.1	94/03/30	1625	19757	47.0	mg/Kg	0 - 3' From Building
28.2	94/03/30	1625	19758	151.0	mg/Kg	10' - 20' From Building
29.1	94/03/30	1630	19759	57.5	mg/Kg	0 - 3' From Building
29.2	94/03/30	1630	19760	< 25.0	mg/Kg	10' - 20' From Building
30.1	94/03/30	1635	19761	37.2	mg/Kg	0 - 3' From Building
30.2	94/03/30	1635	19762	31.1	mg/Kg	10' - 20' From Building
			Drennen (Units 81 - 107)			
81.1	94/03/30	1550	19798	156.0	mg/Kg	0 - 3' From Building
81.2	94/03/30	1555	19799	52.9	mg/Kg	10' - 20' From Building
89.1	94/03/30	1611	19804	94.7	mg/Kg	0 - 3' From Building
89.2	94/03/30	1612	19805	86.6	mg/Kg	10' - 20' From Building
102.1	94/03/30	1604	19800	44.0	mg/Kg	0 - 3' From Building
102.2	94/03/30	1607	19801	32.3	mg/Kg	10' - 20' From Building
104.1	94/03/30	1608	19802	40.1	mg/Kg	0 - 3' From Building
104.2	94/03/30	1610	19803	28.5	mg/Kg	10' - 20' From Building
107.1	94/03/30	1614	19806	73.9	mg/Kg	0 - 3' From Building
107.2	94/03/30	1615	19807	62.3	mg/Kg	10' - 20' From Building
			WAC Circle (Units 2235 - 2240)			
2235.1	94/03/31	820	19824	182.0	mg/Kg	0 - 3' From Building
2235.2	94/03/31	820	19825	65.9	mg/Kg	10' - 20' From Building
2236.1	94/03/31	820	19826	468.0	mg/Kg	0 - 3' From Building
2236.2	94/03/31	820	19827	66.1	mg/Kg	10' - 20' From Building
			Unit 2242			
2242.1	94/03/31	822	19828	2472.0	mg/Kg	0 - 3' From Building
2242.2	94/03/31	822	19829	87.1	mg/Kg	10' - 20' From Building

Table 1 (continued)
FORT McCLELLAN SOIL SAMPLE DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	SAD Lab #		Result	Units	Location of Composite Sample
			FAMILY HOUSING GROUPS (continued)				
			Unit 2271				
2271.1	94/03/31	830	19822		197.0	mg/Kg	0 - 3' From Building
2271.2	94/03/31	830	19823		39.9	mg/Kg	10' - 20' From Building
			Avery (Units 3310 - 3343)				
33.1	94/03/30	1225	19710		39.4	mg/Kg	Playground - Near # 3335
3314.1	94/03/30	1215	19719		45.1	mg/Kg	0 - 3' From Building
3314.2	94/03/30	1220	19720		69.9	mg/Kg	10' - 20' From Building
3327.1	94/03/30	1206	19717		75.6	mg/Kg	0 - 3' From Building
3327.2	94/03/30	1208	19718		49.1	mg/Kg	10' - 20' From Building
3328.1	94/03/30	1200	19715		270.0	mg/Kg	0 - 3' From Building
3328.2	94/03/30	1205	19716		65.9	mg/Kg	10' - 20' From Building
3338.1	94/03/30	1150	19713		357.0	mg/Kg	0 - 3' From Building
3338.2	94/03/30	1155	19714	<	25.0	mg/Kg	10' - 20' From Building
3341.1	94/03/30	1140	19711		97.3	mg/Kg	0 - 3' From Building
3341.2	94/03/30	1145	19712	<	25.0	mg/Kg	10' - 20' From Building
			Littlebrant (Units 3400 - 3411)				
3401.1	94/03/30	1140	19731	<	25.0	mg/Kg	0 - 3' From Building
3401.2	94/03/30	1140	19732		32.5	mg/Kg	10' - 20' From Building
3402.1	94/03/30	1155	19733		54.5	mg/Kg	0 - 3' From Building
3402.2	94/03/30	1155	19734		42.2	mg/Kg	10' - 20' From Building
3403.1	94/03/30	1145	19735		113.2	mg/Kg	0 - 3' From Building
3403.2	94/03/30	1145	19736	<	25.0	mg/Kg	10' - 20' From Building
3407.1	94/03/30	1200	19737		25.8	mg/Kg	0 - 3' From Building
3407.2	94/03/30	1200	19738	<	25.0	mg/Kg	10' - 20' From Building
3409.1	94/03/30	1205	19739		205.0	mg/Kg	0 - 3' From Building
3409.2	94/03/30	1205	19740		37.9	mg/Kg	10' - 20' From Building
			Morton/Church/Baker (Units 3500 - 3542)				
35.1	94/03/30	955	19901		113.8	mg/Kg	Parking Lot/Roadway In front of # 3540
35.2	94/03/30	1010	19904	<	25.0	mg/Kg	Large Playground
35.3	94/03/30	1020	19905		83.3	mg/Kg	Roadway - Near playground
3503.1	94/03/30	1050	19910		246.0	mg/Kg	0 - 3' From Building
3503.2	94/03/30	1055	19911		36.9	mg/Kg	10' - 20' From Building
3519.1	94/03/30	1025	19906		153.0	mg/Kg	0 - 3' From Building
3519.2	94/03/30	1030	19907	<	25.0	mg/Kg	10' - 20' From Building
3530.1	94/03/30	1040	19908		119.0	mg/Kg	0 - 3' From Building
3530.2	94/03/30	1045	19909		47.9	mg/Kg	10' - 20' From Building

Table 1 (continued)
FORT McCLELLAN SOIL SAMPLE DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	SAD Lab #		Result	Units	Location of Composite Sample
			FAMILY HOUSING GROUPS (continued)				
			Morton/Church/Baker (Units 3500 - 3542) (continued)				
3533.1	94/03/30	1000	19902		254.0	mg/Kg	0 - 3' From Building
3533.2	94/03/30	1005	19903		41.5	mg/Kg	10' - 20' From Building
3540.1	94/03/30	945	19899		65.9	mg/Kg	0 - 3' From Building
3540.2	94/03/30	950	19900		76.2	mg/Kg	10' - 20' From Building
			Wirans/Church/Morton (Units 3610 - 3673)				
3615.1	94/03/30	945	19741		64.3	mg/Kg	0 - 3' From Building
3615.2	94/03/30	945	19742		55.2	mg/Kg	10' - 20' From Building
3626.1	94/03/30	1000	19743		52.0	mg/Kg	0 - 3' From Building
3626.2	94/03/30	1000	19744		37.4	mg/Kg	10' - 20' From Building
3629.1	94/03/30	1005	19745		98.6	mg/Kg	0 - 3' From Building
3629.2	94/03/30	1005	19746		50.3	mg/Kg	10' - 20' From Building
3635.1	94/03/30	1020	19747		77.5	mg/Kg	0 - 3' From Building
3635.2	94/03/30	1020	19748		36.1	mg/Kg	10' - 20' From Building
3671.1	94/03/30	1030	19749		57.1	mg/Kg	0 - 3' From Building
3671.2	94/03/30	1030	19750		73.4	mg/Kg	10' - 20' From Building
			Summerall (Units 3700- 3718)				
37A.1	94/03/30	1445	19808		58.6	mg/Kg	Playground - Near # 3712
37A.2	94/03/30	1445	19809		88.4	mg/Kg	Parking Lot - Near # 3708
3700.1	94/03/30	1520	19818		106.0	mg/Kg	0 - 3' From Building
3700.2	94/03/30	1520	19819		93.7	mg/Kg	10' - 20' From Building
3704.1	94/03/30	1510	19816		230.0	mg/Kg	0 - 3' From Building
3704.2	94/03/30	1510	19817		45.9	mg/Kg	10' - 20' From Building
3708.1	94/03/30	1505	19814		63.3	mg/Kg	0 - 3' From Building
3708.2	94/03/30	1505	19815		40.5	mg/Kg	10' - 20' From Building
3714.1	94/03/30	1500	19812		119.0	mg/Kg	0 - 3' From Building
3714.2	94/03/30	1500	19813		50.2	mg/Kg	10' - 20' From Building
3718.1	94/03/30	1450	19810		195.0	mg/Kg	0 - 3' From Building
3718.2	94/03/30	1450	19811		61.9	mg/Kg	10' - 20' From Building
			Sharp/Summerall (Units 3719 - 3732)				
37B.1	94/03/30	1352	19767		152.0	mg/Kg	Playground - Behind # 3729
3720.1	94/03/30	1400	19768		182.0	mg/Kg	0 - 3' From Building
3720.2	94/03/30	1405	19769	<	25.0	mg/Kg	10' - 20' From Building
3722.1	94/03/30	1410	19770		71.2	mg/Kg	0 - 3' From Building
3722.2	94/03/30	1415	19771	<	25.0	mg/Kg	10' - 20' From Building
3725.1	94/03/30	1415	19772		83.2	mg/Kg	0 - 3' From Building
3725.2	94/03/30	1420	19773		65.8	mg/Kg	10' - 20' From Building

Table 1 (continued)
FORT McCLELLAN SOIL SAMPLE DATA
Buildings and Family Housing Groups

Field ID	Sample Date	Sample Time	SAD Lab #	Result	Units	Location of Composite Sample
			FAMILY HOUSING GROUPS (continued)			
			Sharp/Summerall (Units 3719 - 3732) (continued)			
3729.1	94/03/30	1348	19765	188.0	mg/Kg	0 - 3' From Building
3729.2	94/03/30	1350	19766	47.4	mg/Kg	10' - 20' From Building
3732.1	94/03/30	1337	19763	206.0	mg/Kg	0 - 3' From Building
3732.2	94/03/30	1340	19764	29.5	mg/Kg	10' - 20' From Building
			Cooper/Turner/Bray/Littlebrant (Units 3737 - 3770)			
37C.1	94/03/30	1400	19778	< 25.0	mg/Kg	Playground - Behind # 3767
3737.1	94/03/30	1415	19783	128.0	mg/Kg	0 - 3' From Building
3737.2	94/03/30	1415	19784	102.0	mg/Kg	10' - 20' From Building
3744.1	94/03/30	1410	19781	39.8	mg/Kg	0 - 3' From Building
3744.2	94/03/30	1410	19782	104.0	mg/Kg	10' - 20' From Building
3745.1	94/03/30	1405	19779	56.1	mg/Kg	0 - 3' From Building
3745.2	94/03/30	1405	19780	74.7	mg/Kg	10' - 20' From Building
3768.1	94/03/30	1345	19774	66.7	mg/Kg	0 - 3' From Building
3768.2	94/03/30	1345	19775	41.4	mg/Kg	10' - 20' From Building
3769.1	94/03/30	1355	19776	114.0	mg/Kg	0 - 3' From Building
3769.2	94/03/30	1355	19777	< 25.0	mg/Kg	10' - 20' From Building

Table 2
QUALITY CONTROL DATA FOR
FORT McCLELLAN SOIL SAMPLES
Buildings and Family Housing Groups

Field ID	SAD Lab #	Result	Duplicate Result	Units	Spike Percent Recovery
3341.2	19712	< 25.0	32.0	mg/Kg	172.0 %
128.2	19722	52.5	42.9	mg/Kg	103.5 %
3401.2	19732	32.5	47.2	mg/kg	109.0 %
3615.2	19742	55.2	60.7	mg/Kg	109.0 %
3213.2	19752	< 25.0	< 25.0	mg/Kg	112.0 %
30.2	19762	31.1	< 25.0	mg/Kg	104.5 %
3725.1	19772	83.2	60.2	mg/Kg	92.0 %
3744.2	19782	104	188	mg/Kg	92.0 %
129.2	19797	109	56.0	mg/Kg	96.5 %
107.2	19807	94.7	86.6	mg/Kg	103.5 %
3704.2	19817	45.9	38.7	mg/Kg	93.5 %
2236.2	19827	66.1	71.7	mg/Kg	101.5 %
13.2	19837	55.6	90.4	mg/Kg	98.5 %
2290.1	19847	142	139	mg/Kg	94.5 %
130.3	19857	68.3	77.2	mg/Kg	101.5 %
3530.2	19908	119	95.9	mg/Kg	100.0 %

Standard Reference Material Manufacturer	Lot Number	Certified True Value (ug/L)	Run Number	Observed Value (ug/L)	Percent Recovery
Environmental Resource Associates	9947	500	1	500	100.0 %
"	"	"	2	555	111.0 %
"	"	"	3	592	118.5 %
"	"	"	4	482	96.5 %
"	"	"	5	488	97.5 %
"	"	"	6	478	95.5 %
"	"	"	7	570	114.0 %
"	"	"	8	480	96.0 %
"	"	"	9	512	102.5 %
"	"	"	10	572	114.5 %
"	"	"	11	510	102.0 %
"	"	"	12	538	107.5 %
"	"	"	13	545	109.0 %
"	"	"	14	500	100.0 %
"	"	"	15	595	119.0 %
"	"	"	16	550	110.0 %
"	"	"	17	530	106.0 %
"	"	"	18	500	100.0 %
"	"	"	19	500	100.0 %

Blank	Run Number	Result	Units
	1	< 500	ug/L
	2	< 500	ug/L
	3	< 500	ug/L
	4	< 500	ug/L
	5	< 500	ug/L
	6	< 500	ug/L
	7	< 500	ug/L
	8	< 500	ug/L
	9	< 500	ug/L
	10	< 500	ug/L
	11	< 500	ug/L
	12	< 500	ug/L
	13	< 500	ug/L
	14	< 500	ug/L
	15	< 500	ug/L
	16	< 500	ug/L
	17	< 500	ug/L
	18	< 500	ug/L
	19	< 500	ug/L
	20	< 500	ug/L
	21	< 500	ug/L
	22	< 500	ug/L

APPENDIX E

Appendix E

TABLE SUMMARY OF LEAD-BASED PAINT HAZARDS

Building No.	Interior Paint Cond.	Exterior Paint Cond.	LBP Present	LBP Fair Cond.	LBP Poor Cond.	LBP on Friction Surfaces	LBP on Impact Surfaces	LBP on Surface Accessible to mouthing by Children	Lead Dust Exceed Std	Soil Lead Exceed 400 ppm
66 Child Dev. Center	Good Fair Poor	Fair	I-Yes E-ND	I-Yes	I-Yes		Door Jamb, Stall?		NT	NONE
67 Silver Chapel	Good Fair Poor	Good Fair Poor	I-Yes E-Yes	I-Yes	I-Yes		Door & Jamb		Stairwell Floor	NONE
128 Family Fitness Center	Good	Good Fair	I-ND E-Yes	E-Yes			Door & comps.		NT	NONE
129 Workshop	Good Fair Poor	Good Fair Poor	I-Yes E-Yes	I-Yes E-Yes	I-Yes E-Yes		Doors & comp.		NT	0 - 3 ft of Bldg
130 Miller Gym	Good	Good	I-ND E-Yes						NT	NONE
292 Hospital	Good	Good	I-ND E-Not Tested						NT	NONE
893 Chapel	No Obser-vation	Poor	I-Not tested E-Yes	E-Yes	E-Yes	E-Window Sash	Door		NT	0 - 3 ft of Bldg
992 Rec. Center	No Obser-vation	Good Fair Poor	I-Not tested E-Yes	E-Yes	E-Yes				NT	NONE

TABLE SUMMARY OF LEAD-BASED PAINT HAZARDS

Building No.	Interior Paint Cond.	Exterior Paint Cond.	LBP Present	LBP Fair Cond.	LBP Poor Cond.	LBP on Friction Surfaces	LBP on Impact Surfaces	LBP on Surface Accessible to mouthing by Children	Lead Dust Exceed Std	Soil Lead Exceed 400 ppm
1012 Truman Gym	Good Fair Poor	Good	I-Yes E-ND	I-Yes			Orange Metal Doors		NT	NT
1077 WAC Museum	Good	Good	I-ND E-ND						NT	NT
1740 Soldier's Chapel	Good Fair Poor	Good Fair Poor	I-Yes E-Yes	I-Yes	I-Yes E-Yes	Window Sash	Door & Comp.		NONE	10 - 20 ft of Bldg, if children freq.
1928 Bowling Alley	Good to Poor	Fair to Good	I-ND E-ND						NT	NT
1929 Dental Clinic	Good Fair Poor	Fair Poor	I-ND E-ND						NT	NT
2101 Post Theater	Good	Poor to Fair	I-ND E-Yes	E-Yes	E-Yes		Door & comp.		NT	NONE
2102 Library	Good	Good Poor	I-ND E-Yes		E-Yes				NT	NONE
2213 Child Dev. Center	Good to Fair, minor Poor	Good Fair Poor	I-Yes E-Yes	E-Yes	E-Yes		Door & Comp.		NT	NONE

Appendix E

TABLE SUMMARY OF LEAD-BASED PAINT HAZARDS

Building No.	Interior Paint Cond.	Exterior Paint Cond.	LBP Present	LBP Fair Cond.	LBP Poor Cond.	LBP on Friction Surfaces	LBP on Impact Surfaces	LBP on Surface Accessible to mouthing by Children	Lead Dust Exceed Std	Soil Lead Exceed 400 ppm
2242 Family Housing	Good Poor	Good Fair Poor	I-Yes E-Yes	E-Yes	I-Yes E-Yes	Window Sash, etc	Doors		NT	0 - 3 ft of Bldg
2271 Family Housing	Good Fair	Good Fair Poor	I-Yes E-Yes	E-Yes	I-Yes E-Yes		Door & Comp.	Window Sill	NT	NONE
2290 Preventive Medicine	Good Fair Poor	Good Fair Poor	I-Yes E-Yes	E-Yes	E-Yes		Screen Doors, Door & Frame		NT	NONE
2293 WAC Chapel	Good to Fair	Good Fair Poor	I-ND E-Yes	E-Yes	E-Yes	E-Window Sash	Door & Jamb		NT	10 - 20 ft of Bldg, if children frequent
2299 Chemical Corps Museum	Good Fair Poor	Good Fair Poor	I-Yes E-Yes	I-Yes E-Yes	I-Yes E-Yes		Roll-up door		Entry Floor Area	NONE
3182 MP Museum	Good Fair	Good Fair	I-Yes E-Yes	I-Yes E-Yes		Window Sash	Door & Jamb		NT	NONE
3213 Army Comm. Svc Cntr	Good to Fair	Good Fair Poor	I-Yes E-Yes	E-Yes	E-Yes	E-Window Sash	E-Door		NONE	NONE

TABLE SUMMARY OF LEAD-BASED PAINT HAZARDS

Building No.	Interior Paint Cond.	Exterior Paint Cond.	LBP Present	LBP Fair Cond.	LBP Poor Cond.	LBP on Friction Surfaces	LBP on Impact Surfaces	LBP on Surface Accessible to mouthing by Children	Lead Dust Exceed Std	Soil Lead Exceed 400 ppm
3293 Chapel	Good to Fair	Good Fair Poor	I-Yes E-Yes	E-Yes	E-Yes		E-Door & Comp.		NONE	NONE
3527 Scout Building	Good Fair Poor	Fair Poor	I-Yes E-Yes	I-Yes	E-Yes		E-Door & Jamb		NONE	NONE
3681 Elem. School	Good Fair Poor	Good	I-Yes E-Yes				Door Jambs, rear & side entry		NONE	NONE
Buchner Family Housing,	Good	Good Fair Poor	I-Yes E-Yes	I-Yes E-Yes 1/2 units	E-Yes 1/2 units		Door & Comp	Book-Shelves? Window Sill	NT	NONE
Baltzell Family Housing	Good Fair Poor	Good Fair Poor	I-Yes E-Yes	E-Yes 3/5 units			Doors & comp	Window Sill Shelf? Height?	NONE	NONE
Drennen Family Housing	Good Fair Poor	Good Fair Poor	I-Yes E-Yes	I-Yes 3/10 E-Yes 3/10 units	I-Yes 2/10 E-Yes 1/10 units		Door & Comp	Chair Molding? Window Sills	NONE	NONE

Appendix E

TABLE SUMMARY OF LEAD-BASED PAINT HAZARDS

Building No.	Interior Paint Cond.	Exterior Paint Cond.	LBP Present	LBP Fair Cond.	LBP Poor Cond.	LBP on Friction Surfaces	LBP on Impact Surfaces	LBP on Surface Accessible to mouthing by Children	Lead Dust Exceed Std	Soil Lead Exceed 400 ppm
WAC Circle Housing	Good	Good Fair Poor	I-Yes E-Yes	E-Yes 1/2 units	E-Yes 1/2 units		Door & Comp		NONE	NONE
Avery Family Housing, Group 1, 3310-3331	overall good, some fair, little poor	overall good, some fair, little poor	I-Yes E-Yes	I-Yes 1/16 units E-Yes 3/16 units	E-Yes 3/16 units	Window Sash	E-Door Casing		1 FL 1 WW 1WS Unit 3319 1 unit tested	NONE
Avery Family Housing, Group 2, 3334-3343	Good	Good	I-Yes E-Yes				Door Comp, only in 3340A	Shelves? Height? Curtain Molding?	NT	NONE
Littlebrant Family Housing, 3400-3411	Good	Good Fair Poor	I-Yes E-Yes	E-Yes 1/5 units	E-Yes 2/5 units			Shelves? Height?	NT	NONE
Morton, Church, & Baker Rd Family Housing, 3500-3540	Good to fair	Good Fair Poor	I-Yes E-Yes	E-Yes 8/31 units	E-Yes 11/31 units				1 FL Unit 3530C 8 units tested	NONE

Appendix E

TABLE SUMMARY OF LEAD-BASED PAINT HAZARDS

Building No.	Interior Paint Cond.	Exterior Paint Cond.	LBP Present	LBP Fair Cond.	LBP Poor Cond.	LBP on Friction Surfaces	LBP on Impact Surfaces	LBP on Surface Accessible to mouthing by Children	Lead Dust Exceed Std	Soil Lead Exceed 400 ppm
Wirans, Church, and Morton Rds Family Housing , 3610-3673	Good Fair	Good Fair Poor	I-Yes E-Yes	I-Yes 11/32 units E-Yes 20/32 units	I-Yes 2/32 units E-Yes 16/32	Window Sash	E-Door Comp.	Shelf? Height?	10 WW in 6 units 8 units tested	NONE
Summerall Family Housing, Group A, 3700-3718	Good	Good Fair Poor	I-Yes E-Yes	E-Yes 3/18 units	E-Yes 1/18 units		Door & Comp	Window Sill Shelf? Height?	1 FL Unit 3708C 6 units tested	NONE
Summerall /Sharp Family Housing, Group B, 3719-3732	Good Fair Poor	Good Fair Poor	I-Yes E-Yes	E-Yes 12/21 units	E-Yes 2/21 units		Door & Comp.	Shelf? Height?	1 FL Unit 3731H 3 units tested	NONE
Cooper, Bray, & Littlebrant Family Housing, Group C, 3737-3770	Good	Good Fair Poor	I-Yes E-Yes	E-Yes 2/20 units	E-Yes 2/20 units	Window Sash		Shelf? Height?	1WW Unit 3737B 4 units tested	NONE

ND - None Detected; NT - Not Tested; I - Interior; E - Exterior; WW - Window Well; Comp. - Component/s; WS - Window Sill; FL - Floor

BUILDING 128

LBP SURVEY REPORT

US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION LABORATORY
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03 August 1994

LEAD-BASED PAINT SURVEY REPORT FOR BUILDING NO. 128 FAMILY FITNESS CENTER FT. McCLELLAN, ALABAMA

Introduction

1. This is the lead-based paint (LBP) field survey report for Building No. 128 located at Ft. McClellan, Alabama. This report documents the LBP field results for this building.

2. The LBP survey was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990) and EPA standard operating procedures (EPA document EPA600/8-91/214) for this instrument. The survey was performed by certified surveyors using a SCITEC MAP 3, X-ray Fluorescence Spectrometer (spectrum analyzer) XRF instrument.

3. A brief summary of the LBP survey is provided in this report. The actual field XRF readings for this structure appear in Table 1. Photographs of the unit appear as Figures. The building floorplan, showing the locations of the XRF readings testing positive, appears as Plate 1.

4. Positive readings (detectable lead above the action level) with the XRF vary depending on the instrument mode selected. The "test"[1] mode is normally used for routine readings. Readings testing "positive"[2] according to the XRF instrument manufacturer in the test mode are those with a lead concentration greater than 1.3 milligrams per centimeter squared (mg/cm^2), whereas, "negative" refers to readings of 0.7 mg/cm^2 or less. According to the HUD guidelines, positive readings for this instrument are greater than 1.3 mg/cm^2. "Inconclusive" readings are those that fall between 0.7 mg/cm^2 and 1.3 mg/cm^2.

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[1] The XRF instrument "test" mode is a reading of approximately 60 seconds duration. Test of longer duration increases precision.

[2] Inconclusive Range For XRF Spectrum Analyzer

Instrument Mode	Range	Units
Screen	0.4 - 1.6	mg/cm^2
Test	0.7 - 1.3	mg/cm^2
Confirm	0.85 - 1.15	mg/cm^2

5. The "action level" defined in the HUD Interim Guidelines is a lead concentration above 1.0 mg/cm^2. Lead concentrations in this report are shown for both K-shell and L-shell in Table 1. The L-shell XRF reading is essentially for the top 1 or 2 surface paint layers, whereas, the K-shell is total lead applicable for multi-layered paint surfaces. HUD Guidelines specify that the K-Shell results be used for evaluating XRF readings.

6. In this report paint condition stated as "good" is defined as intact; "fair" as intact but worn (minor chips from wear and tear but no adhesion or substrate problems); "poor" as severely worn or no longer adhering or, substrate deterioration (e.g., peeling, flaking, cracking, etc.).

Discussion

7. Building 128 (Family Fitness Center) is a one story structure originally built in 1967 (see figures). This building was formerly a roller skating rink, but has been converted to a fitness center. The walls are constructed of brick with metal upper trim and flashing. The doors and door components (e.g., casings, jambs, headers, etc.) are metal with concrete and metal overhangs. No windows are present.

8. The interior of this building consists of concrete, block and sheetrock walls. There are wood and metal doors and door components. The floors are covered with carpet and tile. Dropped tile ceilings are standard. The skating rink has been divided into two sections by a sheetrock wall. Other rooms appear to have been renovated.

9. A total of forty three (43) XRF readings were made on the interior of this building. None were positive for LBP. Twelve (12) exterior XRF readings were taken. One XRF reading and three lab analysis of scrape samples taken on the exterior of the building were positive for LBP (see Table 1).

Interior Summary

10. No positive levels of lead-based paint were detected on the interior of this building.

Exterior Summary

11. Based on the survey results, metal doors, door components (e.g., casings, headers, jambs, etc.) and painted metal awnings above the doors should be considered positive for LBP. The fire hydrant at the rear of the building tested positive. Yellow paint is visible beneath the beige paint on the fire hydrant. This type yellow paint typically contains lead.

Paint Condition

12. Overall, the paint on the interior of this building is in good condition. The paint on the exterior is in fair condition.

Prepared By: Keith Bates
Keith Bates
Geologist

Reviewed By:
Ray Willingham
Geologist

encls

CESAD-EN-FL 03 August 1994

Date Surveyed: 07 February 1994
Surveyors: KB, NK

Table 1
Ft. McClellan Building No. 128
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
7094020794071501	1.3	1.3	81	N/A	Calibration Check
7094020794071501	1.2	1.3	81	N/A	Calibration Check
7094020794071501	1.2	1.3	81	N/A	Calibration Check
7094020794071501	1.3	1.3	81	N/A	Calibration Check
7094020794071501	1.2	1.3	81	N/A	Calibration Check
0000	0.2	-0.1	81	N/A	Blank
1.63	1.3	1.5	81	N/A	NIST Std. = 1.63
INTERIOR XRF READINGS					
Room 1 (Women's Shower, Restroom and Sauna)					
128.1.1	-0.7	-0.2	20	Good	White Concrete Block Wall
128.1.2	-0.8	-0.2	20	Good	White Concrete Column
128.1.3	0.4	-0.0	81	Good	White Metal Stall
128.1.4	0.1	-0.1	20	Good	White Wood Trim
128.1.5	0.2	-0.1	20	Good	Grey Wood Door
128.1.6	-0.0	-0.2	81	Good	Grey Metal Door Jamb
128.1.7	-0.4	-0.1	20	Good	Stained Wood Cabinet
128.1.8	0.4	-0.1	81	Good	Grey Metal Door
Room 2 (Men's Shower, Restroom and Sauna)					
128.2.1	-1.8	-0.2	20	Good	White Concrete Block Wall
128.2.2	-0.8	-0.1	20	Good	Stained Wood Cabinet
128.2.3	0.2	-0.1	20	Good	White Wood Trim
128.2.4	0.5	-0.1	81	Good	Grey Metal Door
128.2.5	0.0	-0.2	81	Good	Grey Metal Door Jamb
128.2.6	-0.6	-0.2	20	Good	Cream Concrete Block Wall
128.2.7	-1.7	0.1	20	Good	Cream Concrete Pad
128.2.8	-0.5	-0.1	20	Good	Grey Wood Door

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD guidelines.

Table 1 (continued)
Ft. McClellan Building No. 128
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 3 (Main Weight Room)					
128.3.1	-0.7	-0.1	20	Good	Red Wood Baseboard
128.3.2	-1.9	-0.2	20	Good	White Concrete Block Wall
128.3.3	-2.7	-0.2	20	Good	Blue Concrete Floor
128.3.4	0.4	-0.1	81	Good	Grey Metal Door
128.3.5	-0.1	-0.1	81	Good	Grey Metal Door Jamb
128.3.6	-1.2	-0.2	20	Fair	Beige Concrete Block Wall
128.3.7	-0.1	-0.1	20	Good	Grey Wood Trim
128.3.8	-2.0	-0.1	20	Good	White Concrete Ceiling
128.3.9	-0.3	-0.1	20	Good	Beige Wood Wall
128.3.9	0.0	-0.1	20	Good	Duplicate
/094020794092502	1.1	1.2	81	N/A	Calibration Check
128.3.10	0.3	0.3	20	Good	Dark Grey Metal Door
128.3.11	-0.1	-0.1	20	Good	Grey Wood Mirror Casing
128.3.12	-0.9	-0.2	20	Good	Red Concrete Block Wall
128.3.13	-1.0	-0.2	20	Good	White Concrete Block Wall
128.3.14	-0.3	-0.1	20	Good	White Concrete Block Wall
Room 4 (Large Aerobics Room)					
128.4.1	0.1	-0.1	20	Good	White Sheetrock Wall
128.4.2	-0.1	-0.1	20	Good	Grey Wood Chair Rail
128.4.3	-0.5	-0.1	20	Good	Red Wood Baseboard
128.4.4	-1.3	-0.2	20	Good	White Concrete Block Wall
128.4.5	0.4	-0.1	81	Good	Grey Metal Door
128.4.6	0.0	-0.1	20	Good	Grey Wood Mirror Casing

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD guidelines.

Table 1 (continued)
Ft. McClellan Building No. 128
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 5 (Small Aerobics Room)					
128.5.1	-1.4	-0.1	20	Good	White Concrete Wall
128.5.2	0.6	0.2	81	Good	Grey Metal Door
128.5.3	0.4	0.2	81	Good	Grey Metal Door Jamb
Room 6 (Office Area)					
128.6.1	-0.3	-0.2	20	Good	White Concrete Block Wall
128.6.2	0.0	0.1	20	Good	Grey Metal Door Casing
128.6.3	0.5	-0.1	81	Good	Grey Metal Door
128.6.4	0.0	0.0	20	Good	Red Wood Cabinet
128.6.4	0.2	0.0	20	Good	Duplicate
7094020794102502	0.5	0.5	81	N/A	Calibration Check
EXTERIOR XRF READINGS					
7094020794132001	1.2	1.3	81	N/A	Calibration Check
7094020794132001	1.0	1.2	81	N/A	Calibration Check
7094020794132001	1.2	1.2	81	N/A	Calibration Check
128.1	-0.8	-0.1	20	Fair	Beige Concrete column
128.2	**0.8**(1)	0.3	81	Fair (Inconclusive - Scrape Sample Taken)	Brown Metal Door
128.3	0.3	0.9	81	Good	Brown Metal Awning
128.4	-1.3	-0.1	81	Good	Brown Concrete Soffit
128.5	**11.1**	0.3	20	Fair	Beige Metal Fire Hydrant (Yellow Paint Beneath)

(1) Lab analysis positive. (Result = 4.42% Lead, Action level = 0.5% Lead)

Positive XRF readings (if any) are in **Bold**.

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD guidelines.

Table 1 (continued)
Ft. McClellan Building No. 128
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
			EXTERIOR XRF READINGS (continued)		
128.6	-2.5	-0.1	20	Fair	Beige Concrete Column
128.7	**1.3**(2)	0.8	81	Fair	Brown Metal Door (Inconclusive - Scrape Sample Taken)
128.8	**1.1**(3)	0.8	81	Good	Brown Metal Door Jamb (Inconclusive - Scrape Sample Taken)
128.9	-1.6	-0.1	20	Good	Beige Concrete Overhang
128.10	-1.3	0.0	20	Good	Beige Concrete Beam
128.11	-1.9	-0.1	20	Good	Beige Concrete Block
128.12	-0.1	0	81	Fair	Brown Metal Door
7094020794141002	1.1	1.3	81	N/A	Calibration Check
7094020794170501	1.1	1.2	81	N/A	Calibration Check
1.63	1.5	1.6	81	N/A	NIST Std. = 1.63

(2) Lab analysis positive. (Result = 3.91% Lead, Action level = 0.5% Lead)
(3) Lab analysis positive. (Result = 2.21% Lead, Action level = 0.5% Lead)

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD guidelines.

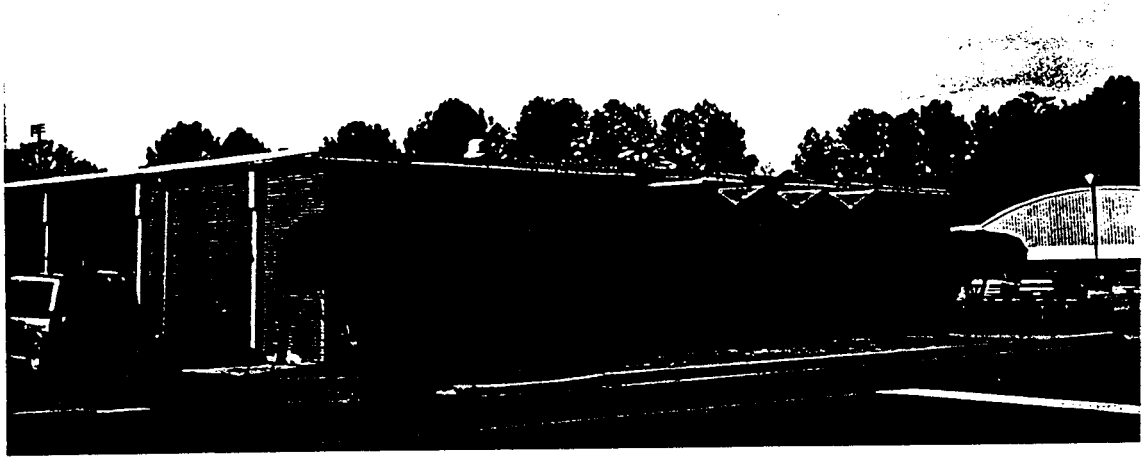
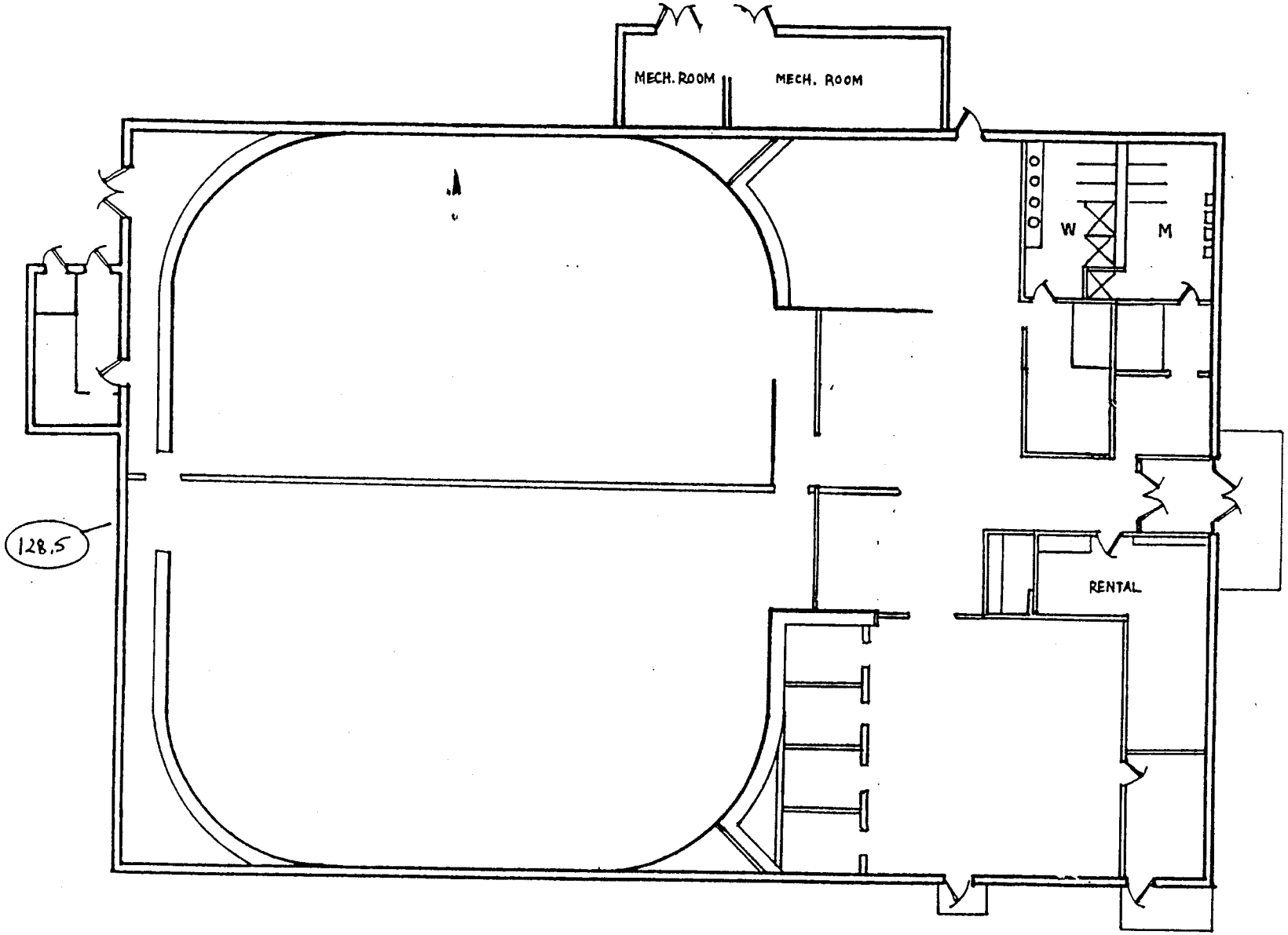


Figure 1. Front view of Building 128.

Figure 2. Rear view of Building 128.



Generalized Floorplan - Not to Scale

Only Locations of Positive XRF Readings (if any) Are Shown

Unit No. 128

Plate No. 1

BUILDING 129

LBP SURVEY REPORT

US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GEORGIA 30060-3112
PHONE 404/421-5271 FAX 404/421-4977

09 August 1994

LEAD-BASED PAINT SURVEY REPORT FOR BUILDING 129 WORKSHOP FT. McCLELLAN, ALABAMA

Introduction

1. This is the lead-based paint (LBP) field survey report for Building 129 located at Ft. McClellan, Alabama. This report documents the LBP field results for this building.

2. The LBP survey was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990) and EPA standard operating procedures (EPA document EPA600/8-91/214) for this instrument. The survey was performed by certified surveyors using a SCITEC MAP 3, X-ray Fluorescence Spectrometer (spectrum analyzer) XRF instrument.

3. A brief summary of the LBP survey is provided in this report. The actual field XRF readings for this structure appear in Table 1. A photograph of the unit appears as Figure 1. The building floorplan, showing the locations of the XRF readings testing positive, appears as Plate 1.

4. Positive readings (detectable lead above the action level) with the XRF vary depending on the instrument mode selected. The "test"[1] mode is normally used for routine readings. Readings testing "positive"[2] according to the XRF instrument manufacturer in the test mode are those with a lead concentration greater than 1.3 milligrams per centimeter squared (mg/cm^2), whereas, "negative" refers to readings of 0.7 mg/cm^2 or less. According to the HUD guidelines, positive readings for this instrument are greater than 1.3 mg/cm^2. "Inconclusive" readings are those that fall between 0.7 mg/cm^2 and 1.3 mg/cm^2.

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[1] The XRF instrument "test" mode is a reading of approximately 60 seconds duration. Test of longer duration increases precision.

[2]

Inconclusive Range For XRF Spectrum Analyzer

Instrument Mode	Range	Units
Screen	0.4 - 1.6	mg/cm^2
Test	0.7 - 1.3	mg/cm^2
Confirm	0.85 - 1.15	mg/cm^2

5. The "action level" defined in the HUD Interim Guidelines is a lead concentration above 1.0 mg/cm^2. Lead concentrations in this report are shown for both K-shell and L-shell in Table 1. The L-shell XRF reading is essentially for the top 1 or 2 surface paint layers, whereas, the K-shell is total lead applicable for multi-layered paint surfaces. HUD Guidelines specify that the K-Shell results be used for evaluating XRF readings.

6. In this report paint condition stated as "good" is defined as intact; "fair" as intact but worn (minor chips from wear and tear but no adhesion or substrate problems); "poor" as severely worn or no longer adhering or, substrate deterioration (e.g., peeling, flaking, cracking, etc.).

Discussion

7. Building 129 (Workshop) is a one story concrete structure with wood trim, metal windows and a terra cotta tile roof.

8. The interior of this building has concrete walls and ceilings, wood doors and door components (some metal), and metal windows. The paint on the interior of this building is in poor condition.

9. A total of twenty six (26) XRF readings were made on the interior of this building. Thirteen (13) were positive for LBP. Seven (7) exterior XRF readings were taken. Four (4) were positive for LBP (see Table 1).

Interior Summary

10. Based on the results of the survey, it is reasonable to assume that the concrete walls, metal windows, wood doors and the wood and metal door components (e.g., jambs, casings, headers, etc.) contain positive levels of lead-based paint.

Exterior Summary

11. All exterior wood components (e.g., doors, door components, upper trim, soffits, etc.) and the metal windows should be considered positive for LBP.

Paint Condition

12. Overall, the paint on the interior and exterior of this building is in fair to poor condition.

Prepared By: Keith Bates
Keith Bates
Geologist

Reviewed By: Ray Willingham
Ray Willingham
Geologist

encls

CESAD-EN-FL 09 August 1994

Date Surveyed: 08 February 1994
Surveyors: KB, NK

Table 1
Ft. McClellan Building No. 129
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
7094020894071001	1.3	1.3	81	N/A	Calibration Check
7094020894071001	1.1	1.3	81	N/A	Calibration Check
7094020894071001	1.3	1.3	81	N/A	Calibration Check
7094020894071001	1.2	1.3	81	N/A	Calibration Check
7094020894071001	1.2	1.3	81	N/A	Calibration Check
0000	0.2	-0.1	81	N/A	Blank
1.63	1.4	1.6	81	N/A	NIST Std. = 1.63

INTERIOR XRF READINGS

Room 1 (Main Workshop Area)

129.1.1	0.1	-0.0	20	Poor	White Lower Concrete Wall
129.1.2	0.6	0.2	326	Poor	White Metal Window Frame
129.1.3	**2.4**	0.1	20	Fair	Beige Upper Concrete Wall
129.1.4	0.1	0.0	20	Good	Beige Concrete Ceiling
129.1.5	-1.2	-0.0	20	Fair	Beige Concrete Window Sill
129.1.6	**1.8**	0.1	81	Poor	Beige Upper Concrete Wall
129.1.7	0.6	0.1	81	Fair	Beige Metal Window Frame
129.1.8	0.3	0.0	81	Good	Beige Concrete Ceiling
129.1.9	**8.2**	1.7	81	Fair	Beige Metal Door Jamb
129.1.10	**5.0**	0.9	20	Fair	Beige Wood Door Casing
129.1.11	**5.0**	1.9	20	Fair	Brown Wood Door Jamb
129.1.12	**5.6**	1.0	20	Fair	Beige Wood Door

Positive XRF readings (if any) are in **Bold**.

K-Shell and L-Shell columns are lead concentrations in mg/cm². K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD Guidelines.

Table 1 (continued)
Ft. McClellan Building No. 129
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 2 (Storage Room)					
129.2.1	**2.8**	0.2	81	Fair	Beige Metal Window Frame
129.2.2	0.3	0.0	20	Good	Beige Concrete Ceiling
129.2.3	-0.2	-0.0	20	Poor	Beige Concrete Wall
Room 3 (Bathroom)					
129.3.1	-0.6	-0.1	20	Poor	Beige Concrete Wall
129.3.2	**8.3**	1.1	20	Fair	Beige Wood Door
129.3.3	**5.9**	1.3	81	Fair	Beige Metal Door Jamb
Room 4 (Storage Room)					
129.4.1	**2.3**	0.1	20	Poor	Beige Concrete Wall
129.4.2	0.5	-0.0	81	Poor	Beige Metal Window Frame
129.4.3	0.1	0.0	81	Good	Beige Concrete Ceiling
Room 5 (Storage Room)					
129.5.1	**2.2**	0.1	20	Poor	Beige Concrete Wall
129.5.2	0.6	-0.0	81	Poor	Beige Metal Window Frame
129.5.3	0.1	0.0	20	Good	Beige Concrete Ceiling
129.5.4	**13.5**	1.1	20	Fair	Beige Wood Door
Room 6 (Exterior Mechanical Room)					
129.6.1	**2.5**	2.4	20	Poor	Brown Wood Door

Positive XRF readings (if any) are in **Bold**.

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD Guidelines.

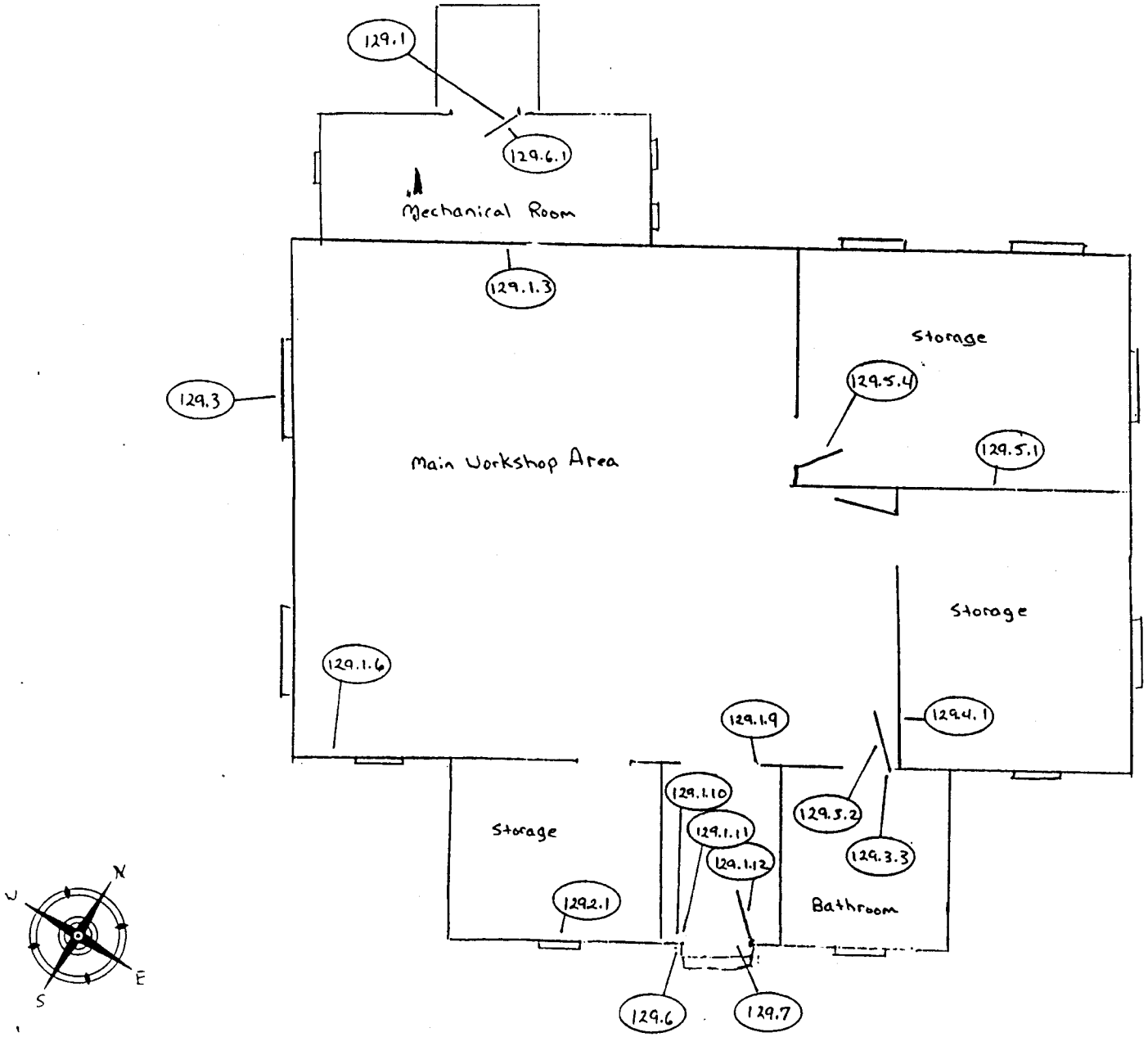
Table 1 (continued)
Ft. McClellan Building No. 129
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
		EXTERIOR XRF READINGS			
129.1	**6.4**	1.8	20	Poor	Brown Wood Door
129.2	-2.1	-0.2	20	Fair	White Concrete Wall
129.3	**10.8**	3.4	81	Fair	Brown Metal Window Frame
129.4	-1.3	-0.2	20	Good	Brown Concrete Window Sill
129.5	-0.5	-0.2	20	Good	White Concrete Door Casing
129.6	**8.0**	2.7	20	Good	Brown Wood Eave
129.7	**5.7**	1.8	20	Fair	Brown Screened Door
129.7	**5.7**	1.7	20	Fair	Duplicate
7094020894093502	1.1	1.3	81	N/A	Calibration Check

Positive XRF readings (if any) are in **Bold**.

K-Shell and L-Shell columns are lead concentrations in mg/cm². K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD Guidelines.

Figure 1. Front view of Building 129.



Generalized Floorplan - Not to Scale

Only Locations of Positive XRF Readings (if any) Are Shown

Unit No. 129

Plate No. 1

BUILDING 130

LBP SURVEY REPORT

US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GEORGIA 30060-3112
PHONE 404/421-5271 FAX 404/421-4977

09 August 1994

LEAD-BASED PAINT SURVEY REPORT FOR BUILDING 130 MILLER GYM FT. McCLELLAN, ALABAMA

Introduction

1. This is the lead-based paint (LBP) field survey report for Building 130 located at Ft. McClellan, Alabama. This report documents the LBP field results for this building.

2. The LBP survey was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990) and EPA standard operating procedures (EPA document EPA600/8-91/214) for this instrument. The survey was performed by certified surveyors using a SCITEC MAP 3, X-ray Fluorescence Spectrometer (spectrum analyzer) XRF instrument.

3. A brief summary of the LBP survey is provided in this report. The actual field XRF readings for this structure appear in Table 1. Photographs of the unit appear as Figures. The building floorplan, showing the locations of the XRF readings testing positive, appears as Plate 1.

4. Positive readings (detectable lead above the action level) with the XRF vary depending on the instrument mode selected. The "test"[1] mode is normally used for routine readings. Readings testing "positive"[2] according to the XRF instrument manufacturer in the test mode are those with a lead concentration greater than 1.3 milligrams per centimeter squared (mg/cm^2), whereas, "negative" refers to readings of 0.7 mg/cm^2 or less. According to the HUD guidelines, positive readings for this instrument are greater than 1.3 mg/cm^2. "Inconclusive" readings are those that fall between 0.7 mg/cm^2 and 1.3 mg/cm^2.

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[1] The XRF instrument "test" mode is a reading of approximately 60 seconds duration. Test of longer duration increases precision.

[2] **Inconclusive Range For XRF Spectrum Analyzer**

Instrument Mode	Range	Units
Screen	0.4 - 1.6	mg/cm^2
Test	0.7 - 1.3	mg/cm^2
Confirm	0.85 - 1.15	mg/cm^2

5. The "action level" defined in the HUD Interim Guidelines is a lead concentration above 1.0 mg/cm^2. Lead concentrations in this report are shown for both K-shell and L-shell in Table 1. The L-shell XRF reading is essentially for the top 1 or 2 surface paint layers, whereas, the K-shell is total lead applicable for multi-layered paint surfaces. HUD Guidelines specify that the K-Shell results be used for evaluating XRF readings.

6. In this report paint condition stated as "good" is defined as intact; "fair" as intact but worn (minor chips from wear and tear but no adhesion or substrate problems); "poor" as severely worn or no longer adhering or, substrate deterioration (e.g., peeling, flaking, cracking, etc.).

Discussion

7. Building 130 (Miller Gym) was built in 1941. It is a one story brick and metal structure with metal doors and trim.

8. The interior of this building is divided into basketball courts, changing rooms, storage rooms and exercise rooms. Most of the interior components are wood. Various other components are composed of metal.

9. A total of forty four (44) XRF readings were made on the interior of this building. No positive results for LBP were detected. Nine (9) exterior XRF readings were taken. One was positive for LBP (see Table 1).

Interior Summary

10. No positive XRF readings were obtained on the interior of this building.

Exterior Summary

11. Except for the positive yellow paint beneath the brown paint on the telephone guide wire covers, no positive levels of lead-based paint were detected on the exterior of this building.

Paint Condition

12. Overall, the paint on the interior and exterior of this building is in good condition.

Prepared By: Keith Bates
Keith Bates
Geologist

Reviewed By: Ray Willingham
Ray Willingham
Geologist

encls

Date Surveyed: 04 February 1994
Surveyors: KB, BS

Table 1
Ft. McClellan Building No. 130
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
7094020494073001	1.3	1.4	81	N/A	Calibration Check
7094020494073001	1.2	1.3	81	N/A	Calibration Check
7094020494073001	1.3	1.3	81	N/A	Calibration Check
7094020494073001	1.2	1.4	81	N/A	Calibration Check
7094020494073001	1.4	1.3	81	N/A	Calibration Check
1.63	1.4	1.6	81	N/A	NIST Std. = 1.63
INTERIOR XRF READINGS					
Room 1 (Women's Restroom)					
130.1.1	-0.8	-0.2	20	Good	Green Concrete Wall
130.1.2	-0.3	-0.2	20	Good	Stained Wood Window Sill
130.1.3	-0.1	-0.1	20	Poor	White Glass Window Pane
130.1.4	0.6	0.3	81	Good	Yellow Metal Stall
130.1.5	0.0	-0.1	20	Good	Stained Wood Door Jamb
130.1.6	-0.4	-0.1	20	Good	Stained Wood Door
130.1.7	0.1	-0.1	20	Good	Stained Wood Door Casing
130.1.8	0.1	-0.1	20	Good	Stained Wood Paneled Wall
130.1.9	0.5	-0.1	81	Good	Brown Metal Door Jamb
Room 2 (Closet)					
130.2.1	-1.2	-0.0	20	Good	Brown Concrete Wall

K-Shell and L-Shell columns are lead concentrations in mg/cm². K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD Guidelines.

Table 1 (continued)
Ft. McClellan Building No. 130
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 3 (Men's Restroom)					
130.3.1	-0.9	-0.2	20	Good	Green Concrete Wall
130.3.2	-1.0	-0.2	20	Good	Stained Wood Window Casing
130.3.3	0.4	0.4	81	Good	Green Metal Stall
130.3.4	0.0	-0.1	20	Good	Stained Wood Door Header
130.3.5	-0.3	-0.1	20	Good	Stained Wood Door
Room 4 (Entry Area)					
130.4.1	0.6	-0.1	81	Good	Red Metal Door
130.4.2	-0.1	-0.1	20	Good	Stained Wood Paneled Wall
130.4.3	0.4	-0.1	81	Good	Black Metal Door Casing
130.4.4	-0.1	-0.1	20	Good	Stained Wood Door
Room 5 (Storage)					
130.5.1	-0.1	-0.1	20	Good	Stained Wood Paneled Wall
Room 6 (Boxing Room)					
130.6.1	-0.1	-0.1	20	Good	Stained Wood Window Casing
130.6.2	-0.6	-0.1	20	Good	Stained Wood Door
130.6.2	-0.2	-0.1	20	Good	Duplicate
7094020494091501	1.2	1.3	81	N/A	Calibration Check
Room 7 (Entry Area)					
130.7.1	0.4	-0.1	81	Good	Red Metal Door Jamb

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD guidelines.

Table 1 (continued)
Ft. McClellan Building No. 130
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 8 (Men's Dressing and Shower Area)					
130.8.1	-0.1	-0.2	20	Good	Blue Concrete Wall
130.8.2	0.5	0.2	81	Good	Blue Metal Stall
130.8.3	-0.2	-0.1	20	Good	Stained Wood Door Jamb
130.8.4	-0.6	-0.2	20	Good	Blue Concrete Block Wall
Room 9 (Women's Dressing and Shower Area)					
130.9.1	-1.2	-0.2	20	Good	White Concrete Wall
130.9.2	-0.2	-0.1	20	Good	Stained Wood Window Apron
130.9.3	0.5	0.1	81	Good	Yellow Metal Stall
130.9.4	-1.1	-0.2	20	Good	Stained Wood Paneled Wall
Room 10 (Office)					
130.10.1	0.4	-0.1	81	Good	Brown Metal Door Jamb
Room 11 (Equipment Room)					
130.11.1	-0.5	-0.1	20	Good	Stained Wood Door
Room 12 (Main Gym Area)					
130.12.1	0.8	0.3	326	Good	White Wood Rafter
130.12.2	-0.3	-0.2	20	Good	White Wood Wall
130.12.3	0.6	0.2	81	Good	White Wood Rafter
130.12.4	-1.5	-0.1	20	Good	White Concrete Support
130.12.5	-0.0	-0.0	81	Good	White Wood Ceiling
130.12.6	-0.4	-0.1	20	Good	Stained Wood Trim
130.12.7	0.3	-0.0	81	Good	Brown Metal Door

K-Shell and L-Shell columns are lead concentrations in mg/cm². K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD Guidelines.

Table 1 (continued)
Ft. McClellan Building No. 130
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 12 (Main Gym Area - continued)					
130.12.8	-1.1	-0.1	20	Good	Yellow Paint on Stained Wood Floor
130.12.9	-0.6	-0.1	20	Good	Stained Wood Bleacher
130.12.10	-0.6	-0.1	20	Good	Stained Wood Floor
130.12.11	-0.1	-0.1	20	Good	White Wood Wall
130.12.11	-0.1	-0.1	20	Good	Duplicate
7094040294101102	1.3	1.2	81	N/A	Calibration Check
EXTERIOR XRF READINGS					
7094020494125302	1.2	1.4	81	N/A	Calibration Check
7094020494125302	1.3	1.4	81	N/A	Calibration Check
7094020494125302	1.2	1.4	81	N/A	Calibration Check
130.1	0.6	1.3	81	Good	Green Metal Upper Trim
130.2	-1.9	-0.1	20	Good	White Concrete Upper Trim
130.3	-0.7	-0.1	20	Good	White Concrete Overhang
130.4	0.2	-0.1	81	Good	Brown Metal Door
130.5	0.5	1.1	81	Good	Green Metal Downspout
130.6	0.3	1.0	20	Good	Brown Concrete Chimney Support
130.7	0.0	0	81	Fair	Silver Metal Chimney
130.8	0.5	-0.1	81	Good	Brown Metal Door
130.9	**2.3**	1.3	20	Good	Brown Metal Guide Wire Cover (Yellow paint beneath)
7094020494133501	1.1	1.2	81	N/A	Calibration Check

Positive XRF readings (if any) are in **Bold**.

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered paint surfaces) and L-Shell is essentially surface paint films. The survey results are based on K-shell readings as per HUD guidelines.

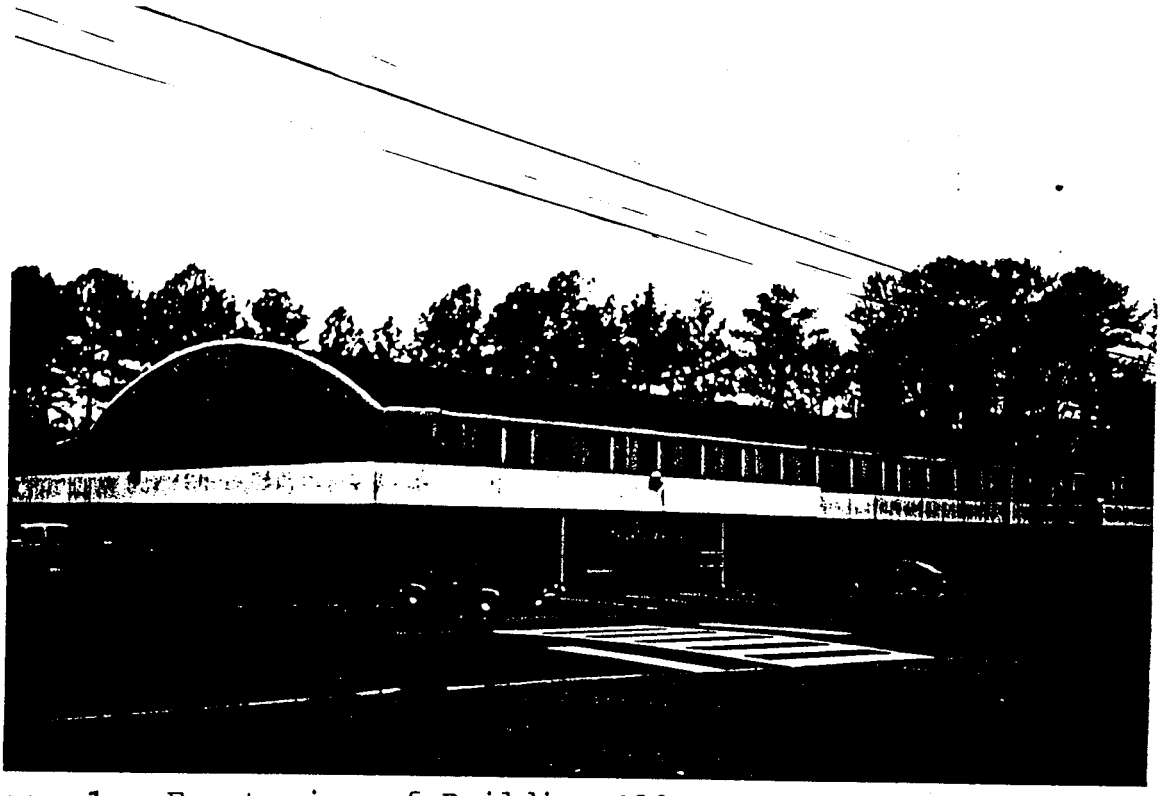
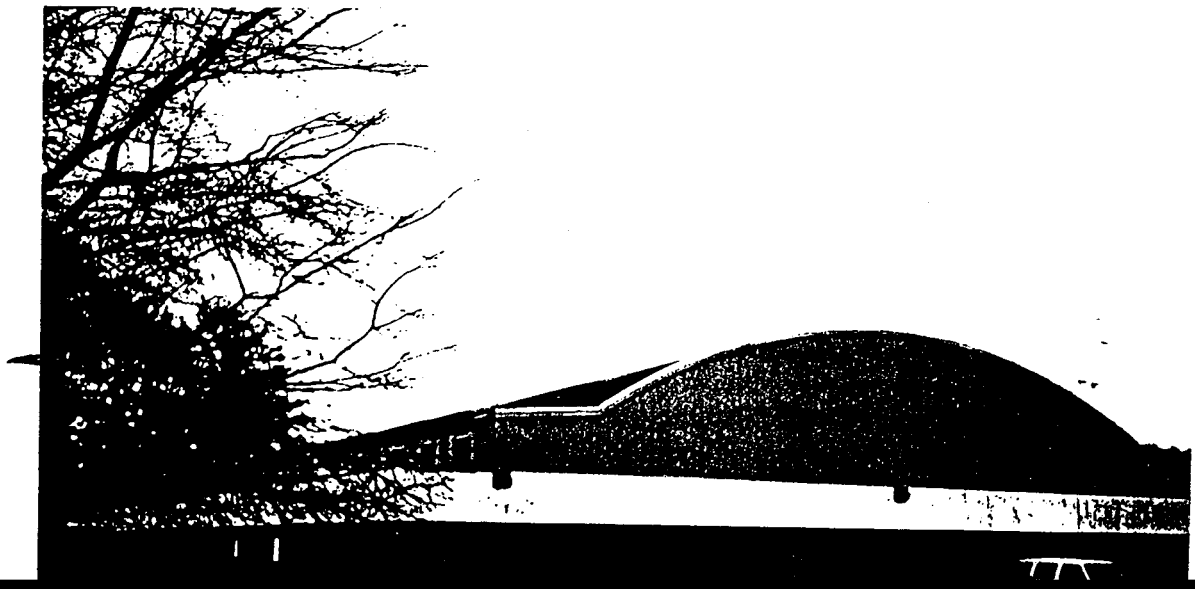
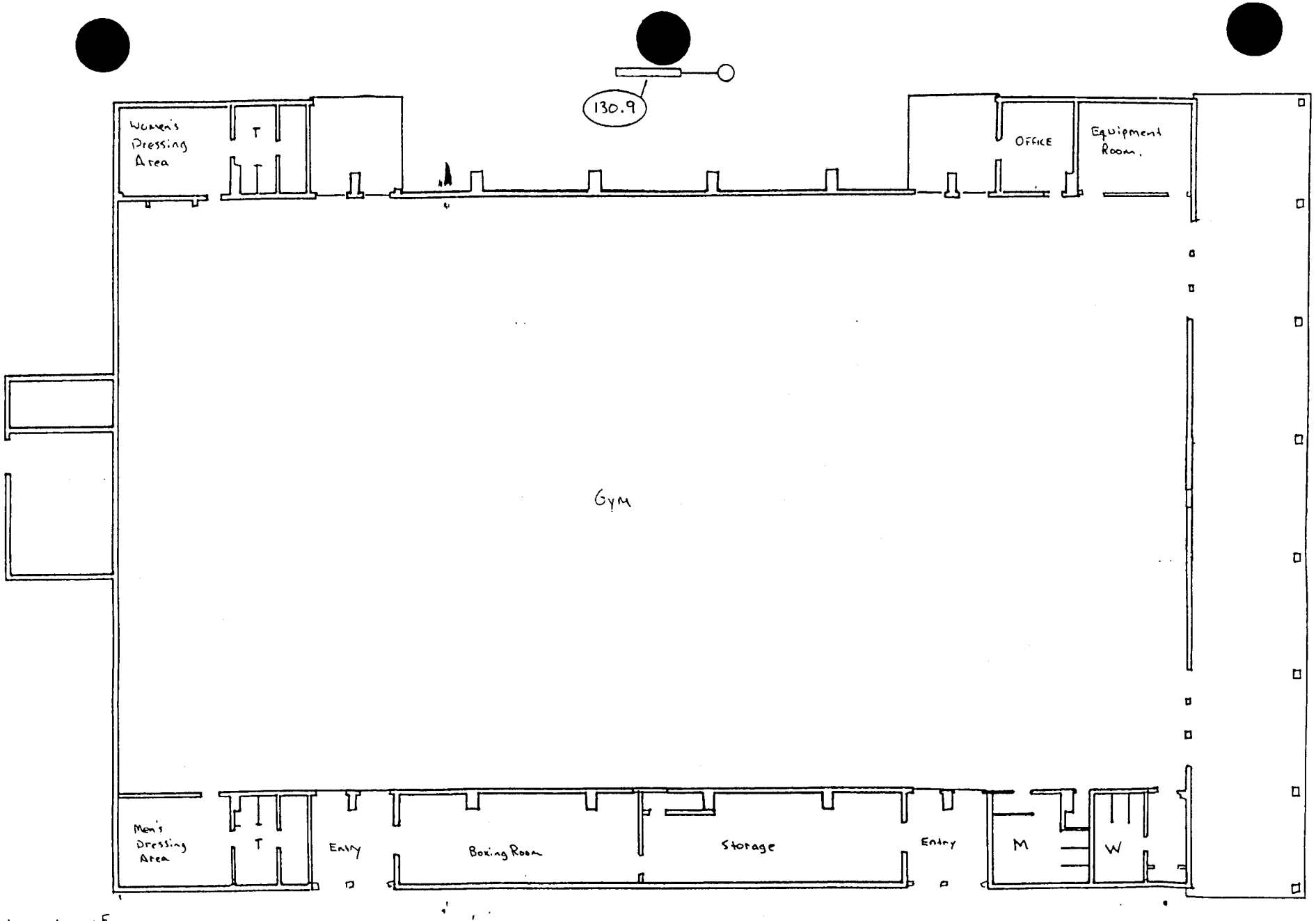


Figure 1. Front view of Building 130.





Generalized Floorplan - Not to Scale

Only Locations of Positive XRF Readings (if any) Are Shown

Unit No. 130

Plate No. 1

BUILDING 1012

LBP SURVEY REPORT

US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION LABORATORY
611 SOUTH COBB DRIVE
MARIETTA, GEORGIA 30060-3112
PHONE 404/421-5271 FAX 404/421-4977

9 August 1994

LEAD-BASED PAINT SURVEY
REPORT FOR BUILDING NO. 1012, FORT McCLELLAN, ALABAMA

Introduction

1. This is the lead-based paint (LBP) field survey report for Building No. 1012, the Truman Gymnasium, located at Fort McClellan, Alabama. This report documents the LBP field results for this building.

2. The LBP survey was conducted in accordance with general procedures in the April 1, 1990 HUD Guidelines (revised September 28, 1990) and EPA standard operating procedures (EPA document EPA600/8-91/214) for this instrument. The survey was performed by certified surveyors using a SCITEC MAP 3, X-ray Fluorescence Spectrometer (spectrum analyzer) XRF instrument.

3. A brief summary of the LBP survey is provided in this report. The actual field XRF readings for this structure appear in Table 1. Photographs of the unit appear as Figures. The building floorplan, showing the locations of the XRF readings testing positive, appears as Plate 1.

4. Positive readings (detectable lead above the action level) with the XRF vary depending on the instrument mode selected. The "test" [1] mode is normally used for routine readings. Readings testing "positive"[2] according to the XRF instrument manufacturer in the test mode are those with a lead concentration greater than 1.3 milligrams per centimeter squared (mg/cm^2), whereas, "negative" refers to readings of 0.7 mg/cm^2 or less. According to the HUD guidelines, positive readings for this instrument are greater than 1.3 mg/cm^2. "Inconclusive" readings are those that fall between 0.7 mg/cm^2 and 1.3 mg/cm^2.

---

[1] The XRF instrument "test" mode is a reading of approximately 60 seconds duration. Test of longer duration increases precision.

[2] **Inconclusive Range For XRF Spectrum Analyzer**

Instrument Mode	Range	Units
Screen	0.4 - 1.6	mg/cm^2
Test	0.7 - 1.3	mg/cm^2
Confirm	0.85 - 1.15	mg/cm^2

5. The "action level" defined in the HUD Interim Guidelines is a lead concentration above 1.0 mg/cm^2. Lead concentrations in this report are shown for both K-shell and L-shell in Table 1. The L-shell XRF reading is essentially for the top 1 or 2 surface paint layers, whereas, the K-shell is total lead applicable for multi-layered paint surfaces. HUD Guidelines specify that the K-Shell results be used for evaluating XRF readings.

6. In this report paint condition stated as "good" is defined as intact; "fair" as intact but worn (minor chips from wear and tear but no adhesion or substrate problems); "poor" as severely worn or no longer adhering or, substrate deterioration (e.g., peeling, flaking, cracking, etc.).

Discussion

7. Building No. 1012, the Truman Gymnasium, is a stucco covered concrete and masonry block structure that was reportedly built in 1977. The building is equipped with factory painted, metal frame windows. There is very little paint on the exterior surfaces of this building. Photographs of building No. 1012 appear in this report as Figures 1 and 2.

Interior Summary

8. With the exception of orange metal doors in the steam and men's locker room and the lockers in the woman's locker room, all XRF measurments in the gymnasium were negative. (See Plate 1)

Exterior Summary

9. There was very little paint on the exterior of this structure. No lead-based paint was detected.

Paint Condition

10. The orange door in the steam room was in fair condition. All other positive paint was in good condition.

Prepared by: Larry Martin
Larry Martin
Civil Engineering Tech.

Reviewed by: Ray Willingham
Ray Willingham
Geologist

encl:
Table 1 (XRF readings)
Plate 1 (floorplan)
Figures 1 and 2 (photos)

CESAD-EN-FL

9 August 1994

Date Surveyed: 14 February 1993
Surveyed By: LM, NAM

TABLE 1
Building No. 1012, Truman Gymnasium, Fort McClellan, Alabama
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
0794021494070501	1.3	1.3	83	N/A	Calibration Check
0794021494070501	1.4	1.4	83	N/A	Calibration Check
0794021494070501	1.3	1.3	83	N/A	Calibration Check
0794021494070501	1.3	1.3	83	N/A	Calibration Check
0794021494070501	1.2	1.3	83	N/A	Calibration Check
0000	0.2	-0.1	83	N/A	Calibration Blank
1.63	1.5	1.6	83	N/A	NIST Std. = 1.63

INTERIOR XRF READINGS

Room 1 (Storage)

1012.1.1	-0.8	-0.1	20	Good	White Plaster Wall
1012.1.2	-0.2	-0.2	20	Good	White Wood Shelf Support
1012.1.3	0.1	-0.1	20	Good	White Wood Shelf
1012.1.4	0.1	-0.1	83	Good	Brown Metal Door Jamb
1012.1.5	0.7	-0.0	334	Good	Orange Metal Door
1012.1.6	-0.1	-0.1	20	Good	White Wood Shelf
1012.1.7	-0.6	-0.1	20	Good	White Wood Shelf Support
1012.1.8	0.5	-0.1	83	Fair	Orange Metal Door

Room 2 (Steam/Sauna Room)

1012.2.1	-0.8	-0.2	20	Poor	Creme plaster ceiling
1012.2.2	-0.3	-0.2	20	Good	Creme plaster ceiling
1012.2.3	-1.8	-0.2	20	Good	Creme plaster ceiling
1012.2.4	0.2	-0.1	20	Good	Stained Wood Bench
1012.2.5	**3.4**	1.9	83	Fair	Orange Metal Door
1012.2.6	0.5	-0.1	83	Fair	Brown Metal Door Casing

Values in **bold** type are positive.

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered surfaces) and L-Shell is essentially surface paint films.

TABLE 1 Cont.

Building No. 1012, Truman Gymnasium, Fort McClellan, Alabama
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
		Room 3 (Storage)			
1012.3.1	0.0	-0.1	20	Good	White Sheetrock Wall
1012.3.2	0.4	-0.1	83	Poor	Orange Metal Door
		Room 4 (Weight Room)			
1012.4.1	-0.6	-0.1	20	Good	Stained Wood Wall
1012.4.2	0.4	0.9	83	Good	Orange Metal Door
1012.4.3	0.6	-0.1	83	Good	Brown Metal Door Jamb
		Room 5 (Racquetball Court)			
1012.5.1	0.4	-0.1	83	Fair	Orange Metal Door
1012.5.1	0.4	-0.1	83	Fair	Duplicate
1012.5.2	0.3	-0.1	83	Good	Brown Metal Door Jamb
1012.5.3	-0.9	-0.1	20	Good	Stained Wood Floor
1012.5.4	-1.5	-0.2	20	Good	White Concrete Wall
1012.5.5	-0.2	-0.1	20	Good	Sheetrock Ceiling
1012.5.6	-1.8	-0.1	20	Good	Grey Concrete Floor
094021494093002	1.2	1.2	83	N/A	NIST Std. = 1.63
1012.5.7	0.5	-0.1	83	Poor	Brown Metal Hand Rail
1012.5.8	0.6	-0.0	83	Fair	Orange Metal Door
		Room 6 (Women's Locker Room)			
1012.6.1	0.5	-0.0	83	Good	Orange Metal Door
1012.6.2	0.3	-0.1	83	Good	Brown Metal Door Jamb
1012.6.3	-1.3	-0.2	20	Good	Creme Plaster Wall
1012.6.4	-1.9	-0.1	83	Good	Plastic Stall Door
1012.6.5	-1.6	-0.2	20	Good	Wood Blinder Stall
1012.6.6	0.6	0.2	83	Fair	Black Bulletin Board
1012.6.7	**2.1**	1.1	83	Good	Blue Metal Locker
1012.6.8	1.1	0.0	83	Good	Blue Metal Locker
					*Inconclusive - Scrape Sample Taken

* After laboratory analysis by atomic absorption sample ID# 1012.6.8 was determined to be positive for lead. (Sample ID# 1012.6.8 = **4.28%** lead by weight)

Values in **bold** type are positive.

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is total lead (multi-layered surfaces) and L-Shell is essentially surface paint films.

TABLE 1 Cont.
Building No. 1012, Truman Gymnasium, Fort McClellan, Alabama
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 7 (Men's Locker Room)					
1012.7.1	0.2	-0.1	83	Good	Brown Metal Door Jamb
1012.7.2	**2.6**	1.7	83	Good	Orange Metal Door
1012.7.3	-1.2	-0.1	20	Good	Blue Wood Blinder Door
1012.7.4	-0.3	-0.2	20	Good	Yellow Plaster Ceiling
1012.7.5	0.3	-0.1	83	Good	Blue Metal Locker
1012.7.6	0.4	-0.1	83	Poor	Orange Metal Door
1012.7.6	0.5	-0.1	83	Poor	Duplicate
7094021494103502	1.4	1.6	83	N/A	Calibration Check
Room 8 (Front Desk)					
1012.8.1	0.5	-0.1	83	Fair	Orange Metal Door
1012.8.2	0.5	-0.1	83	Good	Orange Metal Door
1012.8.3	0.3	-0.1	83	Good	Brown Metal Door Jamb
1012.8.4	0.1	-0.1	20	Good	White Wood Shelf
1012.8.5	-1.5	-0.1	20	Poor	Grey Concrete Floor
1012.8.6	-0.2	-0.2	20	Fair	White Wood Shelf
1012.8.7	0.3	-0.1	20	Good	Brown Wood Door
1012.8.8	0.4	-0.1	83	Good	Orange Metal Door
1012.8.9	0.6	-0.0	83	Good	Orange Metal Door
1012.8.10	-0.6	-0.2	20	Good	White Plaster Wall
Room 9 (Main Entrance/Restrooms)					
1012.9.1	0.4	-0.1	83	Good	Orange Metal Door
1012.9.2	0.5	-0.1	83	Good	Brown Door Header
1012.9.3	-0.1	-0.2	20	Good	Creme Plaster Wall
Room 10 (Basketball Gym)					
1012.10.1	-1.7	-0.1	20	Good	White Concrete Wall
1012.10.2	0.1	-0.1	20	Good	White Plywood Wall
1012.10.3	-0.7	-0.1	20	Good	Brown Wood Door Jamb

Values in **bold** type are positive.

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is tal lead (multi-layered surfaces) and L-Shell is essentially surface nt films.

TABLE 1 Cont.
Building No. 1012, Truman Gymnasium, Fort McClellan, Alabama
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 10 (Basketball Gym) Cont.					
1012.10.4	0.3	-0.1	20	Good	White Concrete Ceiling
1012.10.5	-1.5	-0.2	20	Good	White Concrete Wall
1012.10.6	-1.1	-0.1	20	Good	Tan Concrete Floor
1012.10.6	-1.7	-0.1	20	Good	Duplicate
7094021494112502	1.5	1.4	83	N/A	Calibration Check
1012.10.7	-0.2	-0.1	20	Good	Stained Wood Bleacher Seat
1012.10.8	-0.8	-0.0	20	Good	Brown Concrete Floor
Room 11 (Swimming Pool Area)					
1012.11.1	0.4	-0.0	83	Good	Orange Metal Door
1012.11.2	0.3	-0.1	20	Good	Brown Metal Handrail
1012.11.3	-1.3	-0.3	20	Good	Yellow Concrete Wall
1012.11.4	0.4	-0.0	83	Good	Orange Metal Door
1012.11.5	-0.1	-0.1	83	Good	Yellow Metal Vent Duct
1012.11.6	-2.0	-0.2	20	Good	White Plaster Window Divider Column
1012.11.7	0.1	0.0	83	Good	Brown Steel Support Beam
1012.11.8	-0.5	-0.1	20	Good	Yellow Concrete Wall
1012.11.9	0.2	-0.1	83	Good	White Diving Board Frame
1012.11.10	-0.5	-0.1	20	Good	Brown Window Panel
1012.11.11	0.3	-0.1	20	Good	Brown Metal Window Frame
1012.11.12	-1.3	-0.1	20	Good	White Plaster Wall
1012.11.13	0.5	-0.0	83	Good	Orange Metal Door
1012.11.14	0.4	0.0	83	Good	Brown Metal Door Jamb

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is tal lead (multi-layered surfaces) and L-Shell is essentially surface int films.

TABLE 1 Cont.
Building No. 1012, Truman Gymnasium, Fort McClellan, Alabama
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
Room 11 (Swimming Pool Area) Cont.					
1012.11.15	0.6	-0.0	83	Good	Orange Metal Door
1012.11.16	0.2	0.0	83	Good	White Concrete Wall
1012.11.17	-0.2	0.0	83	Good	Blue Metal Locker
7094021494133502	1.2	1.3	83	N/A	Calibration Check
7094021494133502	1.1	1.3	83	N/A	Calibration Check
7094021494133502	1.0	1.3	83	N/A	Calibration Check
1012.11.18	0.3	0.0	83	Good	Grey Metal Door
1012.11.19	0.5	-0.1	83	Fair	Grey Metal Door Jamb
Room 12 (Manager's Office)					
1012.12.1	0.1	-0.1	20	Good	Orange Wood Door
1012.12.2	-0.2	-0.1	20	Good	White Wood Door Header
1012.12.3	0.6	-0.1	83	Good	Brown Metal Door Jamb
1012.12.4	-0.4	-0.1	20	Good	White Sheetrock Wall
1012.12.5	0.4	-0.1	20	Good	Orange Wood Door
1012.12.6	0.4	-0.1	83	Good	Brown Metal Door Casing
Room 13 (Upstairs Entry)					
1012.13.1	-0.6	-0.1	20	Good	White Concrete Wall
1012.13.2	-0.0	-0.1	20	Good	Orange Wood Door
Room 14 (Nautilus Room)					
1012.14.1	-0.4	-0.1	20	Good	Orange Wood Door
1012.14.2	-1.2	-0.2	20	Good	White Sheetrock Wall
1012.14.3	-0.1	-0.1	20	Good	White Sheetrock Wall
1012.14.4	-0.2	-0.1	20	Good	White Sheetrock Wall
1012.14.5	-0.2	-0.1	20	Good	Orange Wood Door
1012.14.6	0.0	-0.1	44	Good	White Sheetrock Ceiling
1012.14.7	-1.5	-0.1	83	Fair	White Window Sill

K-Shell and L-Shell columns are lead concentrations in mg/cm^2. K-Shell is ...tal lead (multi-layered surfaces) and L-Shell is essentially surface ...nt films.

TABLE 1 Cont.
Building No. 1012, Truman Gymnasium, Fort McClellan, Alabama
Lead-Based Paint Field Survey Results

ID#	K-Shell mg/cm^2	L-Shell mg/cm^2	Time seconds	Condition	Comments
		EXTERIOR XRF READINGS			
1012.1	-0.2	-0.0	20	Good	Creme Stucco Wall
1012.2	0.2	0.6	83	Good	White Concrete Entry Way Roof
1012.3	0.5	-0.1	83	Good	Creme Stucco Wall
1012.4	0.3	-0.1	83	Good	Creme Metal Vent Cover
7094021494150502	1.1	1.3	83	N/A	Calibration Check

K-Shell and L-Shell columns are lead concentrations in mg/cm². K-Shell is total lead (multi-layered surfaces) and L-Shell is essentially surface paint films.

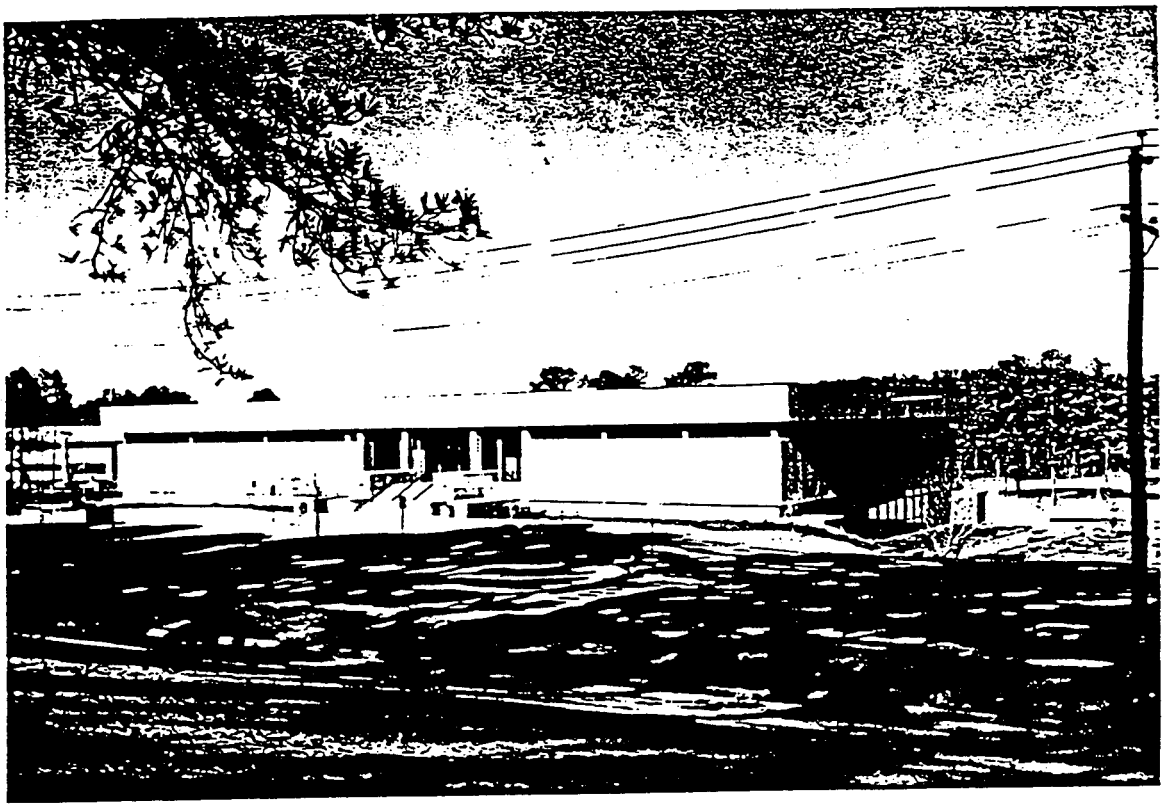


Figure 1. Front view of the Truman Gymnasium (Bldg.1012) at Fort McClellan, Alabama.

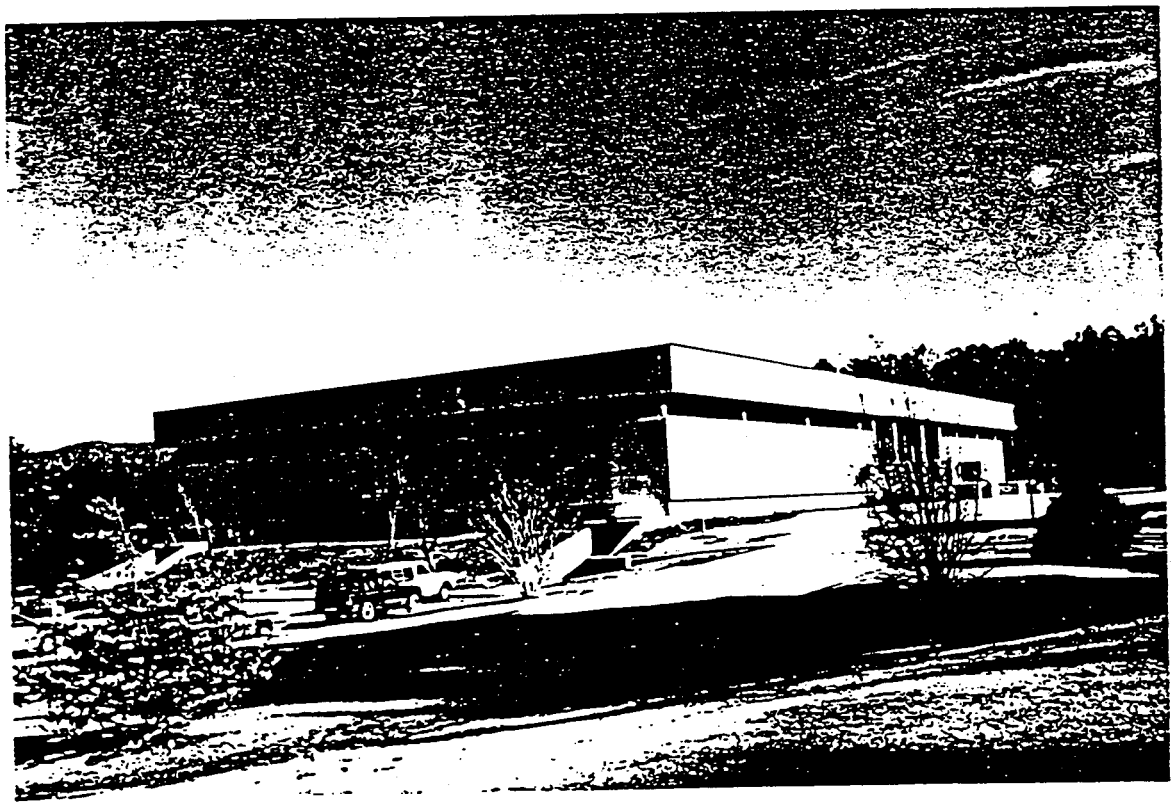
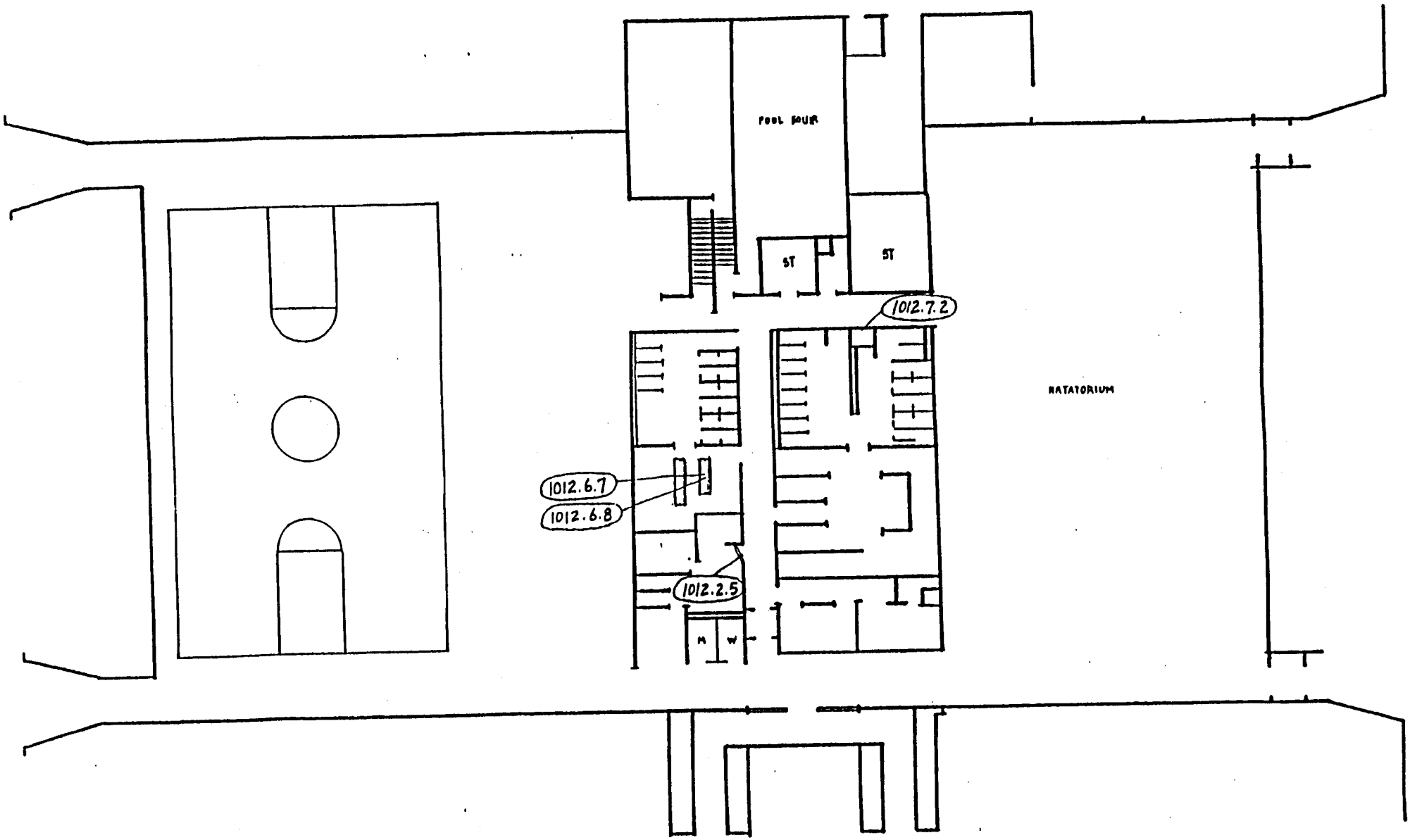


Figure 2. Front and side view of Bldg. 1012



No Scale Implied

Only Locations of XRF Readings testing Positive Are Shown

NORTH

FORT McCLELLAN, ALABAMA
PLATE 1
BUILDING NUMBER 1012 UNIT —
LOCATION: 5th AVENUE

ATTACHMENT 4
DOD-APPROVED PESTICIDES

00-063-3981	Algaecide, Copper Sulfate, 80.16% pentahydrate, crystal (Cuprose)	50-lb bag	L	---	BG	A,
00-281-2724	Fungicide, Wood Preservative, copper naphthenate mixture (COP-R-NAP)	55-gal drum	J	1208.20	DR	A,
00-282-0971	Fungicide, Wood Preservative, copper naphthenate mixture (COP-R-NAP)	5-gal co	D	262.14	CO	A,N,
01-209-6298	Fungicide, Wood Preservative, copper naphthenate mixture (COP-R-NAP RTU)	5-gal co	L	---	CO	
01-360-4741	Fungicide, Methylisothiocyanate (MITC-FUME) ***RESTRICTED USE PESTICIDE***	18 tubes	L	---	CO	A,N,
01-457-6588	Fungicide, Methyl Azoxystrobin, 50% (Heritage)	(6) 1- lb. cont.	J	2100.00	BX	A,N,
00-027-6467	Herbicide, Borate-Bromacil mixture, 94% sodium metaborate tetrahydrate, 4% bromacil, granular (Borocil IV)	50-lb bag	V	111.03	BG	A,
00-392-7593	Herbicide, Bromacil, 21.9% lithium salt of bromacil, liquid (Hyvar X-L)	(2) 2.5-gal co	D	306.16	BX	A,N,
00-181-7106	Herbicide, Bromacil, 40.8%, water soluble liquid (Bromax-4L)	5-gal drum	D	689.52	DR	A,
01-408-9079	Herbicide, Bromacil, 40.8%, wettable powder (Hyvar X)	(12) 4-lb bags	H	967.98	BX	A,N,
00-684-8975	Herbicide, Chlorate-Borate mixture, 30% sodium chlorate, 68% sodium metaborate tetraahydrate, granular (Monobor Chlorate)	50-lb bag	I.0	62.97	BG	A,
01-005-7523	Herbicide, Diquat, 35.3%, water soluble liquid (Reward)	1-gal co	D	116.93	GL	F
00-815-2799	Herbicide, Diquat, 35.3%, water soluble liquid (Reward)	(2) 2.5-gal co	D	650.43	BX	A,
01-341-9346	Herbicide, Diuron, minimum 80% diuron, granular	25-lb bag	Z	116.93	BG	A,
00-001-7710	Herbicide, Diuron-Bromacil mixture, 40% bromacil, 40% diuron, granular (Krovar I DF)	6-lb bag	D	70.96	BG	A,
01-108-9578	Herbicide, Isopropylamine salt of glyphosate, 41%, water soluble liquid (Roundup Pro)	(2) 2.5-gal co	D	304.10	BX	A,
01-388-0142	Herbicide, Isopropylamine salt of glyphosate, 41%, water soluble liquid (Roundup Pro)	30-gal drum	D	1790.56	DR	A,
01-356-8893	Herbicide, Isopropylamine salt of glyphosate, 41%, water soluble liquid (Rodeo)	(2) 2.5-gal co	D	679.93	BX	A,N,
01-377-7113	Herbicide, Isopropylamine salt of glyphosate, 0.96%, water soluble liquid (Roundup Ready-to-Use)	24-oz pump spray bottle	D	5.61	BT	F
01-399-0673	Herbicide, Isopropylamine salt of glyphosate, 0.96%, water soluble liquid (Roundup Dry Pack)	25 pkg	D	53.59	BX	A,N,
01-356-8902	Herbicide, Isopropylamine salt of imazapyr, 27.6% (Arsenal)	(2) 2.5-gal co	D	1190.26	BX	A,N,
01-318-7417	Herbicide, Oryzalin, 40% (Sulflan A.S.)	1-gal bot	L	---	GL	A,N,
00-145-0013	Herbicide, Prometone, 25% prometone, emulsifiable concentrate (Pramitol 25E)	5-gal can	D	96.05	CN	A,
00-180-6386	Herbicide, Prometone, 50% sodium metaborate, 40% sodium chlorate, 5% prometone, 0.75% simazine, pellets (Pramitol 5PS)	50-lb bag in a drum	Y	140.27	DR	A,N,
01-319-2890	Herbicide, Tebuthiuron (Spike 80W)	4-lb bag	L	---	BG	A,N,
01-457-6576	Herbicide, Tebuthiuron-Diruron, 1% Tebuthiuron, 3% Diuron (Spraykil SK-13)	40 lb. container	J	98.29	CO	A,N,
00-577-4194	Herbicide, 2,4-Dichlorophenoxy-acetic acid (2,4-D), oil miscible/water emusifiable liquid (low volatile ester form)	(2) 2.5-gal co	H	104.70	BX	A,N,
00-664-7060	Herbicide, 2,4-Dichlorophenoxy-acetic acid (2,4-D), water soluble liquid (amine salt form)	(2) 2.5-gal co	H	88.43	BX	A,N,
01-377-7110	Herbicide, 2,4-Dichlorophenoxy-acetic acid (2,4-D), 0.4%, water soluble liquid (amine salt form) (Weed-B-Gon)	24-oz pump spray bottle	D	6.53	BT	F
00-753-4963	Insect Repellent, clothing application, 75% DEET, 25% ethanol	2-oz bottle	D	1.37	BT	A,N,
01-278-1336	Insect Repellent, clothing application, aerosol (Permethrin Arthropod Repellent)	(12) 6-oz cans	D	37.05	BX	A,N,
01-284-3982	Insect Repellent, personal application, (3M/EPA 58007-1)	(12) 2-oz tubes	D	32.88	BX	A,N,
01-334-2666	Insect Repellent, clothing application, 40% permethrin, liquid (2-Gal sprayer)	(12) 151-ml bot	D	162.11	BX	A,N,
01-137-8456	Insect Repellent, personal application, 3% benzocaine, 10% precipitated sulfur (Chigg-Away)	188-ml bot	D	2.31	BT	A,N,
01-288-2188	Insect Repellent, personal application & sunscreen, 20% DEET/SPF15 (Sunset)	(12) 2-oz tubes	D	43.51	BX	A,
01-452-9582	Insect Repellent, personal application & sunscreen, 20% DEET/SPF15 (Sunset)	320 packets	J	197.63	BX	A,
01-345-0237	Insect Repellent, clothing application, permethrin (IDA)	12 kits	D	43.53	BX	A,N,
00-142-8965	Insect Repellent, personal application, 30% DEET (Cutter Insect Repellent Stick)	(12) 1-oz tubes	D	31.02	BX	A,
00-145-0016	Insecticide, Aluminum phosphide, 55 % tablets (Phostoxin/Fumitoxin) ***RESTRICTED USE PESTICIDE***	100 tablets	D	24.26	CN	A,
00-442-5698	Insecticide, Aluminum phosphide, 55 % tablets (Phostoxin/Fumitoxin) ***RESTRICTED USE PESTICIDE***	1660 pellets	D	34.57	BT	A,
01-377-7049	Insecticide, *Bacillus thuringiensis*, 10% (Bactimos Briquets)	100 Briquets	D	74.57	BX	A,N,
00-180-6069	Insecticide, Baygon, 1% propoxur, liquid (Roach and Ant Spray)	1-gal can	V	10.99	GL	A,N,

01-287-3938	Insecticide, Boric Acid, aerosol (Whitmire PT 249 Perma-dust)	(12) 9 oz cans	D	77.85	BX	A,
00-932-7297	Insecticide, Carbaryl, 80%, water dispersible powder (Sevin 80S)	(5) 10-lb bags	H	248.61	BX	A,
01-104-0887	Insecticide, Carbaryl, 42.6%, liquid (Carbaryl 4L)	(2) 2.5-gal co	D	154.99	BX	F
01-033-4481	Insecticide, Carbaryl, 5%, dust (Sevin 5% dust)	(12) 4-lb bags	D	139.28	BX	A,
01-224-1269	Insecticide, Fipronil, cockroach, large size (Combat Quick Kill)	8 bait stations/ box/12 boxes	D	83.50	PG	A,N,
01-180-0167	Insecticide, Fipronil, cockroach, regular size (Combat Quick Kill)	12 bait stations/ box/12 boxes	D	81.44	PG	A,N,
01-313-7359	Insecticide, Cyfluthrin (Tempo 2EC)	(12) 240-ml bot	J	407.05	BX	A,N,
01-383-6251	Insecticide, Cyfluthrin (Tempo 20WP)	(288) 9.5-g pack	D	386.14	BX	A,N,
01-390-4822	Insecticide, Cypermethrin (Demon WP)	1-lb jar	J	51.57	LB	A,N,
01-431-3345	Insecticide, Deltamethrin (Delta Dust)	1-lb co	D	11.88	LB	A,N,
00-753-5038	Insecticide, Diazinon, 2%, dust	25-lb can	D	30.79	CN	A,N,
00-782-3925	Insecticide, Diazinon, 47.5%, emulsifiable concentrate	1-gal can	D	39.18	GL	A,N,
00-955-0931	Insecticide, Diazinon, 2%, dust	5-lb bag	J	13.65	BG	A,F
00-142-9438	Insecticide, Dichlorvos, 20% (plastic strips)	48 strips	D	183.24	BX	A,N,
01-412-4634	Insecticide, D-Phenothrin, 2%, aerosol	12-oz can	D	6.50	CN	A,N,
01-067-2137	Insecticide, D-trans Allethrin and Resmethrin, 0.15% and 0.2% minimum, respectively, aerosol	11-oz can	D	1.79	CN	A,N,
01-122-2651	Insecticide, Dursban, 42% chlorpyrifos, emulsifiable concentrate (Dursban 4E)	1-gal can	D	124.17	GL	N,F
01-338-6003	Insecticide, Dursban, 20% chlorpyrifos, microencapsulated (Empire 20)	1-pint co	D	25.26	PT	A,N,
01-270-9766	Insecticide, Dursban, 42.8% chlorpyrifos, emulsifiable concentrate (Dursban TC/CYREN PRO Termite Conc.)	(4) 1-gal co	D	266.57	BX	A,N,
00-402-5411	Insecticide, Dursban, 42% chlorpyrifos, emulsifiable concentrate (Dursban 4E)	5-gal can	D	516.40	CN	A,N,
01-203-6161	Insecticide, Dursban, 19.36% chlorpyrifos, liquid (Mosquitomist 1.5 ULV)	5-gal can	D	264.15	CN	A,N,
01-338-2487	Insecticide, Dursban, 0.5% chlorpyrifos, aerosol (PT 279-Engage)	(12) 20-oz cans	D	103.47	BX	A,N,
01-210-3392	Insecticide, Dursban, 42% chlorpyrifos, emulsifiable concentrate (Dursban LO)	(12) 40-ml bot	D	29.35	BX	A,
01-412-4361	Insecticide, Dursban, 20% chlorpyrifos, emulsifiable concentrate (Dursban Pro)	1-pint co	H	10.02	PT	A,N,
01-087-6672	Insecticide, Ficam, 76% bendiocarb, wettable powder (Ficam)	1-lb jar	D	77.92	LB	A,N,
01-183-7244	Insecticide, Fly Bait, 1% methomyl (Apache/Golden Malrin)	5-lb can	D	17.87	CN	A,N,
01-287-3913	Insecticide, Hydramethylnon (Amdro Fire Ant Bait)	(24) 6-oz bot	L	---------	BX	A,N,
01-298-1122	Insecticide, Fipronil (MaxForce Ant Bait)	96 stations	D	90.84	PG	A,N,
01-318-7416	Insecticide, Hydroprene, emulsifiable concentrate (Gentrol IGR)	(10) 1-oz bot	D	97.12	BX	A,N,
01-457-6580	Insecticide, Imidacloprid, 5% granular (Merit 0.5 g)	30 lb. bag	J	50.00	BG	A,N,
01-428-6646	Insecticide, Lambda-cyhalothrin, 9.7% (Demand CS)	(8) 8 oz bottle	J	300.64	BX	A,N,
01-431-3357	Insecticide, Lamda-cyhalothrin (Demand Pesttab)	40 tablets	D	69.05	CO	A,N,
01-424-2494	Insecticide, Logic (Award Brand of Logic)	25-lb bag	J	260.89	BG	A,N,
00-655-9222	Insecticide, Malathion, 57.0%, emulsifiable concentrate, class 1	1-gal co	D	34.30	GL	A,N,
00-685-5438	Insecticide, Malathion, 57.0%, emulsifiable concentrate, class 1	5-gal can	D	130.80	CN	A,N,
00-926-1481	Insecticide, Malathion, 95%, liquid, grade B	54-gal drum	D	1726.07	DR	A,N,
01-169-1842	Insecticide, Malathion, 95%, liquid, grade B	5-gal can	D	111.09	CN	A,N,
01-424-2495	Insecticide, Methoprene (Altosid XR Briquets)	220 Briquets	D	681.97	BX	A,N,
01-424-2493	Insecticide, Methoprene (Altosid SR-20 Liquid Larvicide)	(2) 2.5-gal co	J	4751.36	BX	A,N,
01-426-5472	Insecticide, N-ethyl perfluorooctane sulfonamide (Advance Dual Choice)	24 stations	D	39.51	PG	A,N,
01-270-9765	Insecticide, Naled, 85%, liquid (Dibrom)	30-gal drum	J	3331.90	DR	A,
00-597-6111	Insecticide, Naphthalene, ball form	1-lb box	D	5.80	LB	A,N,
00-286-6018	Insecticide, Naphthalene, flake GSA	1-lb box	Y	3.00	LB	
00-174-1825	Insecticide, P-Dichlorobenzene, crystal/flake	100-lb drum	Z	427.05	DR	A,
00-174-1824	Insecticide, P-Dichlorobenzene, crystal GSA	1-lb can	J	3.22	LB	A,N,
01-318-7415	Insecticide, Propetamphos, 50% (Catalyst)	(8) 3.2-oz bot	D	37.34	BX	A,N,
01-104-0780	Insecticide, Pyrethrins, 3% pyrethrins with synergists, liquid (ULV fog concentrate)	1-gal bot	D	76.28	GL	A,N,
00-459-2443	Insecticide, Pyrethrins, allethrin, d-phenothrin, or resmethrin, aerosol (PT 515 Wasp Freeze & Hornet Killer/Wasp Stopper II Plus/Wasp & Hornet Killer II)	(12) 12-oz cans	D	44.89	BX	A,N,
00-823-7849	Insecticide, Pyrethrin, aerosol (PT 565 Plus XLO)	(12) 12-oz cans	D	118.40	BX	A,
01-359-8533	Insecticide, Resmethrin (Scourge)	5-gal can	D	442.69	CN	A,
01-457-6583	Insecticide, Spinosad, 11.6% (Conserve SC)	1 gal cont.	J	250.00	GL	A,N,
01-424-3132	Insecticide, Temephos (Abate 4E)	2.5-gal co	J	356.09	CO	A,N,
01-431-3352	Rodent Indicator Bait Blocks (Census Bait Blocks)	285 blocks	D	55.22	CO	A,N,
00-089-4664	Rodenticidal Bait, Anticoagulant, 0.005% diphacinone	40 blocks	D	52.14	BX	A,N,

00-753-4973	Rodenticidal Bait, Anticoagulant, 0.005-0.0055% diphacione or 0.025-0.028% warfarin, pellets	5-lb can	D	9.16	CN	A,
01-151-4884	Rodenticidal Bait, Anticoagulant, 0.005% broadiolone (Maki), pellets	11-lb can	D	29.35	CN	A,N,
01-426-4808	Rodenticidal Bait, Anticoagulant, 0.005% brodifacoum (Talon-G), pellets	10-lb can	D	38.17	CN	A,N,
01-435-9320	Rodenticidal Bait, 2% zinc phosphide (ZP Rodent Bait) ***RESTRICTED USE PESTICIDE***	(250) 7.5-g pkg.	J	52.56	CO	
00-753-4972	Rodenticide, Anticoagulant, concentrate 0.106% sodium salt of diphacinone (LIQUA-TOXII)	50 pouches	D	48.27	BX	A,N,
01-435-9318	Rodenticide, 10% zinc phosphide (ZP Tracking Powder) ***RESTRICTED USE PESTICIDE***	(4) 500-g bot	J	31.54	BX	

+ User Code A=Army, N=Navy, F=Air Force, M=Marines SOS (RIC)=S9G

*ACQUISITION ADVICE CODES (ACC)

D. DOD INTEGRATED MATERIAL MANAGER (IMM) STOCKED, AND ISSUED. Issue, transfer, or shipment is not subject to specialized controls other than those imposed by the Integrated Material Manager/Military Service supply policy.
   1. The item is centrally managed, stocked, and issued.
   2. Requisitions will be submitted in accordance with Military Service requisitioning procedures.

G. GENERAL SERVICES ADMINISTRATION (GSA) INTEGRATED MATERIAL MANAGED, STOCKED AND ISSUED. Identifies GSA managed items available from GSA Supply Distribution Facilities. Requisitions and fund citations will be submitted in accordance with GSA/Military Service requisitioning procedures.

H. CENTRAL CONTRACT - NOT STOCKED ITEM. Direct delivery under central contract #(non-stocked items) issue, transfer, or shipment is not subject to specialized controls other than those imposed by IMM/Service/Agency supply policy.
   1. The item is centrally managed and procured.
   2. Normal issue is by direct shipment from the vendor to the user at the order of the ICP or IMM. However, orders for quantities less than the vendor s minimum order of quantity may be issued from stock by ICP or IMM supply distribution facilities.
   3. Requisitions and fund citations will be submitted in accordance with IMM/Service/Agency requisitioning procedures.
   4. Generally, delivery will be made within applicable Service/Agency guidelines addressing customer-required time frame.

I. DIRECT ORDERING FROM A CENTRAL CONTRACT/SCHEDULE. Issue, transfer, or shipment is not subject to specialized controls other than those imposed by Integrated Material Manager/Military Service supply policy. The item is covered by a centrally issued contractual document, or by a multiple award Federal Supply schedule for GSA managed items, which permits using activities to place orders on vendors for direct delivery to the user.

J. NOT STOCKED, CONTROLLED PROCURED. Identifies IMM/Military Service centrally managed but not stocked items. Long lead times must be anticipated, since procurement will be initiated only after receipt of a requisition. Requisitions will be submitted in accordance with IMM/Military Service requisitioning procedures.

K. CENTRALLY STOCKED FOR OVERSEAS ONLY. Main means of supply is local purchase. Item is stocked in domestic supply system for those overseas activities unable to procure locally due to non-availability of procurement sources or where local purchase is prohibited. Requisitions will be submitted by overseas activities in accordance with Service/Agency requisitioning procedures. NOTE: CONUS activities will obtain supply support through local procurement procedures.

L. LOCAL PURCHASE. IMM/Military Service managed items authorized for local purchase, as a normal means of support, by the Military Service, or base, post, camp, or station level. Items not stocked in wholesale distribution system of IMM/Military Service ICP. The local purchase forms authorized by the individual IMM/Military Service must be used. NOTE: GSA FSS items are included.

V. TERMINAL ITEM. Identifies items in stock; but future procurement is not authorized. Requisitions may continue to be submitted until stocks are exhausted. Preferred items National Stock Number (NSN) normally provided by the application of the phrase, "When Exhausted Use (NSN)". Requisitions will be submitted in accordance with IMM/Military Service requisitioning procedures as applicable.

X. SEMIACTIVE ITEM-NO REPLACEMENT. A potentially inactive NSN which must be retained in the supply system as an item of supply because (1) stocks of the item are on hand or in use below the wholesale level and (2) the NSN is cited in equipment authorization documents TO&E, TA, TM, etc. or in-use assets are being reported.

1. Items are authorized for central procurement but not authorized for stockage at wholesale level.
2. Requisitions for in-use replacement will be authorized in accordance with individual Military Service directives.
3. Requisitions may be submitted as requirements generate. Repetitive demands may dictate at ACC change to permit Wholesale stockage.

Y. TERMINAL ITEM. Further identifies AAC V items on which wholesale stocks have been exhausted. Future procurement not authorized.

1. Requisitions will not be processed to the wholesale suppliers.
2. Internal Services' requisitioning may be continued in accordance with Military Service requisitioning policies.

Z. INSURANCE/NUMERIC STOCKAGE OBJECTIVE ITEM. Items, which may be required occasionally or intermittently and prudence requires that a nominal quantity of material be stocked due to the essentiality or the lead-time of the item.

1. The item is centrally managed, stocked and issued.
2. Requisitions will be submitted in accordance with IMM/Military Service requisitioning procedures.

ATTACHMENT 5

Environmental Constraints Map

FOR TRAINING ONLY

FT. MC CLELLAN

NATURAL RESOURCE AND ENVIRONMENTAL CONSTRAINTS

REFUSE COLLECTION POINTS/ DUMPSTER LOCATIONS (RANGE LOCATIONS NOT INCLUDED)

RESTRICTED AREA

WEEDED RESTRICTED AREA

CEMETERY

ENDANGERED SPECIES

WASH RACK

IMPACT AREAS

WETLANDS

Prepared and published under the direction of the Commander, United States Army Forces Command by the 584th Engineer Company (Carto), 30th Engineer Battalion (Topographic) (Army).

LEGEND

IMPACT AREAS

RANGE/REC AREA

CANTONMENT AREA

BOUNDARY AREAS

SUB AREAS

LEGEND

ROAD DATA 1965

Hard surface, heavy duty road, four or more lanes wide — 4 LANES & 6 LANES

Hard surface, heavy duty road, two lanes wide, three lanes wide — 2 3 LANES

Hard surface, medium duty road, four or more lanes wide — 4 LANES & 6 LANES

Hard surface, medium duty road, two lanes wide, three lanes wide — 2 3 LANES

Improved light duty road, street

Unimproved dirt road

Trail

Route markers: Interstate; Federal; State — 95 (295) (80)

RAILROADS — Single track — Multiple track

Standard gauge

Narrow gauge

BOUNDARIES

National

State (with monument)

County

Corporate limits

Military reservation — MIL RES

Other reservation

Power transmission line

Buildings or structures

Church, school

Windmill, wind pump; Watermill

Mines: Horizontal shaft; Vertical shaft

Open pit mine or quarry

Horizontal control station

Bench mark, monumented — BM X79

Bench mark, non-monumented — X 31

Spot elevations in feet: Checked; Unchecked — 168

Woodland

Vineyard; Orchard

Intermittent lake

Intermittent stream; Dam

Marsh or swamp

Rapids; Falls

Large rapids; Large falls

RANGE DATA

819 RANGE

BRIDGE

RESTRICTED AREA

Scale 1:25,000

1000 500 0 1000 2000 Meters

1000 500 0 1000 2000 Yards

1 ½ 0 1 Statute Mile

1 ½ 0 1 Nautical Mile

CONTOUR INTERVAL 20 METERS

Spheroid ..... Clarke 1866

Grid ..... 1000 meter UTM

Projection ..... Polyconic

Vertical Datum ..... Sea level Datum 1929

Horizontal Datum ..... 1927 North American Datum

Control by ..... USGS, USC & GS ICE

Prepared by ..... 'B' Company (Photomapping) (4-74)

Printed by ..... 'A' Company (Reproduction) (8-74)

SAMPLE 1,000 METER GRID SQUARE — 46 — Sample point — 12 — 13 — 45

100,000 M. SQUARE IDENTIFICATION — FN

GRID ZONE DESIGNATION — 16S

100 METER REFERENCE

1. Read large numbers labeling the VERTICAL grid line left of point and estimate tenths (100 meters) from grid line to point.
2. Read large numbers labeling the HORIZONTAL grid line below point and estimate tenths (100 meters) from grid line to point.

Example: 123456

WHEN REPORTING ACROSS A 100,000 METER LINE PREFIX THE 100,000 METER SQUARE IDENTIFICATION, IN WHICH THE POINT LIES.

Example: FN123456

WHEN REPORTING OUTSIDE THE GRID ZONE DESIGNATION AREA, PREFIX THE GRID ZONE DESIGNATION.

Example: 16SFN123456

GRID CONVERGENCE 0°39' (12 MILS) FOR CENTER OF SHEET

1972 G-M ANGLE 1° (18 MILS)

TO CONVERT A MAGNETIC AZIMUTH TO A GRID AZIMUTH ADD G-M ANGLE

TO CONVERT A GRID AZIMUTH TO A MAGNETIC AZIMUTH SUBTRACT G-M ANGLE

ADJOINING SHEET

PELHAM RANGE | FORT McCLELLAN

OVERPRINT PREPARED AND PRINTED BY 1704TH ENGR CO (CARTO) ARNG SLOCOMB, AL 1986

ATTACHMENT 6

UNDERGROUND STORAGE TANK CLOSURE REPORTS

BUILDING 128

UNDERGROUND STORAGE TANK CLOSURE REPORT

ADEM UST CLOSURE
SITE ASSESSMENT REPORT

(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-128 (NON-REGULATED TANK)

Incident No.(If applicable) UST _____

Facility County: CALHOUN

Facility Name: FORT MCCLELLAN

Location: BLDG 128

Address: FORT MCCLELLAN
ANNISTON ALABAMA 36205-5000

Date of this Report: 5-17-96

UST Owner: U.S DEPT. OF DEFENSE

Address: FORT MCCLELLAN
ANNISTON ALABAMA 36205-5000

Contact: MS. CANDY DECK

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING INC

Name of Laboratory used: MEMPHIS ENVIRONMENTAL CENTER, INC.

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: Ø

Closure Date: 4-17-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4"x24'				
Tank Capacity	1000				
Tank Age	UNKNOWN				
Date Tank Last Used	4-96				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO X If not, provide the depth from the ground surface to the groundwater table. Approx 12 ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____

(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES X NO _____ If yes;

1. The odor strength was (mild)(strong)(other, describe MILD)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other HEATING OIL)

e. Was there water in the excavation? YES _____ NO X If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES X NO _____ If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

ONE HOLE ON THE END OF TANK, ON BOTTOM

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-10 FT BGS — REDDISH YELLOW SILTY CLAY

i. Has the excavation backfilled? YES X NO _____ If yes, provide the date. 4-25-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____)
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

g. Specify the inert solid material used to fill the tank(s). _____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date: _____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:
   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

YES X NO

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES X NO ____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench X (IN ADJACENT TANK)
2. Boring or Monitor Well ____
3. Topographic features ____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES ____ NO X If yes;
1. The odor strength was (mild)(strong)(other, describe ____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other ____)

f. Was there water in the piping trench? YES ____ NO X
1. One time discharge to sanitary sewer with local approval ____
2. Hauled to facility capable of treating constituents of petroleum products in water ____
3. Hauled to local POTW with local approval ____
4. Other (specify) ____

g. Was there free product found in the piping trench? YES ____ NO X If yes,
1. How was the free product handled? ____
2. What was the measured thickness of the free product? ____

h. Were visible holes noted in the piping? YES ____ NO X
If yes, please indicate the location(s) and provide a general description as to the size and number of holes ____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-2 FT BGS → REDDISH YELLOW SANDY CLAY

j. Was the piping trench backfilled? YES X NO ____
If yes, provide the date 5-1-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) Groundwater Sampling Not Required

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

D. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVISED BY ADEM. THE CLOSURE PROTOCOL IS PROVIDED AS ATTA A. ALL CONTAMINATED SOIL WAS EXCAVATED AND STOCKPILE. THE STOCK WAS SAMPLED AND ANALYTICAL RESULTS ARE ATTACHED.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 16 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

CONTAMINATED SOIL IS STOCKPILED ON 30 MIL PLASTIC SHEETING AND COVERED W/ 10 MIL PLASTIC. STOCKPILE IS DISPOSED

c. Indicate method of soil disposal used or to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
   2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   (5.) Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

INVOICES / RECEIPTS WILL BE PROVIDED WHEN STOCKPILE IS TRANSPORTED FOR TREATMENT

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned. _____

b. Provide an estimate of the volume of sludge removed from the tank.
30 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GALLON DRUMS. INVOICES WILL BE PROVIDED UPON PROJECT COMPLETION.

INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: DK Reeves
Company: THETA ENGINEERING, INC.
Telephone Number: (423) 482-0056

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: DK R Date: 5-15-96

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK R Date: 5-15-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 153B
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)

TOTAL POTENTIAL VOC EMMISSIONS CALCULATIONS

	a ppm	x	b cyds	x .002 =	c lbs VOC emissions
Sample 1	854 ppm	x	8 cyds	x .002 =	13.7 lbs VOC emissions
Sample 2	57 ppm	x	8 cyds	x .002 =	.9 lbs VOC emissions
Sample 3	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 4	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 5	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 6	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 7	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 8	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 9	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 10	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 11	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 12	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 13	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 14	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 15	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 16	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 17	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 18	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 19	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 20	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 21	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 22	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 23	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 24	ppm	x	cyds	x .002 =	lbs VOC emissions
Sample 25	ppm	x	cyds	x .002 =	lbs VOC emissions

TOTAL POTENTIAL EMMISSIONS 14.6 lbs VOC emissions

* NOTE - If more samples are taken than indicated on this form, please at additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Report form.

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 05/01/96 08:23

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-128-CON**	Date Collected:	04/22/96
Lab ID Number:	9602205	Date Received:	04/29/96
File Number:	960819	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	04/30/96

Compound Name	Result	Units	MDL	Notes
TPH	824	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

MEC
Memphis Environmental Center, Inc.
2603 Corporate Avenue, Suite 100
Memphis, Tennessee 38132
(901) 345-1788

Printed: 05/01/96 08:23

TPH-IR
Method: SW-846 9071A/EPA 418.1

Description:	THETA - FORT MCCLELLAN	Matrix:	SOIL
Client Sample ID:	**SS-128-STK**	Date Collected:	04/23/96
Lab ID Number:	9602206	Date Received:	04/29/96
File Number:	960819	Date Extracted:	-
Charge Number:	914420000	Date Analyzed:	04/30/96

Compound Name	Result	Units	MDL	Notes
TPH	57	mg/Kg, dry	20	

MDL = Method Detection Limit
ND = Below Method Detection Limit

MEMPHIS ENVIRONMENTAL CENTER
2603 Corporate Ave., Suite 100, Memphis, TN 38132
Telephone (901) 345-1788

SHIPPED TO (Laboratory Name): MEMPHIS ENVIRONMENTAL CENTER

CHAIN OF CUSTODY RECORD

PROJECT NO: 8001-001

PROJECT NAME: FORT McCLELLAN

SAMPLER'S SIGNATURE DKR (sign)

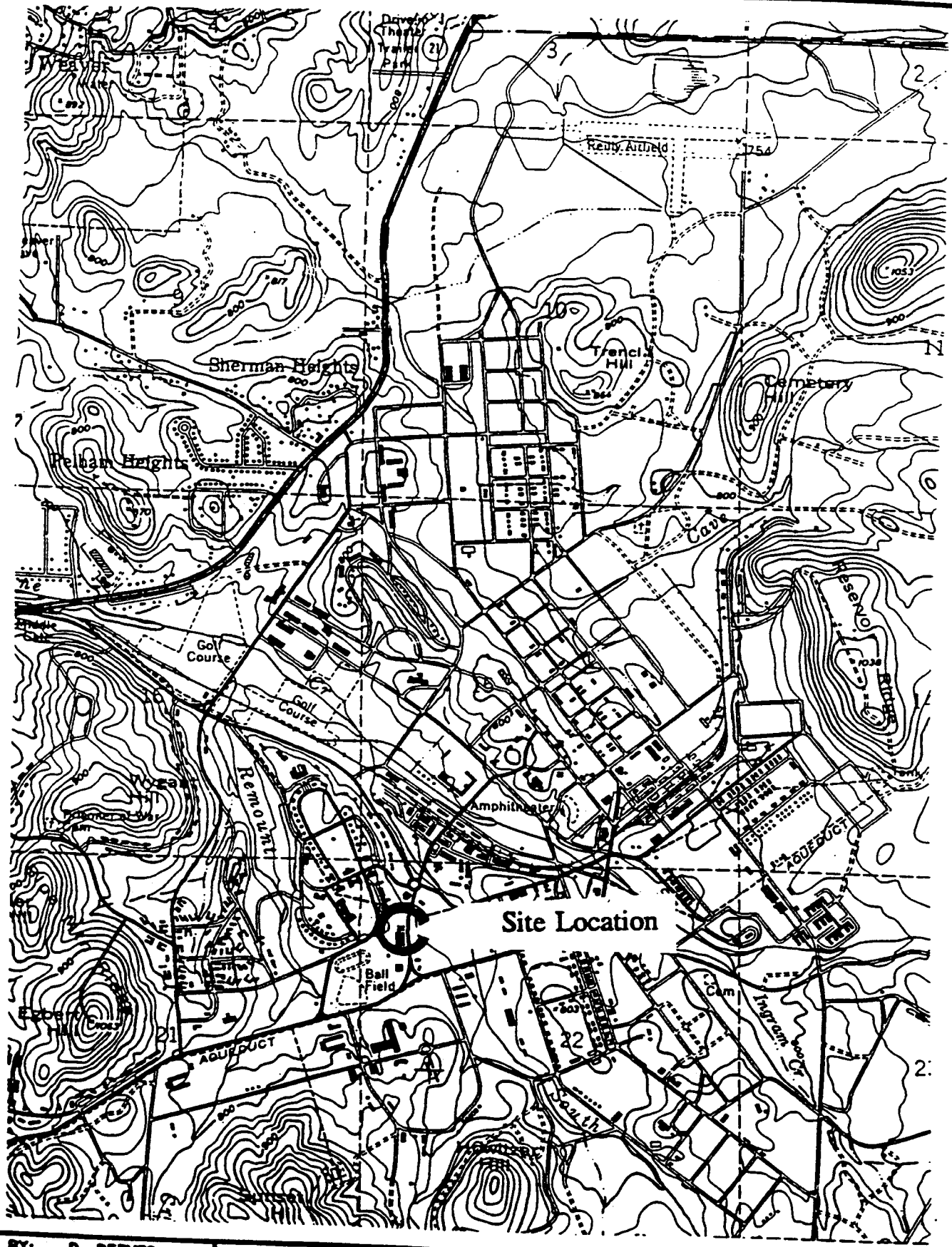
SEQ. NO.	SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	MATRIX	NO. OF CONTAINERS	REMARKS
001	SS-128-COM	4-22-96	0900	BLDG 128	S	1	BTEX BY 8020, TPH BY 418.1
002	~~SS-128-DUP~~	4-22-96	1500	BLDG 128	S	1	TPH BY 418.1
	SS-128-STK						
003	TRIP BLANK	-	-	-	W	3	BTX BY 8020

TOTAL NO. OF CONTAINERS — 5

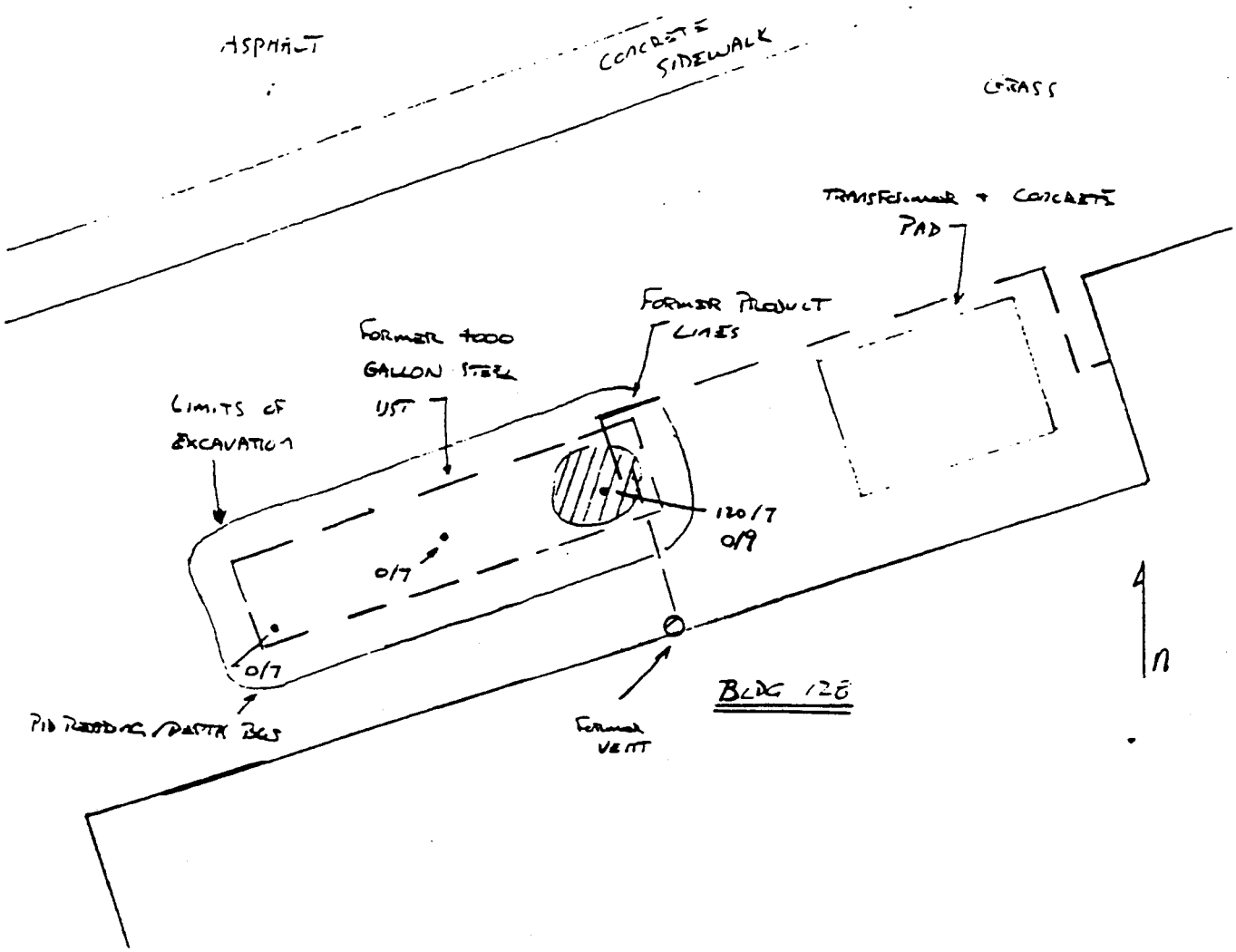
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
1 DSR (sign)	4-26-96 1415	2 _____ (sign)
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
2 _____ (sign)	_____	3 _____ (sign)

METHOD OF SHIPMENT:	SHIPPED BY:	RECEIVED FOR LABORATORY BY:	DATE/TIME
FED-EX	DKR	(sign) SRG	4/29/96 10:45
CONDITION OF SEAL UPON RECEIPT:		**COOLER OPENED BY:**	**DATE/TIME**
GENERAL CONDITION OF CODLER:	DCC	(sign) SRG	4/29/96 10:45

WHITE — Receiving Laboratory Copy YELLOW — Shipper's Copy PINK — MEC Laboratory Copy GOLDENROD — MEC Office Copy NO: 1

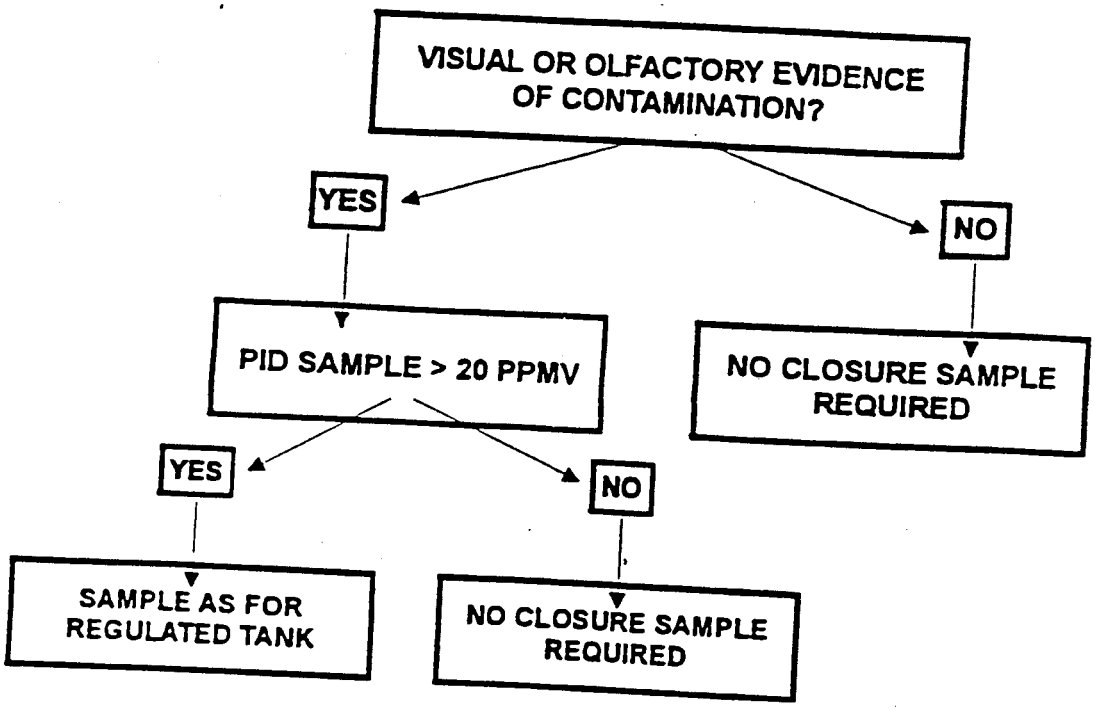


DRAWN BY: D. REEVES DATE: 5/12/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC.	SITE LOCATION MAP Site 128 FORT McCLELLAN, ALABAMA	

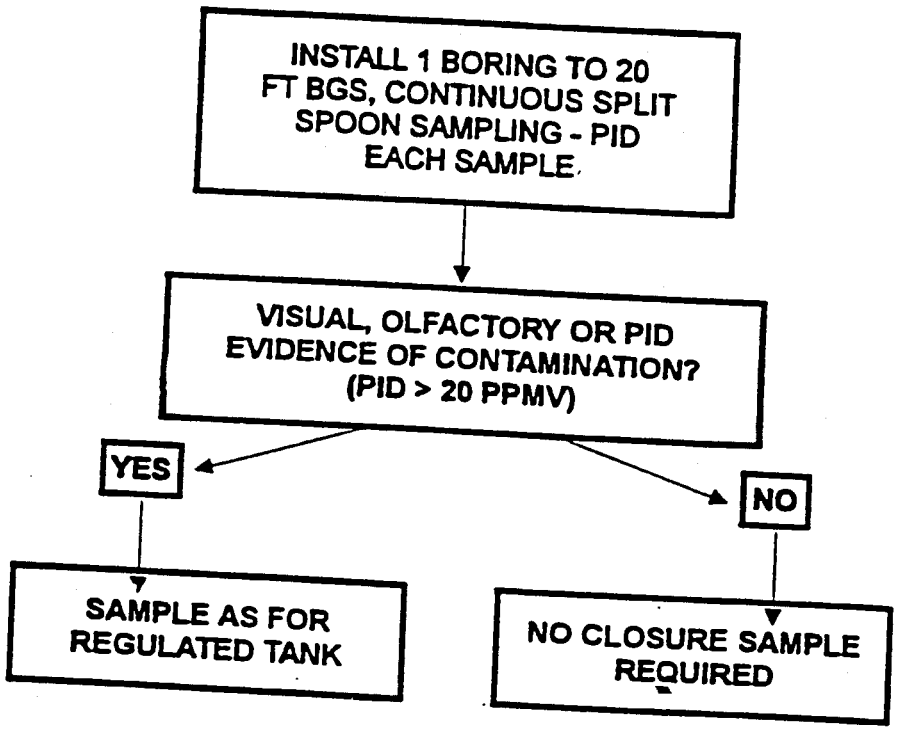


DRAWN BY: D. REEVES DATE: 5/12/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC.	SITE PLAN Site 128 FORT McCLELLAN, ALABAMA	

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM



ATTACHMENT A. FLOW DIAGRAMS FOR CLOSURES SAMPLING

128

BUILDING 130

UNDERGROUND STORAGE TANK CLOSURE REPORT

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11953-015-130 (NON-REGULATED TANK)

Date of this Report: 5-17-96

Incident No.(If applicable) UST _ _-_ _-_ _

UST Owner: U.S. DEPT. of DEFENSE

Facility County: CALHOUN

Address: FORT MCCLELLAN ANNISTON, ALABAMA 36205-5000

Facility Name: FORT MCCLELLAN

Location: BLDG 130

Contact: MS. CANDY SEECK

Address: FORT MCCLELLAN ANNISTON, ALABAMA 36205-5000

Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING, INC.

Name of Laboratory used: NONE

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE

Number of tanks remaining at site: NONE

Closure Date: 4-11-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	5'4" x 15'				
Tank Capacity	2500 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	4-96				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO X If not, provide the depth from the ground surface to the groundwater table. 10 ft. Method used to determine water table depth:

(1.) Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO X If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X If yes, how was it handled?
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X If yes;
1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-2.5 ft BGS - REDDISH YELLOW CLAY, SOME SILT; 2.5 - 3 ft BGS OLIVE BROWN SILT, SOME CLAY; 3 - 7 ft BGS - REDDISH YELLOW CLAY SOME SILT; 7FT - CARBONATE BEDROCK

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 4-22-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline)(diesel)
   (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____
   _____
   2. What was the measured thickness of the free product?_____
   _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). _____
_____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES ___X___ NO _____ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench? YES _____ NO ___X___ If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO ___X___ If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-2G BGS REDDISH YELLOW CLAY, SAND SILT

j. Was the piping trench backfilled? YES ___X___ NO _____ If yes, provide the date 4-22-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) Groundwater Samples Not Required

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REQUIRED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM, AND IT SUMMARIZED AS ATTACHMENT A. NO VISUAL OLFACTORY OR PID EVIDENCE WAS OBSERVED AND NO SAMPLES WERE COLLECTED.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 36.5 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

No EVIDENCE OF CONTAMINATION WAS OBSERVED. SOIL WAS RETURNED TO THE EXCAVATION.

c. Indicate method of soil disposal used or to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5. feet from the base pit.
   2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

NA

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned._____

b. Provide an estimate of the volume of sludge removed from the tank.
30 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GAL DRUMS. INVOICES WILL BE PROVIDED UPON DISPOSAL

INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No Samples were Collected
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK Rowe Date: 5-17-96

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

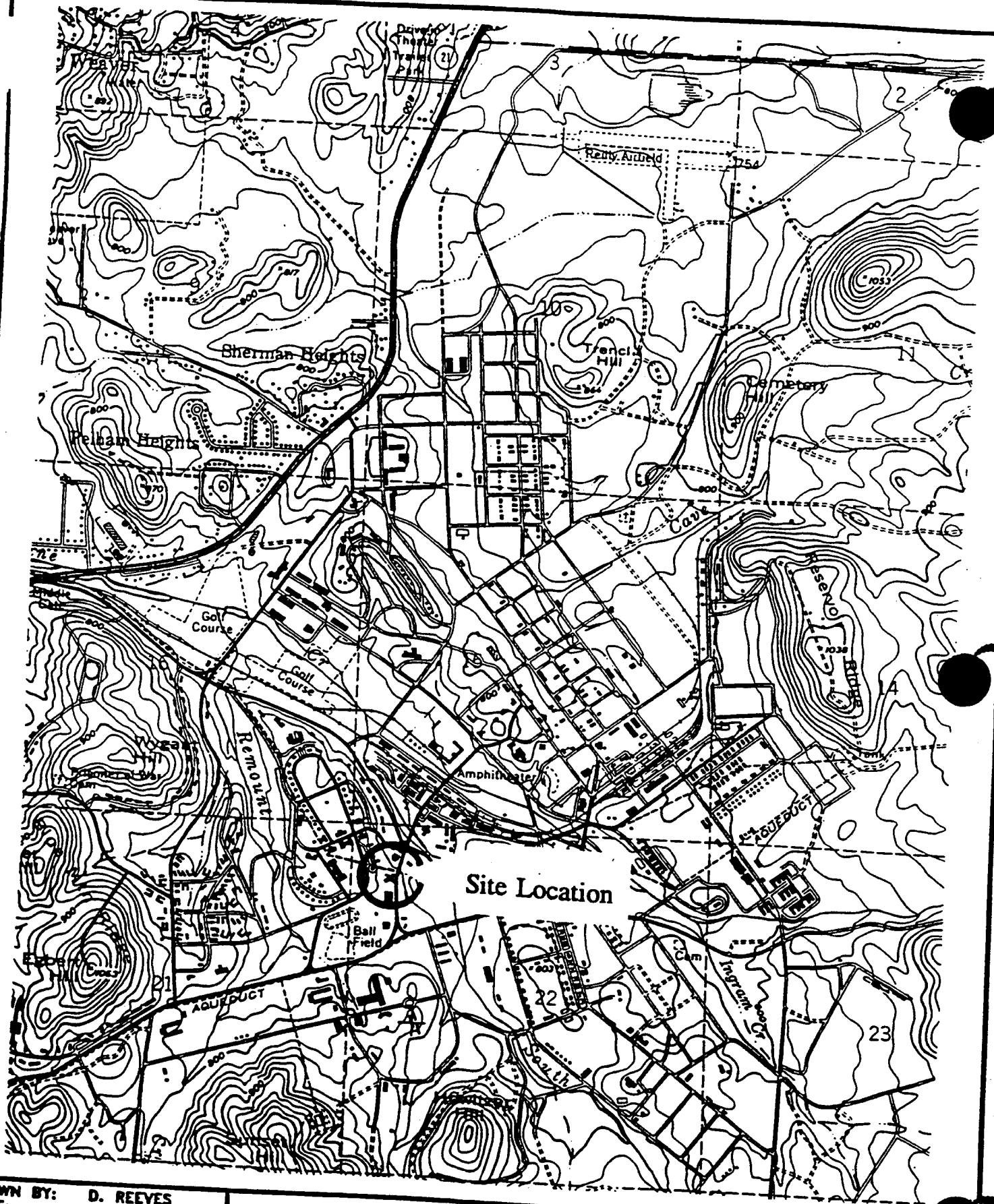
API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

Attachment UST Closure Guidelines
(Remove from closure letter)



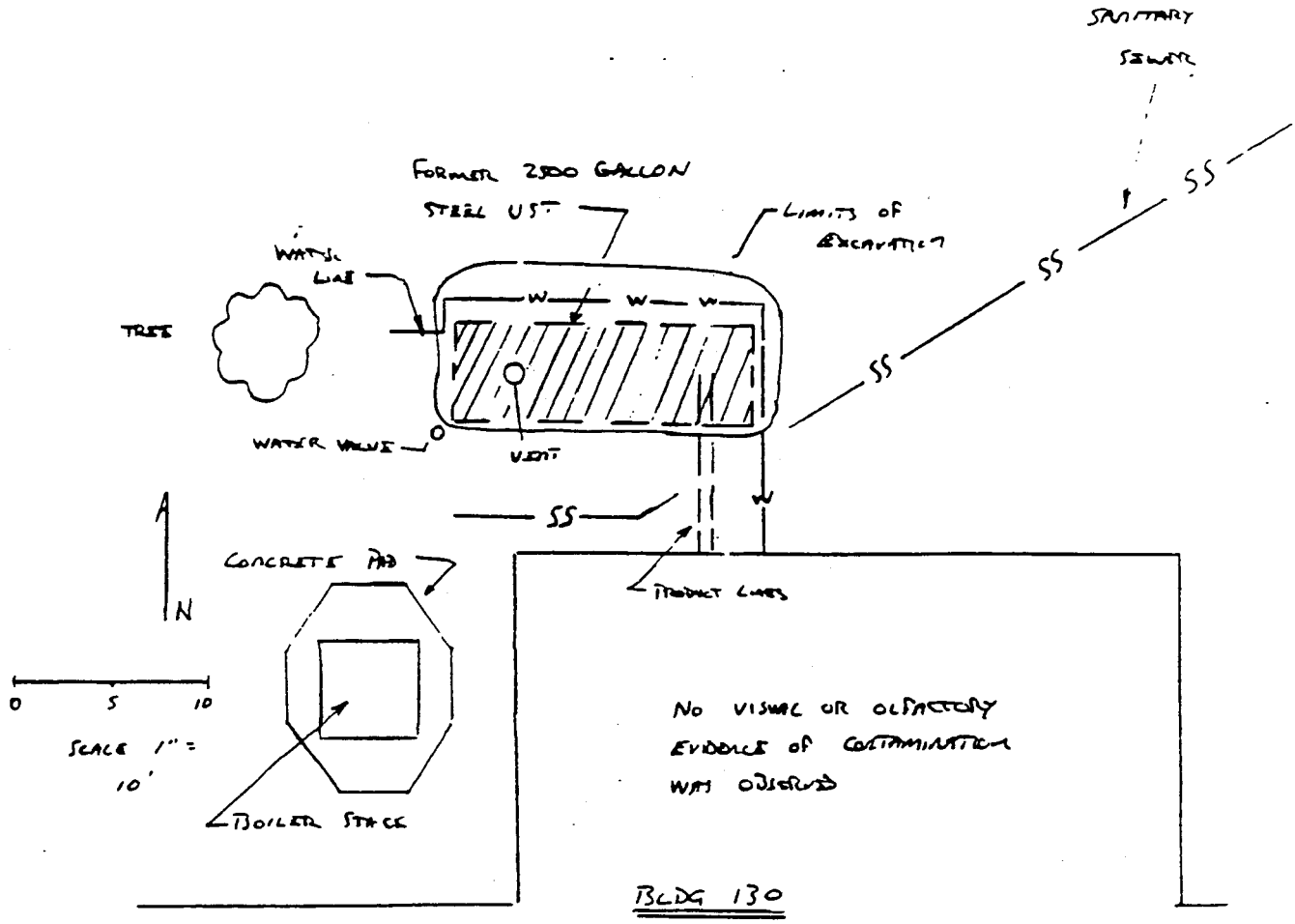
DRAWN BY:	D. REEVES
DATE:	5/14/96
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG	ENV0000
REV	0

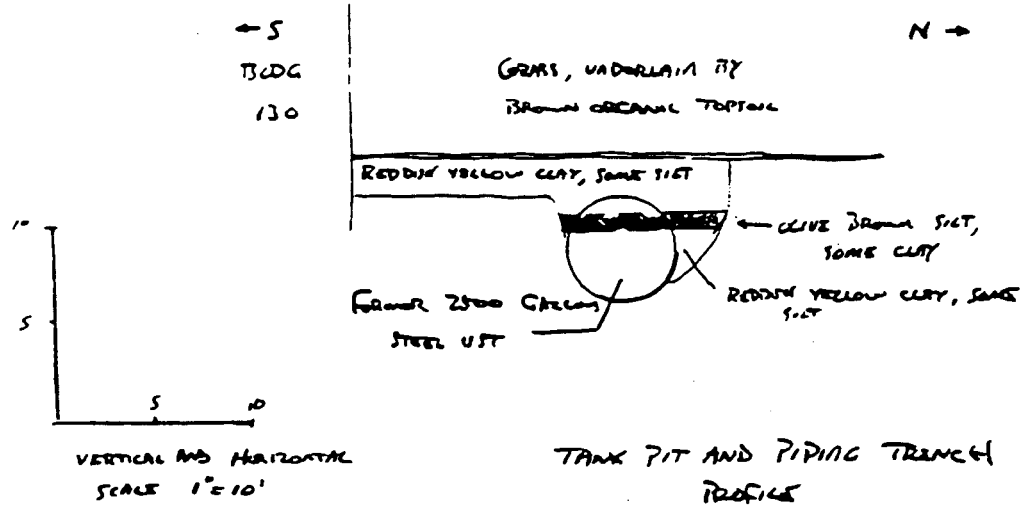
THETA ENGINEERING, INC.

SITE LOCATION MAP

Site 130

FORT McCLELLAN, ALABAMA

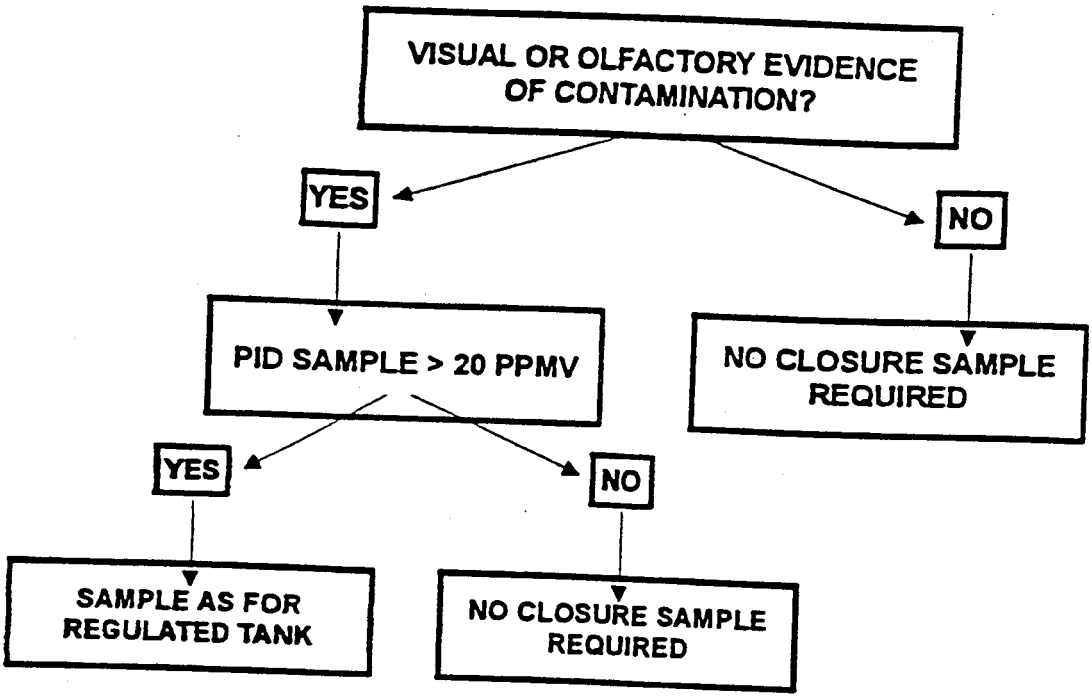




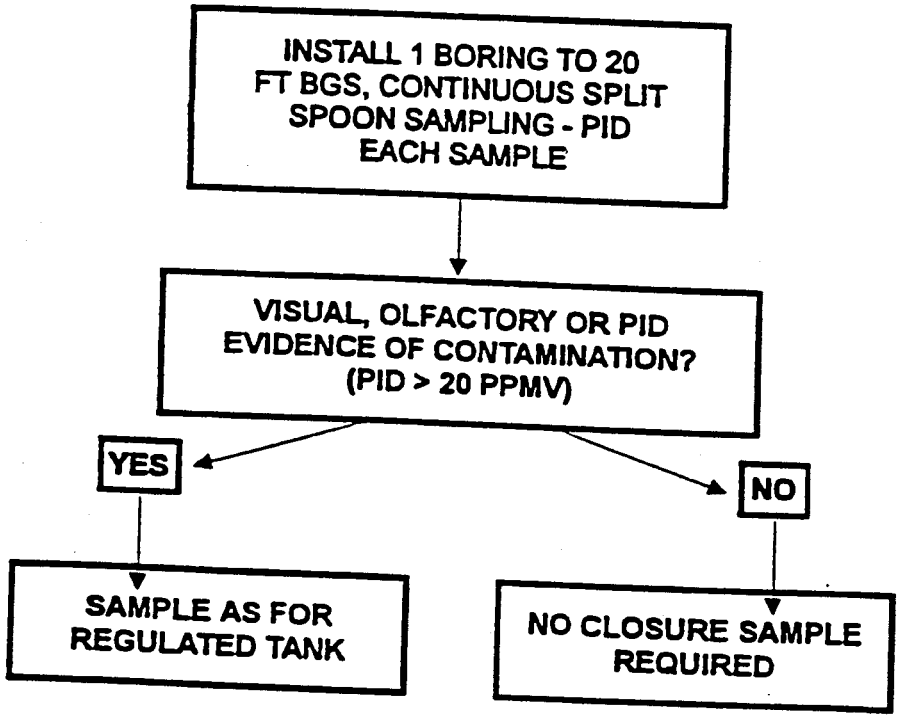
TANK PIT AND PIPING TRENCH PROFILE

DRAWN BY: D. REEVES DATE: 5/14/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-6886	SITE PLAN Site 130 FORT McCLELLAN, ALABAMA	

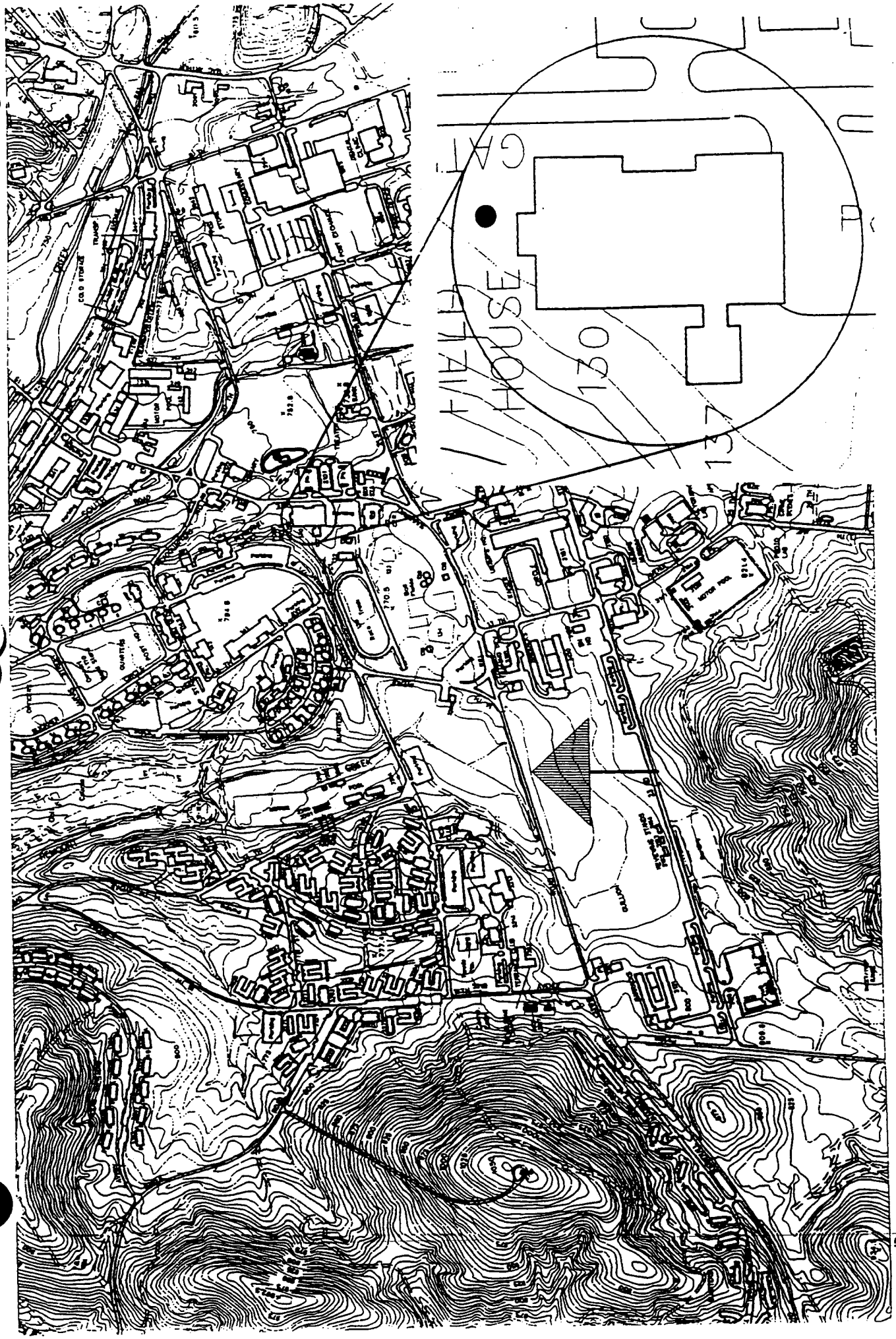
TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM



ATTACHMENT A. FLOW DIAGRAMS FOR CLOSURES SAMPLING


HOUSE
130
137

BUILDING 1012

UNDERGROUND STORAGE TANK CLOSURE REPORT

ADEM UST CLOSURE
SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: 11953-015-001012

DATE OF THIS REPORT: 3/14/97

INCIDENT NO. (If applicable). UST __ __-___-___

UST OWNER: Fort McClellan

FACILITY COUNTY: Calhoun County

ADDRESS: Directorate Of The Environmen
Fort McClellan, Alabama 3620

FACILITY NAME: Fort McClellan

CONTACT NAME: Raymond J. Mulholland

LOCATION: Building 1012

CONTACT PHONE #: (205)848-3539

ADDRESS: Fort McClellan
Fort McClellan, Alabama 36205

NAME OF CONTRACTOR USED TO CLOSE (REMOVE) TANK: Davis Oil Company

NAME OF CONSULTANT CONDUCTING ASSESSMENT: SEMS, Inc.

NAME OF LABORATORY USED: Not Applicable

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS" THESE API BULLETINS ARE AVAILABLE FROM ADEM UPON REQUEST.

NUMBER OF TANKS CLOSED: One (1) & Replaced

NUMBER OF TANKS REMAINING AT SITE: Unknown

CLOSURE DATE: 10/16/96

UNIQUE TANK #:	1012				
TANK SIZE:	5,000 gallons				
TANK CAPACITY:					
TANK AGE:	Unknown				
DATE TANK LAST USED:	10/16/96				
SUBSTANCE STORED:	Fuel Oil				
TYPE OF PRODUCT PIPING: (Pressurized/Suction)	Galvanized				
FARM TANK:	☐	☐	☐	☐	☐
HEATING OIL TANK:	XXX	☐	☐	☐	☐

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

1. TANK CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☒ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☒	☐
2. Boring or monitoring well:	☐	☒
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☒

d. Was there a notable odor found in the excavation? YES ☐ NO ☒

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☒

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐
5. Other? Explain: _____	☐	☐

f. Was free product found in the excavation? YES ☐ NO ☒

If yes,

1. How was free product handled? Describe:
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☒

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

_____

_____

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

Silty Clay

_____

_____

_____

_____

i. Was the excavation backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

2. TANK CLOSURE WITHOUT REMOVAL:

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth: YES NO

1. Boring or monitoring well: ☐ ☐
2. Topographic features (Method must be approved by ADEM prior to use): ☐ ☐

d. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

e. Was free product found in the bore holes? YES ☐ NO ☐

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs: _____

g. Specify the inert solid material used to fill the tank(s): _____

h. Provide the date the tank(s) were filled: _____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

3. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES ☒ NO ☐
If yes, was the product properly disposed of? ☒ ☐

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES [X] NO [ ]

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of trench:	[X]	[ ]
2. Boring or monitoring well:	[ ]	[X]
3. Topographic features (Method must be approved by ADEM prior to use):	[ ]	[X]

e. Was there a notable odor found in the piping trench? YES [ ] NO [X]

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was there water in the piping trench? YES [ ] NO [X]

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	[ ]	[ ]
2. Hauled to facility capable of treating constituents of petroleum products in water?	[ ]	[ ]
3. Hauled to local POTW with local approval?	[ ]	[ ]
4. Treated on-site with NPDES approved discharge?	[ ]	[ ]
5. Other? Explain:	[ ]	[ ]

_____

g. Was free product found in the piping trench? YES [ ] NO [X]

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES [ ] NO [X]

If yes, indicate the location(s) and provide a general description as to the size and number of holes: _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☒

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

4. PRODUCT PIPING CLOSURE WITHOUT REMOVAL

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. Was the piping purged of product prior to closure? YES ☐ NO ☐
If yes, was product properly disposed of? ☐ ☐

d. Was the piping capped? YES ☐ NO ☐

e. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

1. Boring or monitoring well: YES ☐ NO ☐
2. Topographic features (Method must be approved by Dept. prior to use): ☐ ☐

f. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

g. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

_____

_____

_____

i. Were the bore holes properly sealed with bentonite/soil? YES ☐ NO ☐
If yes, provide the date: _____

5. GROUNDWATER SAMPLING (If required by attached closure guidelines):

a. Indicate the following on the plan and section views required by Section 1.b., 2.b, 3.b, or 4.b. above:

1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)

2. The most probable direction of groundwater flow. State basis for determining direction:

_____

_____

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

6. LABORATORY DATA

a. Attach the original chain of custody record (**copies are not acceptable**) for each sample which includes at least the following:

1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 10 of this form),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (**copies are not acceptable**) which includes at least the following:

A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b., 2.b., 3.b., or 4.b. above,
The sample analytical results with appropriate units,
The method used to analyze each sample,
The date and time the sample was analyzed,
The person analyzing the sample.

7. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with clean backfill. **Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s) or piping trenches.** Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit or piping trench if the groundwater is greater than 5 feet from the base of the pit or piping trench.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: 0 cubic yds

b. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate current method and location of soil management and/or treatment prior to final disposal:

d. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

e. If soil was disposed of prior to the submittal of this form, indicate the final destination and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

8. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☒	☐

If no, describe how tank(s) were cleaned:

b. Provide an estimate of the volume of sludge removed from the tank: 0 Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

This form should be completed and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____

Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geological practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Geologist: _____ Date: _____

Signature of Alabama Registered Professional Engineer: [signature] _____

Date: 3/19/97

Alabama P.E. Registration Number: 19618

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

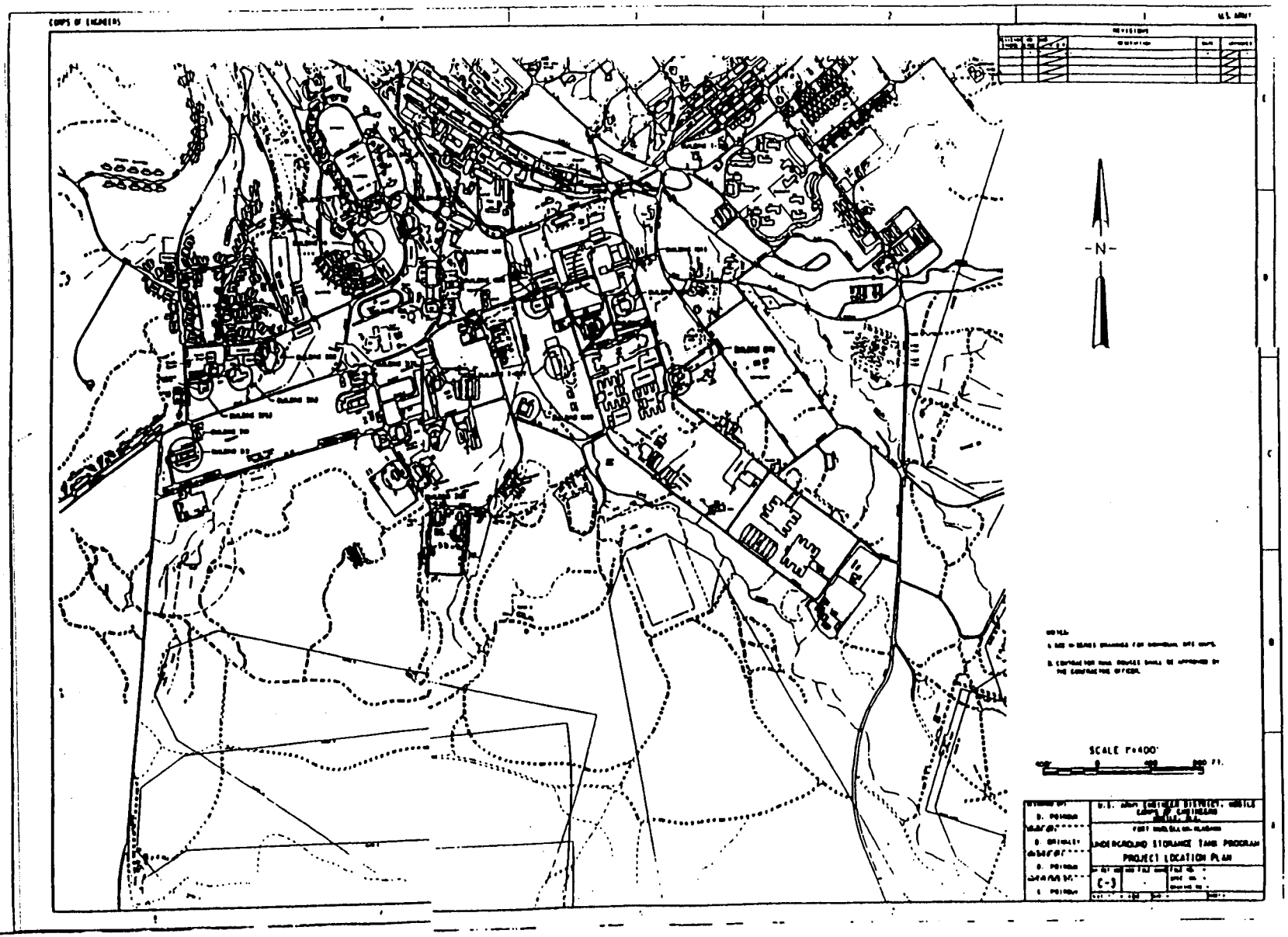
FOR ADEM USE ONLY:

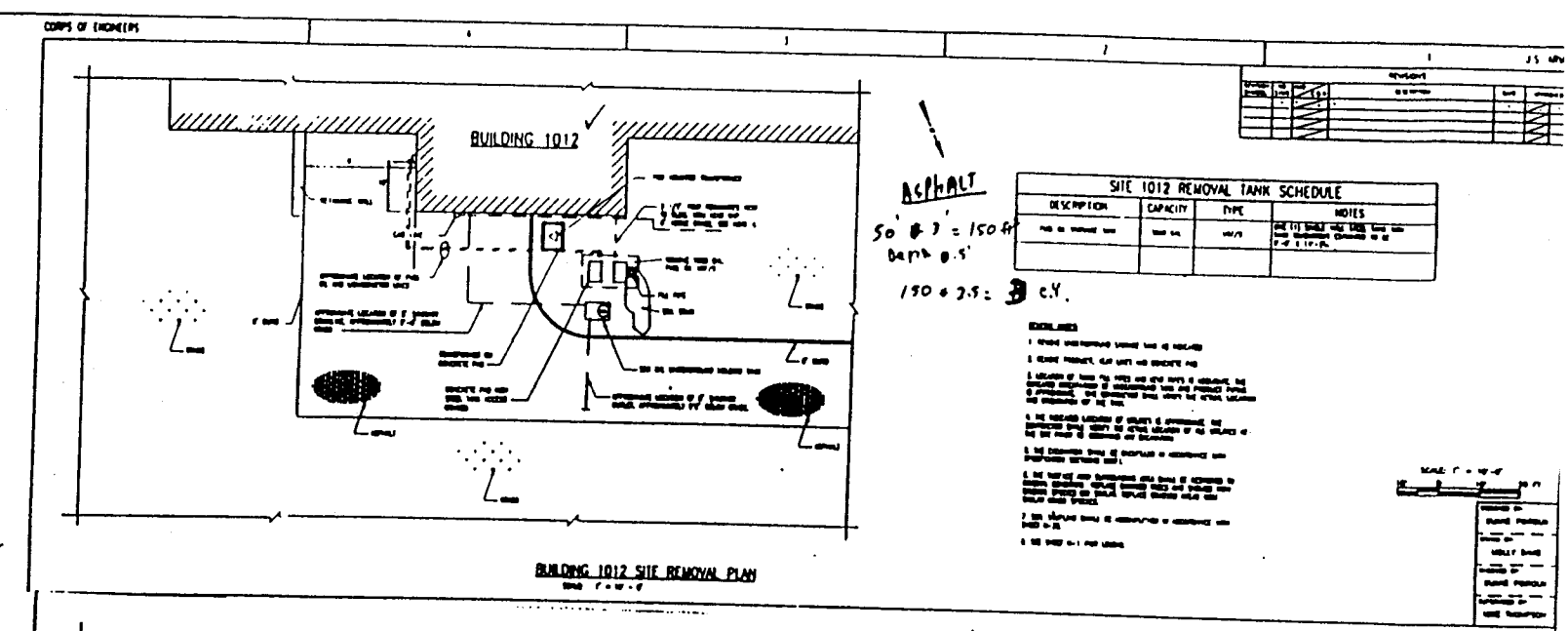
Reviewed By: _____ Date: _____

COMMENTS:

FORM 1133
5/8/95

Attachments: UST Closure Guidelines

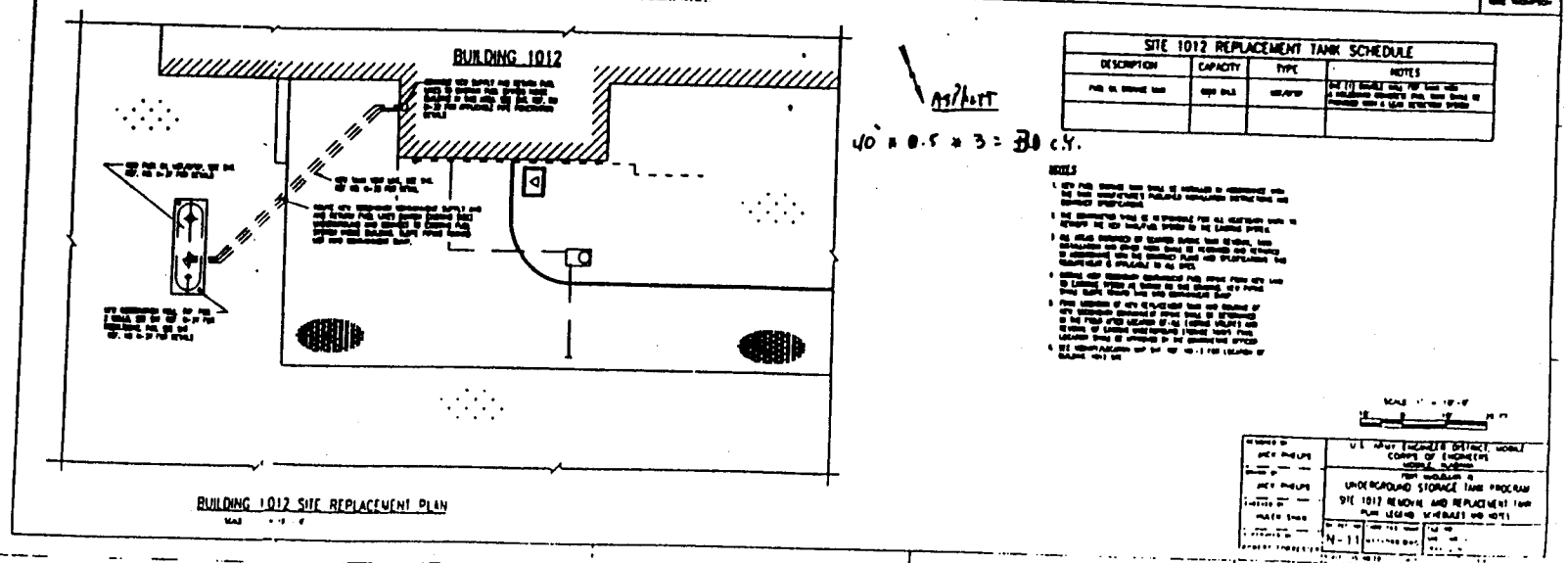

-N-
SCALE 1"=400'
UNDERGROUND STORAGE TANK PROGRAM
PROJECT LOCATION PLAN
C-3



BUILDING 1012 SITE REMOVAL PLAN

Asphalt
50' @ 3' = 150 ft²
Depth 0.5'
150 ÷ 27 = 3 c.Y.

SITE 1012 REMOVAL TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES



BUILDING 1012 SITE REPLACEMENT PLAN

Asphalt
40' × 0.5 × 3 = 30 c.Y.

SITE 1012 REPLACEMENT TANK SCHEDULE			
DESCRIPTION	CAPACITY	TYPE	NOTES

U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS

UNDERGROUND STORAGE TANK PROGRAM
SITE 1012 REMOVAL AND REPLACEMENT TANK
PLAN LEGEND SCHEDULES AND NOTES

N-11

BUILDING 3131

UNDERGROUND STORAGE TANK CLOSURE REPORT

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11853-015-3131 NON REGULATED TANK
Incident No.(If applicable) UST _ _-_ _-_ _
Facility County: CALHOUN CO.
Facility Name: FORT MCCLELLAN
Location: BLDG 3131
Address: FORT MCCLELLAN, ANNISTON ALABAMA 36205-5000

Date of this Report: 6-24-96
UST Owner: U.S DEPT OF DEFENSE
Address: FORT MCCLELLAN ANNISTON, ALABAMA
Contact: MS. CANDY SEFCIK
Contact Telephone No.: (205) 848-4318

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING
Name of Laboratory used: _____

NON-REGULATED TANK - NO EVIDENCE OF CONTAMINATION - NO SAMPLES COLLECTED

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: ONE
Number of tanks remaining at site: NONE
Closure Date: 3-21-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	10'4"x37'9"				
Tank Capacity	20,000 GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[✓]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES _____ NO X If not, provide the depth from the ground surface to the groundwater table. 11½ APPROX ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit X
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES X NO _____
If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water ✓
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X
If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X
If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0- 12 FT SCS - YELLOWISH RED SILTY CLAY

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 3-25-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline)(diesel)
   (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes;
   1. How was free product handled?_____
   _____
   2. What was the measured thickness of the free product?_____
   _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). _____
_____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES ___X___ NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES _____ NO ___X___ If not, provide the depth from the ground surface to the groundwater table depth:

1. Excavation extended 5 feet below base of trench ___X___
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO ___X___ If yes:
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO ___X___
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____
NO ___X___ If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES_____ NO___X___
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0-2 FT BGS - YELLOWISH RED SANDY CLAY

j. Was the piping trench backfilled? YES ___X___ NO _____
If yes, provide the date 4-2-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) GROUNDWATER SAMPLE NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: THIS TANK WAS NOT REGULATED BY ADEM. THE CLOSURE ASSESSMENT PROTOCOL EMPLOYED WAS REVIEWED BY ADEM. THE CLOSURE PROTOCOL IS PROVIDED IN ATTACHMENT A. NO EVIDENCE OF PETROLEUM CONTAMINATION WAS OBSERVED.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 648 cy cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.

SOIL WAS STOCKPILED ADJACENT TO THE TANK, THEN RETURNED TO THE EXCAVATION. 72 CY OF STOCKPILED (WET) SOIL WAS TRANSFERRED TO THE DARE BORROW PIT.

d. Indicate method of soil disposal used or to be used:
   (1) Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
   2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other 32 CY OF WATER-SATURATED SOIL WAS TRANSPORTED TO THE B.M. PIT.

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
NA

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned._____

b. Provide an estimate of the volume of sludge removed from the tank.
100 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED IN 55 GALLON DRUMS. MANIFEST WILL BE PROVIDED UPON DISPOSAL.

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: No SAMPLES WERE COLLECTED
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

- -

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: DK [signature] Date: 6-24-96

Signature of Alabama Registered Professional Engineer:
_____ Date: _____

Alabama P.E. Registration No.: _____

- -

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

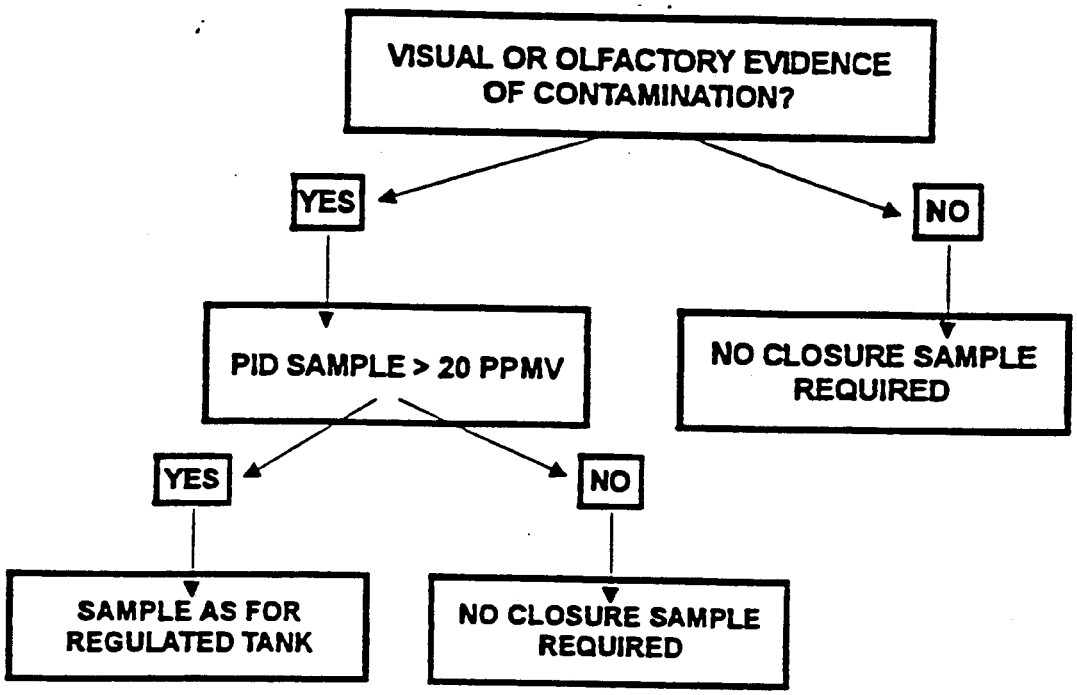
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

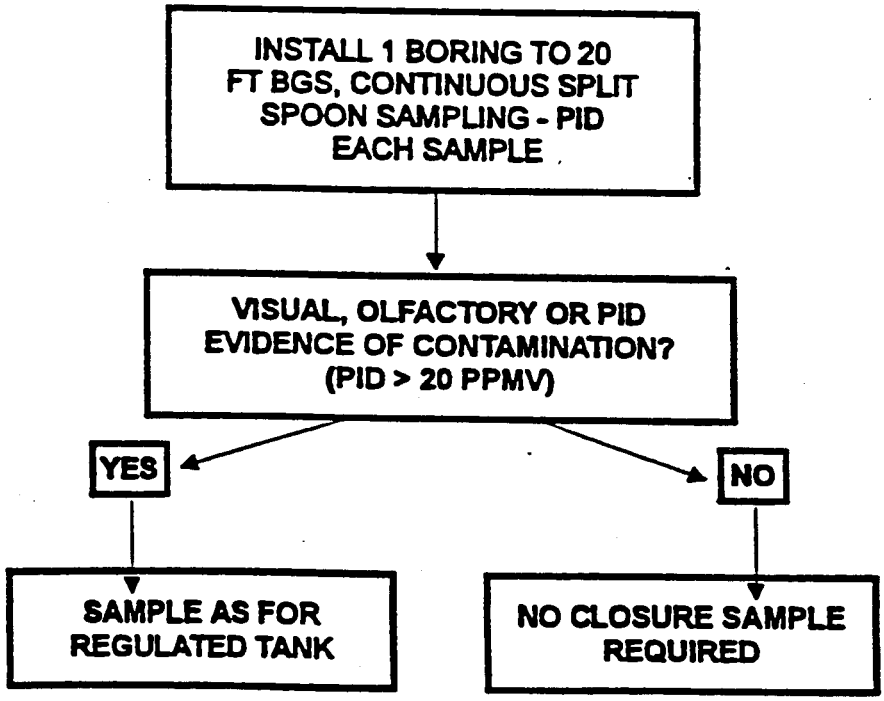
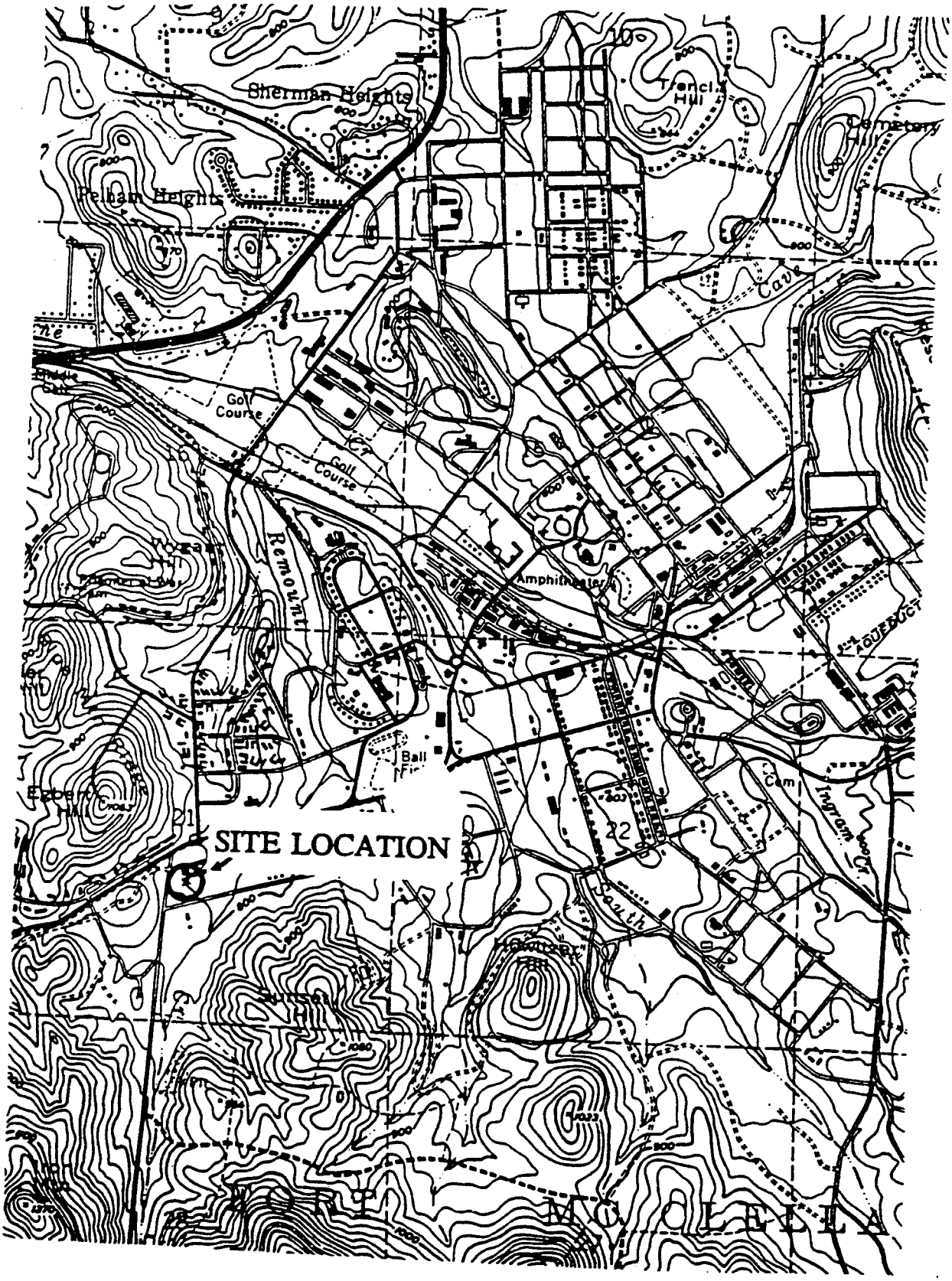


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



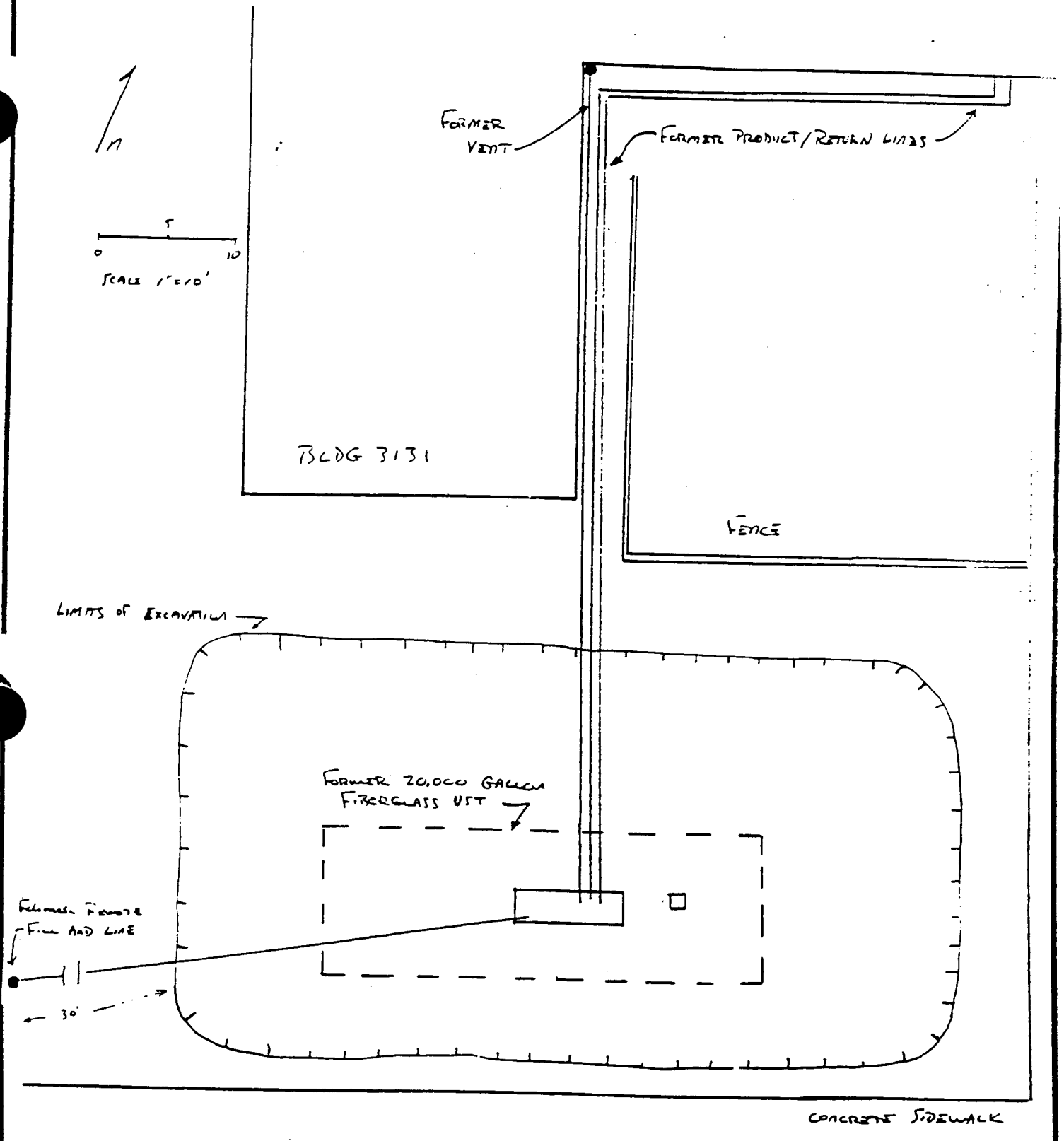
DRAWN BY:	D. REEVES
DATE:	6/10/96
CHECKED BY:	D. REEVES
PROJ. NO.:	8001-001
DWG	ENV0000
REV	0

THETA ENGINEERING, INC.

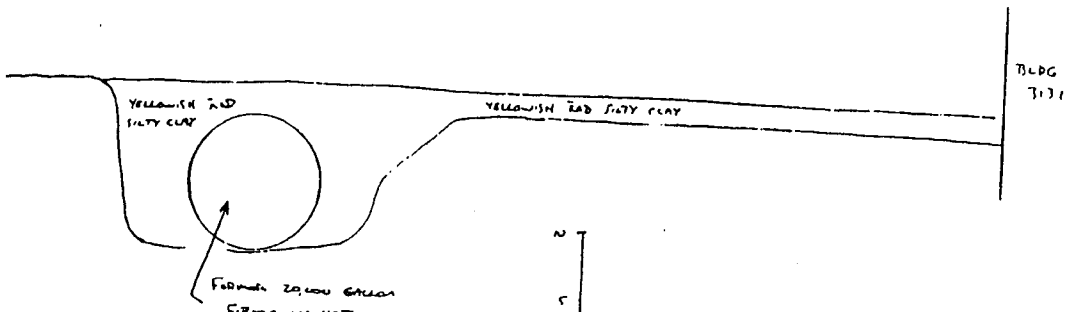
SITE LOCATION MAP

SITE 3131

FORT McCLELLAN, ALABAMA



DRAWN BY: D. REEVES DATE: 6/10/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC.	SITE PLAN SITE 3131 FORT McCLELLAN, ALABAMA	



No evidence of Petroleum Contamination was observed

VERTICAL AND HORIZONTAL SCALE 1"=10'

TANK PIT AND PIPING TRENCH
CROSS SECTION

DRAWN BY: D. REEVES DATE: 6/11/96 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THETA ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37... 13/482-0000	SITE PLAN SITE 3131 FORT McCLELLAN, ALABAMA	

BUILDING 3161

UNDERGROUND STORAGE TANK CLOSURE REPORT

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No.: 11957-015-3161 (NON-REGULATED TANK)
Incident No.(If applicable) UST _-_-_ -_-_
Facility County: CALHOUN
Facility Name: FORT MCCLELLAN
Location: BLDG 3161

Address: FORT MCCLELLAN ANNISTON ALABAMA 36205-5000

Date of this Report: 3-29-96
UST Owner: U.S. DEPT OF DEFENSE

Address: FORT MCCLELLAN ANNISTON ALABAMA 36205-5000
Contact: MR. CANDY SECCIK
Contact Telephone No.: (205) 848-7717

Name of Contractor and/or Consultant used to close tanks: THETA ENGINEERING INC
Name of Laboratory used: NO SAMPLES WERE COLLECTED - NON-REGULATED TANK - NO CONTAMINATION OBSERVED

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS".

Number of Tanks Closed: 1

Number of tanks remaining at site: Ø
Closure Date: 2-27-96

Tank Identification #	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Tank Size	4.0'x11.3'L				
Tank Capacity	1000-GAL				
Tank Age	UNKNOWN				
Date Tank Last Used	UNKNOWN				
Substance Stored	HEATING OIL				
Type of Product Piping (pressurized/suction)	SUCTION				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[X]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

   a. Attach site maps showing the general location of the facility.

   b. Attach plan and sectional views of the excavation and include the following:

      1. All appropriate excavation dimensions,

      2. All soil sample locations and depths using an appropriate method of identification,

      3. Location of areas of visible contamination,

      4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES UNKNOWN NO _____ If not, provide the depth from the ground surface to the groundwater table. _____ ft. Method used to determine water table depth:

1. Excavation extended 5 feet below base of pit _____
2. Boring or Monitor well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation? YES _____ NO X If yes;

1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____)

e. Was there water in the excavation? YES _____ NO X If yes, how was it handled?

1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

f. Was free product found in the excavation? YES _____ NO X If yes;

1. How was free product handled? _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO X If yes, please indicate which tank(s) by the Identification Number _____. Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

h. Describe the soil type and thickness of all soil layers encountered in the excavation: 0-0.3 FT BGS - DARK BROWN SANDY TOPSOIL; 0.3 - 7 FT - MOTTLED REDDISH YELLOW AND YELLOW SILTY CLAY. TANK BACKFILL CONSISTED OF PEA GRAVEL

i. Was the excavation backfilled? YES X NO _____ If yes, provide the date. 2-27-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____ ft.
Method used to determine water table depth: _____
   1. Boring or Monitor Well _____
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes;
   1. The odor strength was (mild)(strong)(other, describe _____
   _____)
   2. The odor indicates what type of product? (gasoline)(diesel)
   (waste oil)(kerosene)(other _____)

e. Was there free product in the bore holes? YES _____NO _____
If yes;
   1. How was free product handled?_____
   _____
   2. What was the measured thickness of the free product?_____
   _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____
_____
_____
_____

g. Specify the inert solid material used to fill the tank(s). _____
_____

h. Provide the date the tank(s) were filled. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date:_____

3. Product Piping Closure by Removal

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

   1. All appropriate excavation dimensions and length of piping,
   2. All soil sample locations and depths using an appropriate method of identification,
   3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure?
YES X NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench? YES X NO _____ If not, provide the depth from the ground surface to the groundwater table depth.

(1) Excavation extended 5 feet below base of trench (IN ADJACENT TANK PIT)
2. Boring or Monitor Well _____
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES _____ NO X If yes;
1. The odor strength was (mild)(strong)(other, describe _____)
2. The odor indicates what type of product? (gasoline)(diesel)(waiste oil)(kerosene)(other _____)

f. Was there water in the piping trench? YES _____ NO X
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water _____
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? YES _____ NO X If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES _____ NO X
If yes, please indicate the location(s) and provide a general description as to the size and number of holes _____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench: 0 - 0.3 FT BGS - DARK BROWN SANDY TOPSOIL
0.3 - 2 FT BGS - MOTTLED REDDISH YELLOW + YELLOW SILTY CLAY

j. Was the piping trench backfilled? YES X NO _____
If yes, provide the date 3-4-96 DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the piping including depth,
   2. Location of piping with respect to tank(s), if applicable,
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____.

e. Is the groundwater more than 5 feet below the bottom of the piping YES _____ NO _____ If no, provide the depth from the ground surface to the groundwater table. _____

f. Was there a notable product odor found in the bore holes? YES _____ NO _____ If yes:
   1. The odor strength was (mild)(strong)(other, describe _____
   2. The odor indicates what type of product? (gasoline)(diesel) (waste oil)(kerosene)(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If yes;
   1. How was free product handled? _____
   2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil? YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines) * GROUNDWATER SAMPLING NOT REQUIRED

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b 3.b or 4.b above:
   1. The location and depth of the 1 up-gradient and 3 down-gradient borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
1. Sample identification number,
2. Date and time sample was taken,
3. Name and title of person collecting sample (see certification requirement on page 8 of this form.),
4. Type of sample (soil or water),
5. Type of sample container,
6. Method of preservation,
7. Date and time sample was relinquished,
8. Person relinquishing sample,
9. Date and time sample was received by lab,
10. Person receiving sample at lab.

NOTE: No evidence of contamination was observed. No samples were collected. See Attachment 1.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
1. A sample identification method which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above,
2. The sample analytical results with appropriate units,
3. The method used to analyze each sample,
4. The date and time the sample was analyzed,
5. The person analyzing each sample.

7. Excavated Soil

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed. 12.2 cubic yds.

b. Attach "Total Potential VOC Emissions Calculations" for soil removed.

c. Indicate method and location of soil management and/or treatment prior to final disposal.
No evidence of contamination was observed
Excavated soil was returned to the tank pit excavation

d. Indicate method of soil disposal used or to be used:

1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base pit.
2. Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm.
3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
4. Incineration
5. Thermal volatilization
6. Other _____

d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.

_____

_____

_____

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____
If no, describe how tank(s) were cleaned._____

_____

_____

_____

b. Provide an estimate of the volume of sludge removed from the tank.
20 gallons

c. Indicate the final destination of the sludge and attach invoices or receipts. SLUDGE IS CONTAINERIZED ONSITE PENDING PROJECT COMPLETION. INVOICES / RECEIPTS WILL BE PROVIDED AT THAT TIME

THIS FORM SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463
(334) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: NON-REGULATED TANK - NO CONTAMINATION WAS OBSERVED, NO SAMPLES WERE COLLECTED.
Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted geologic practices; I am either a geologist or an Alabama registered professional engineer; I am experienced in hydrogeological investigations; and the information I have submitted, to the best of my knowledge and belief, is true accurate and complete.

Signature of Geologist: D.K. R_____ Date: 3-29-96

Signature of Alabama Registered Professional Engineer: _____ Date: _____

Alabama P.E. Registration No.: _____

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

For ADEM Use:

Reviewed by:_____ Date:_____

Comments:_____

GRWATER3
WP+ 1538
5/2/94

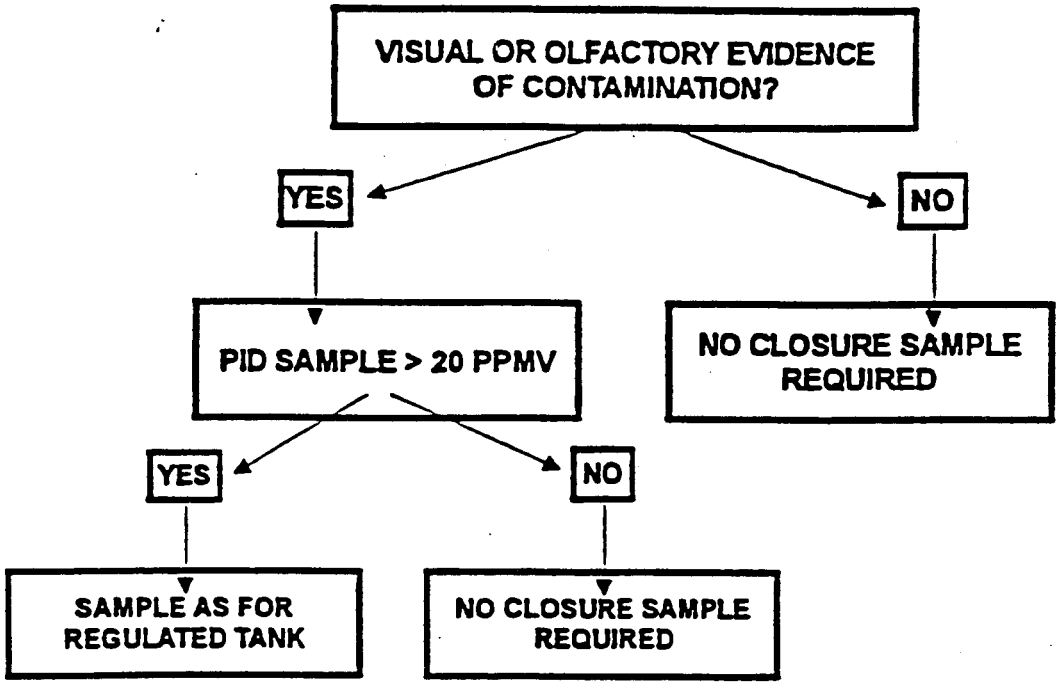
Attachment UST Closure Guidelines
(Remove from closure letter)

ATTACHMENT 1

The subject UST formerly contained heating oil for use at the tank location. Consequently the UST was not regulated by the Alabama Department of Environmental Management. Theta Engineering, Inc. (Theta) prepared a Value Engineering Change Proposal (VECP) to guide closure of non-regulated tanks. The VECP was submitted on December 1, 1995 and approved by the Base on February 22, 1996.

In accordance with the VECP, soil not exhibiting visual or olfactory evidence of contamination would be considered non-contaminated and could be used to backfill the tank pit. Soil exhibiting visual and/or olfactory evidence of contamination was field screened using an HNu photoionization detector (PID). Soils exhibiting a PID reading of 20 parts per million vapor (ppmv) or less were considered non-contaminated. Waste characterization samples were collected of soil exhibiting evidence of contamination. UST closure samples were collected only if all soil exhibiting evidence of petroleum contamination was not overexcavated. A Tank Removal Closure Sampling flow chart is provided below that shows the decision logic.

TANK REMOVAL CLOSURE SAMPLING FLOW DIAGRAM (FOLLOWING TANK REMOVAL AND OVER-EXCAVATION)



CLOSE IN PLACE CLOSURE SAMPLING FLOW DIAGRAM

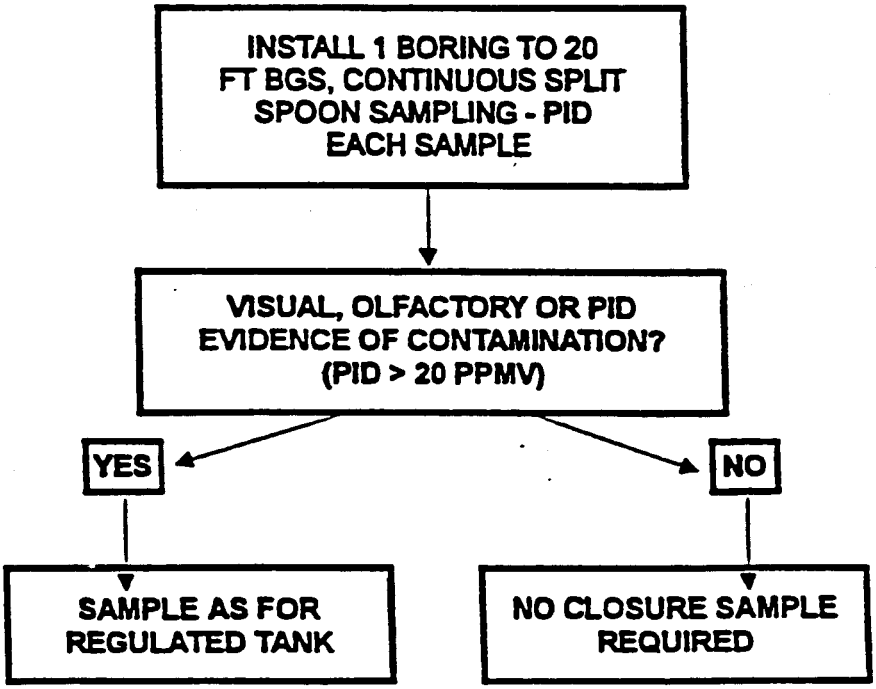
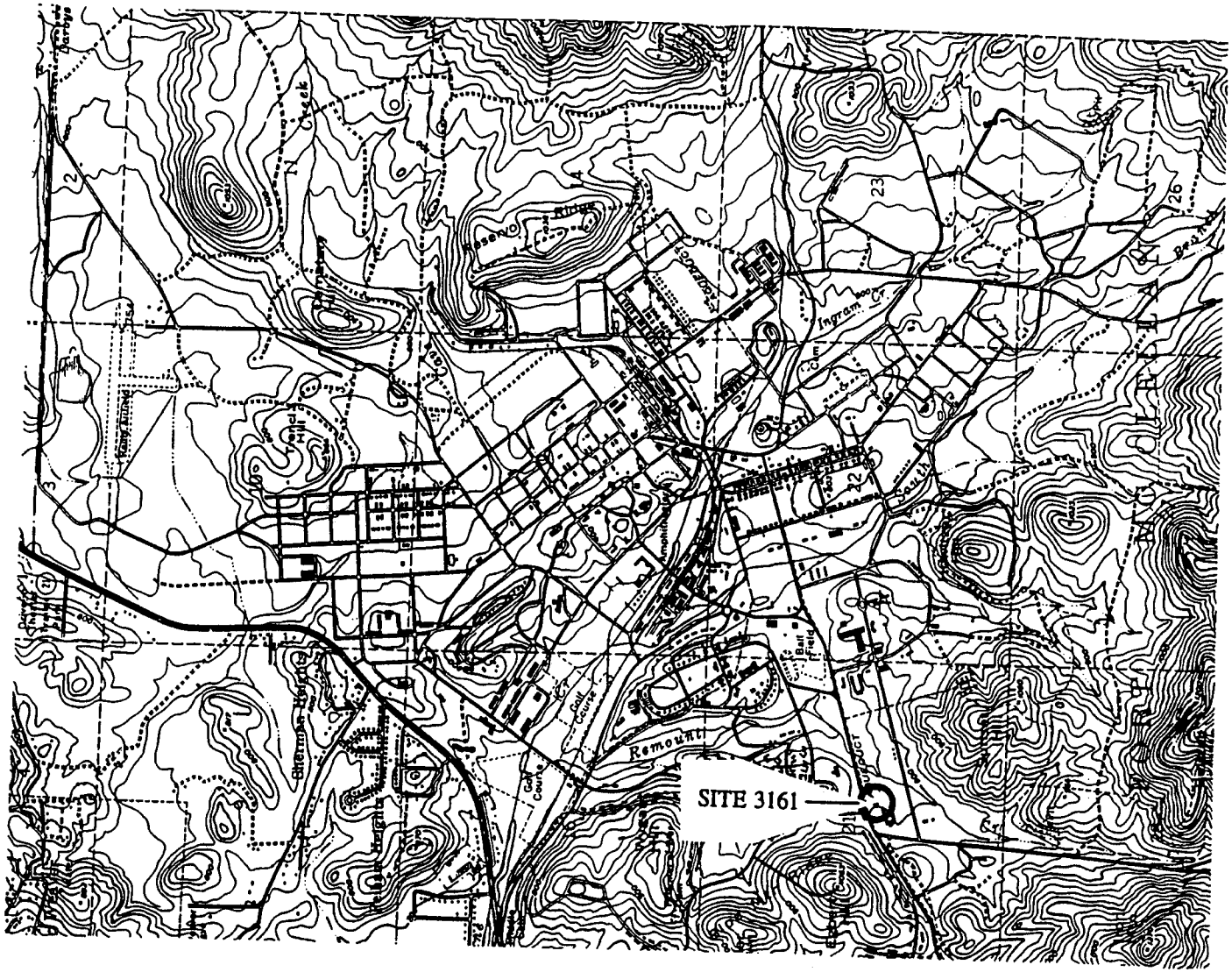
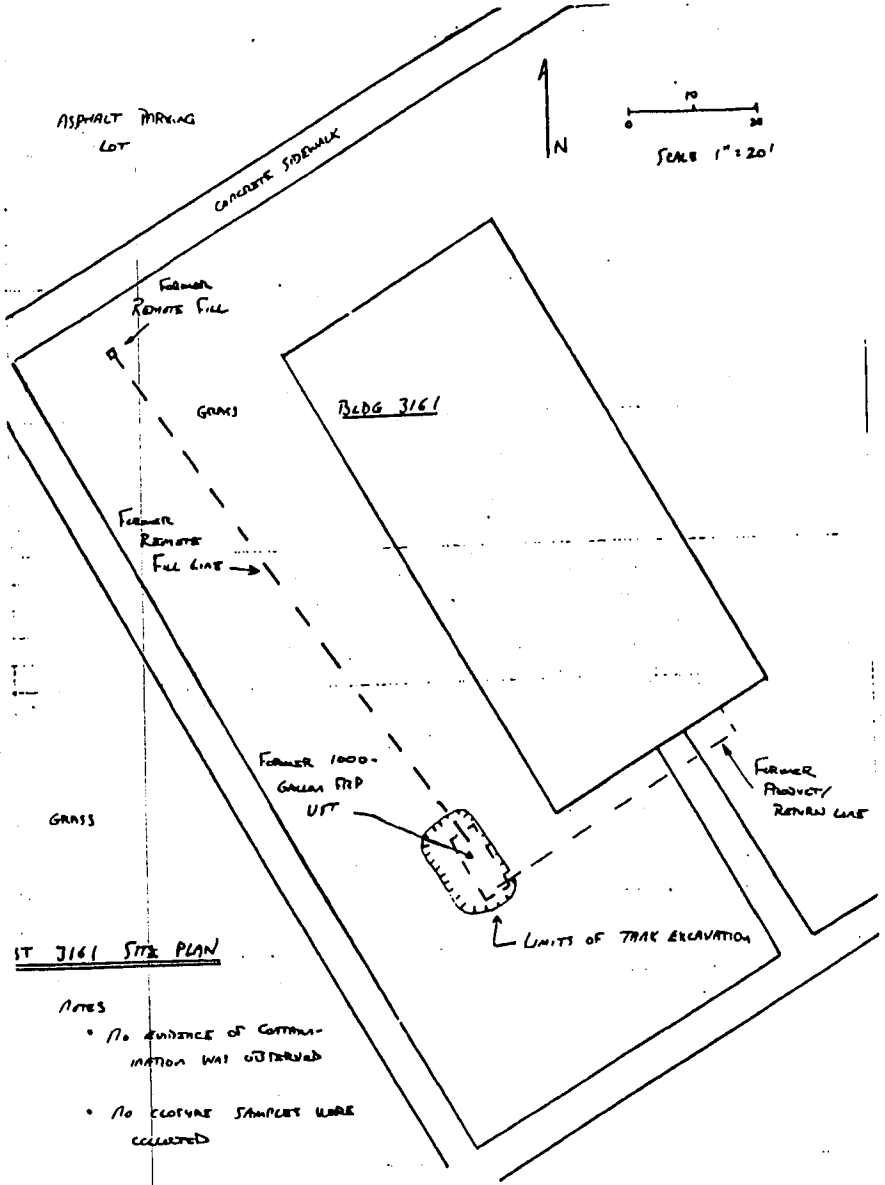


Figure 1. FLOW DIAGRAMS FOR CLOSURES SAMPLING



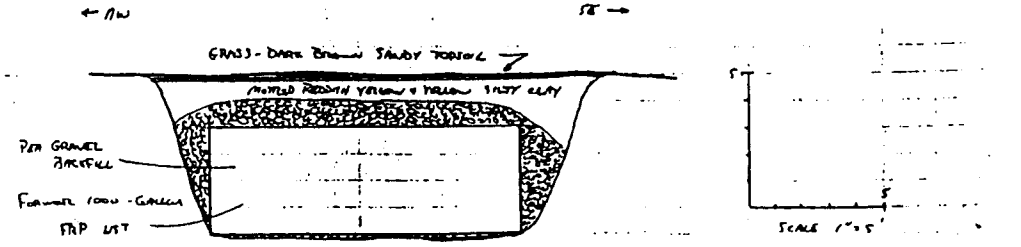
DRAWN BY: D. NEAVES DATE: 3/29/96 CHECKED BY: D. NEAVES PROJ. NO.: 2001-001 DWG ENV0000 REV 0	ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-9258	SITE LOCATION MAP SITE 3161 FORT McCLELLAN, ALABAMA



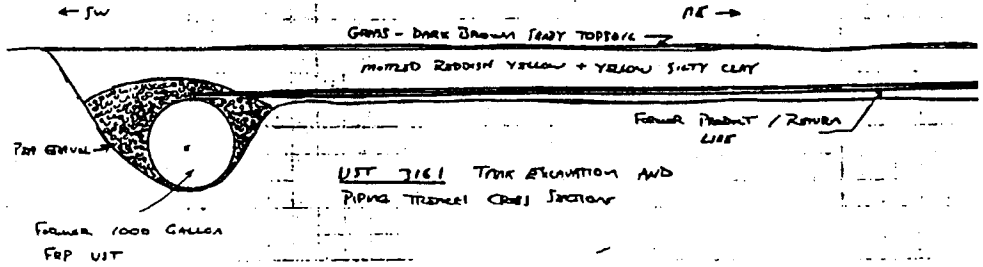
UST 3161 SITE PLAN

NOTES

- No evidence of contamination was observed
- No closure samples were collected



UST 3161 TANK EXCAVATION CROSS SECTION



UST 3161 TANK EXCAVATION AND PIPING TRENCH CROSS SECTION

DRAWN BY: D. REEVES DATE: 3/29/91 CHECKED BY: D. REEVES PROJ. NO.: 8001-001 DWG ENV0000 REV 0	THE ENGINEERING, INC. 101 East Tennessee Ave. • Oak Ridge, TN 37830 • 423/483-0086	SITE PLAN SITE 3161 FORT McCLELLAN, ALABAMA

BUILDING 3148

UNDERGROUND STORAGE TANK CLOSURE REPORT

ATTACHMENT 13

BUILDING 3148 (BRAUN)

BRAUN INTERTEC

Braun Intertec Corporation
1345 Northland Drive
Mendota Heights, Minnesota 55120-1141
612-683-8700 Fax: 683-8888

Engineers and Scientists Serving the Built and Natural Environments

January 25, 1995

Contract No. DABT02-93-C-0039
Braun Intertec Project CMKX-93-0180

Mr. Ray Murphy
Fort McClellan
Directorate of Engineering
Building 215
Fort McClellan, AL 36205

Dear Mr. Murphy:

Re: UST Closure, Site Assessment Report, Fort McClellan Building 3148, Calhoun County, Fort McClellan, Alabama

Braun Intertec Corporation (Braun Intertec) is pleased to submit this Underground Storage Tank (UST) Closure, Site Assessment Report for the above referenced site.

Partially completed copies of the Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached to this report. The forms need to be signed and submitted to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
1751 Congressman W.L. Dickinson Drive
Montgomery, Alabama 36130

Should you have any questions regarding this report, please call Earl Windahl at (612) 683-8758 or John Phillips at (612) 683-8737.

Sincerely,

for: John Phillips
Environmental Scientist

for Earl W. Windahl
Supervisor, Remedial Services

c: Dale Ciche, J & D Enterprises
f:*wpfiles\cmkx\93-0180\0180.R05

Table of Contents

A. Background 1

B. Piping Removal 1

C. In-Place UST Abandonment 1

D. Sludge Disposal 1

E. Soil Sampling and Laboratory Results 2

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E.2. Classification 2
E.3. Soil Boring Observations. 2
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E.6. Analytical Analyses Results 3

F. Conclusions 4

Appendices

A. ADEM Closure Report Form
B: Site Location
C. Site Plan with Sample Locations
D. Hazardous Waste Manifest and Certificate of Disposal
E: Soil Boring Logs
F: Organic Vapor Field Data Sheets
G. Laboratory Results

A. Background

The Underground Storage Tank (UST) at BLDG 3148 is located south of the concrete ramps and west of the lubricant storage area. The UST capacity was approximately 2,000 gallons and was used to store waste oil. Because the UST was located adjacent to the spread footings of a truck maintenance ramp, in-place abandonment was chosen as the closure option. Alabama Department of Environmental Management (ADEM) UST Closure Report Form and the ADEM Form 297 are attached in Appendix A. The general location of the site is shown on Figure 1, which is included in Appendix B.

B. Piping Removal

Product was placed into a drain pan between the concrete ramps and gravity fed by aboveground PVC pipe to the UST. The piping was removed on May 5, 1994. The aboveground pipe measured approximately 10 long. One soil sample was collected for analyses beneath the aboveground piping. The location is illustrated in Figure 2, Appendix C.

C. In-Place UST Abandonment

Prior to closure, the remaining product was removed from the UST, the UST was purged with fresh air and cleaned. The tank was constructed of single wall steel. No holes were observed in the UST walls from the interior and it appeared to be in fair condition. The tank was filled with approximately 11 yards of concrete slurry on May 5, 1994.

D. Sludge Disposal

No sludge was encountered during removal, however 100 gallons of waste oil was drummed, transported and disposed of through Fisher Industrial Service, Inc. located in Glencoe, Alabama. The ADEM facility and transport permit number is ALD 981 020 894. Copies of the Hazardous Waste Manifest and the Certificate of Disposal are attached in Appendix D.

E. Soil Sampling and Laboratory Results

E.1. Soil Sampling Procedures

Three power auger borings (labeled 3148-N, 3148-E, and 3148-W) were performed on each accessible side of the UST using a truck-mounted core and auger drill. A forth boring on the south side of the tank was not possible. The UST was located near the south edge of a motor pool compound. A fence was located approximately 4 feet south of the UST. No access roads were located south of the fence. Trees, overhead power lines, and soft, wet soils also prohibited sample collection with a truck mounted drill rig. The three borings were extended to a depth near the assumed base of the UST. All down-hole equipment was steam cleaned prior to use, and clean augers were used for each borehole.

Power auger borings were advanced 2.5 foot intervals below land surface then removed by dead lifting. Split spoon sampling of the borings was conducted in accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." Using this method, a 140 pound hammer falling 30 inches drove a standard, 2-inch OD, split-barrel sampler 1 1/2 feet below the base of the power auger boring. The blows for the last foot of penetration were recorded and are used as an index of soil strength characteristics and for stratigraphic correlation. Soil samples were collected at 2 1/2-foot vertical intervals to the termination depth of the borings.

E.2. Classification

Soils encountered in the borings were visually and manually classified in the field by a Braun Intertec geologist in accordance with ASTM D 2487 "Standard Test Method for Classification of Soils for Engineering Purposes" and ASTM D 2488 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)."

E.3. Soil Boring Observations.

The soils encountered in the soil borings completed near the UST basin consisted of 3 feet of silty sand fill with gravel and crushed asphalt; over 3 to 5 feet of silty clayey sand and clayey sand; over lean clay. The boring located beneath the aboveground product piping encountered sand fill with crushed asphalt to 2.5 feet. An oil stain was noted on the surface beneath the product piping.

Groundwater was encountered at 6 feet below land surface in borings 3148-N, 3148-E and 3148-W. Complete Soil Boring Logs are attached in Appendix E.

E.4. Organic Vapor Screening

During the field investigation, soil samples were examined visually by an environmental geologist for staining or other signs of contamination. The soil samples were also screened for the presence of organic vapors using a photoionization detector (PID). The PID was calibrated to a benzene standard prior to sampling and was equipped with a 10.2 eV lamp. The PID was used to test fresh surfaces of soil collected from the split spoon sampler.

The headspace analytical procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a clean sealable plastic bag with a soil sample. The bag is quickly sealed and headspace development proceeds for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of the headspace development period. After headspace development, a small opening is cut in the bag and the PID probe is inserted into the bag. The highest reading observed on the PID is then recorded. Complete PID headspace analysis results are included on the attached Organic Vapor Field Data Sheets included in Appendix F.

E.5. Chemical Soil Sampling

Soil samples were collected for chemical analysis from the depth of 7.5 feet below land surface in each of the three soil borings near the UST. The soil samples collected from the soil borings were analyzed for the presence of total petroleum hydrocarbons (THC) and total lead. Soil samples were also collected from beneath the aboveground product piping at 0.5 feet and 2.5 feet below land surface. The material located above the UST consisted of a concrete slab and asphalt. Therefore, no soil samples were collected from this material. The samples were placed in clean, glass VOA screw-top vials with Teflon®-lined caps, labeled, and transported to our laboratory under refrigerated conditions using Braun Intertec chain-of-custody procedures.

The soil samples were submitted to Braun Intertec Northwest, Inc. in Portland, Oregon for laboratory analysis. The soil samples were analyzed for total recoverable petroleum hydrocarbons (TPH) and total lead.

E.6. Analytical Analyses Results

The results of the soil samples collected from the sidewalls and base of the UST excavation, pipe trench and the soil stockpile are summarized in Table 2. Complete laboratory reports and original chain of custody is attached in Appendix G.

Table 2
Soil Chemistry Data

Location	TPH (ppm)	Total Lead (ppm)	Depth Vertical (ft)	Sample ID No.
3148-N	<5	12	7.5	94-0431-13
3148-E	10	15	7.5	94-0431-14
3148-W	15	12	7.5	94-0506-03
Pipe trench "A"	9000	39	0.5	94-0506-01
Pipe trench "B"	520	11	2.5	94-0506-02

Soil samples collected from beneath the aboveground piping contained asphalt which may have increased the concentration of TPH found in the soil samples.

F. Conclusions

The 2000-gallon fuel oil UST located at building 3148 was abandoned in-place on May 5, 1994. Three soil borings were completed near the UST and soil samples were collected from a depth of 7.5 feet below land surface. TPH concentrations ranged from <5 ppm to 15 ppm in the soil samples collected and total lead concentrations ranged from 11 ppm to 15 ppm. A surface spill of waste oil was apparent beneath the product piping. Soil samples collected from beneath the aboveground piping contained asphalt which may have increased the concentration of TPH found in the soil samples. Groundwater was encountered in the soil borings completed near the UST at approximately 6 feet below land surface.

Appendix A

ADEM Closure Report Form

ADEM UST CLOSURE
SITE ASSESSMENT REPORT
(Use a separate form for a group of tanks in each tank pit)

Facility I.D. No: 11953-015 -015840

Incident No. (If applicable)
UST _____ - _____ - _____
Facility County: Calhoun
Facility Name: Building 3148
Location: Ft. McClellan

Address: Ft. McClellan, Alabama

Date of this Report: January 25, 1995

UST Owner: Fort McClellan

Address: Fort McClellan, AL 36205

Contact: Mr. Ray Murphy/Lee Jaye

Contact Telephone No.:
(205) 848-6155/(205) 848-3539

Name of Contractor and/or Consultant used to close tanks: J&D Enterprises, Inc. (Contractor), Braun Intertec Corporation (Consultant)

Name of Laboratory used: Braun Intertec Corporation

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN API BULLETIN 1604. "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS."

Number of Tanks Closed: 1 CIP

Number of tanks remaining at site: 1
Closure Date: 5-5-94

Tank Identification #	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5
Tank Size	5' X 13'				
Tank Capacity	2,000				
Tank Age	UN				
Date Tank Last Used	UN				
Substance Stored	Waste Oil				
Type of Product Piping (pressurized/suction)	gravity				
Farm Tank	[ ]	[ ]	[ ]	[ ]	[ ]
Heating Oil Tank	[ ]	[ ]	[ ]	[ ]	[ ]

1. Tank Closure by Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the excavation and include the following:
   1. All appropriate excavation dimensions.
   2. All soil sample locations and depths using an appropriate method of identificatior
   3. Location of areas of visible contamination.
   4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation?
YES __NO ___ If not, provide the depth from the ground surface to the groundwater tabl
ft. method used to determine water table depth:
   1. Excavation extended 5 feet below base of pit _____
   2. Boring or Monitoring well _____
   3. Topographic features _____
   (Method must be approved by Department prior to use.)

d. Was there a notable product odor found in the excavation?
YES _____ NO _____ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene
   (other _____

e. Was there water in the excavation? YES _____ NO _____
If yes, how was it handled?
   1. One-time discharge to sanitary sewer with local approval _____
   2. Hauled to facility capable of treating constituents of petroleum products in water _____
   3. Hauled to local POTW with local approval _____
   4. Other (specify) _____

f. Was there free product in the excavation? YES _____ NO _____
If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES _____ NO _____
If yes, please indicate which tank(s) by the Identification Number _____
Also, describe the location(s) and provide general description as to the size and number c
holes for above noted tanks, (Example: 3 square feet of pinholes or 3-inch diameter hole
_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation: _____

i. Was the excavation backfilled? YES _____ NO _____ If yes, provide the date. _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

2. Tank Closure Without Removal

a. Attach site maps showing the general location of the facility.

b. Attach plan and sectional views of the site and include the following:
   1. Location of the tank(s) including depth,
   2. Location of tank(s) with respect to other tanks, if applicable.
   3. Soil boring locations and depth at which soil samples were taken.
   4. Boring logs

c. Is the groundwater more than 5 feet below the bottom of the tank?
YES _____ NO __X__ If no, provide the depth from the ground surface to the groundwater table. __6__ ft.
   1. Boring or Monitor Well __3 soil borings near UST__
   2. Topographic features _____
   (Method must be approved by Department prior to use)

d. Was there a notable product odor found in the excavation?
YES _____ NO __X__ If yes:
   1. The odor strength was (mild) (strong) (Other, describe _____)
   2. The odor indicates what type of product? (gasoline) (diesel) (Waste oil) (kerosene) (other _____)

e. Was there free product in the bore holes? YES _____ NO _____
If yes:
   1. How was free product handled? _____
   2. What was the measured thickness of free product? _____

f. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. boring logs attached

g. Specify the inert solid material used to fill the tank(s). concrete slurry

h. Provide the date the tank(s) were filled. 5-5-94

i. Were the bore holes properly sealed with bentonite/soil?
Yes X No _____ If yes, provide date: 4/25/94

3. Product Piping Closure Removal

PIPING WAS ABOVEGROUND

a. Attach site maps showing the general location of the facility.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trenc and include the following:
1. All appropriate excavation dimensions and length of piping.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

c. Was the piping purged of product prior to closure? YES X NO _____

d. Is the groundwater more than 5 feet below the bottom of the piping trench?
YES X NO _____ If not, provide the depth from the grour surface to the groundwater table depth:
1. Excavation extended 5 feet below base of trench _____
2. Boring or Monitoring Well Soil borings near UST
3. Topographic features _____
(Method must be approved by Department prior to use.)

e. Was there a notable product odor found in the piping trench?
YES X-surface spill NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe Mild
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene) (other Waste oil from surface spills

f. Was there water in the piping trench? YES _____ NO X
1. One time discharge to sanitary sewer with local approval _____
2. Hauled to facility capable of treating constituents of petroleum products in water
3. Hauled to local POTW with local approval _____
4. Other (specify) _____

g. Was there free product found in the piping trench? Yes NO X-Aboveground pipir
If yes,
1. How was the free product handled? _____
2. What was the measured thickness of the free product? _____

h. Were visible holes noted in the piping? YES X NO _____
If yes, please indicate the location(s) and provide a general description as to the size an
number of holes: Joints were not properly sealed

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:
The piping run was aboveground, no piping trench was excavated.

j. Was the piping trench backfilled? YES _____ NO _____
If yes, provide the date _____ DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM.

4. Product Piping Closure Without Removal

a. Attach site maps showing general location of the facility.

b. Attach plan and sectional views of the site and include the following:
1. Location of the piping including depth.
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken.
4. Boring logs.

c. Was the piping purged of product prior to closure? YES _____ NO _____

d. Was the piping capped? YES _____ NO _____

e. Is the groundwater more than 5 feet below the bottom of the piping
YES _____ NO _____ If no, provide the depth from the ground surface to th
groundwater table. _____

f. Was there a notable product odor found in the bore holes?
YES _____ NO _____ If yes:
1. The odor strength was (mild) (strong) (other, describe _____
2. The odor indicates what type of product? (gasoline) (diesel) (waste oil) (kerosene)
(other _____

g. Was there free product in the bore holes? YES _____ NO _____ If ye
1. Now was free product handled? _____
2. What was the measured thickness of the free product? _____

h. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs. _____

i. Were the bore holes properly sealed with bentonite/soil?
YES _____ NO _____ If yes, provide the date _____

5. Groundwater Sampling (If required by attached closure guidelines)

a. Indicate the following on the plan and sectional views required by Section 1.b, 2.b, 3.b or 4.b above:
   1. The location and depth of the one upgradient and three downgradient boring or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)
   2. The most probable direction of groundwater flow. State basis for determining direction _____

b. Was a monitoring well used? YES _____ NO _____
If yes, attach a schematic drawing of the well(s).

6. Laboratory Data

a. Attach the original chain of custody record (copies are not acceptable) for each sample which includes at least the following:
   1. Sample identification number,
   2. Date and time sample was taken,
   3. name and title of person collecting sample (see certification requirement on page 8 of this form),
   4. Type of sample (soil or water),
   5. Type of sample container,
   6. Method of preservation,
   7. Date and time sample was relinquished,
   8. Person relinquishing sample,
   9. Date and time sample was received by lab
   10. Person receiving sample at lab.

b. Attach the original laboratory data sheet (copies are not acceptable) which includes at least the following:
   1. A sample identification method which can be cross-referenced with the soil sample locations indicated on the plan and sectional views required by Section 1.b, 2.b, 3.b, or 4.b above,
   2. The sample analytical results with appropriate units,
   3. The method used to analyze each sample,
   4. The date and time the sample was analyzed,
   5. The person analyzing each sample.

Excavated Soil

EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits should be backfilled as soon as possible with clean backfill. Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall not be returned to the excavation pit(s). Soils having TPH levels between 10 and 100 ppm can only be returned to the excavation pit if the depth to groundwater is greater than 5 feet from the base of the pit.

a. If tank was closed by removal, provide an estimate of the volume of soil removed 0 cubic yards.
b. Attach "Total Potential VOC Emissions Calculations" for soil removed.
c. Indicate method of soil disposal to be used:
   1. Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is grater than 5 feet from the base pit.
   2. Spread in a thin layer on site only when TPH is less than or equal to 100 ppm.
   3. Disposal in a landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes")
   4. Incineration
   5. Thermal volatilization
   6. Other _____
d. If soil was disposed of, indicate the final destination and if applicable, attach copies of invoices or receipts.
   No stockpile of soil was created.

8. Tank Cleaning

a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Publication 2015? YES X NO _____ If no, describe how tank(s) were cleaned. _____
b. Provide an estimate of the volume of sludge removed from the tank. 0 gallons.
c. Indicate the final destination of the sludge and attach invoices or receipts. _____

THIS INFORMATION SHOULD BE COMPLETED AND RETURNED, ALONG WITH ANY OTHER PERTINENT INFORMATION, TO THE FOLLOWING ADDRESS.

The Alabama Department of Environmental Management
Groundwater Branch
1751 congressman W. L. Dickinson Drive
Montgomery, AL 36130
(205) 270-5655

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: John Phillips
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8737

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: [signature] for: John Phillips Date: 1-27-95

Name of Engineer or Geologist performing closure and completing Form: Earl Windahl
Company: Braun Intertec Corporation
Telephone Number: (612) 683-8758

I certify under penalty of law that I have completed a four year course in Engineering and/or Geology at a college or university and that the information I have provided is true and to the best of my belief and knowledge.

Signature of Geologist or Engineer: [signature] for Earl Windahl Date: 1-27-95

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature of Tank Owner: _____ Date: _____

API BULLETINS 1604 AND 2015 ARE AVAILABLE FROM ADEM UPON REQUEST.

==========

For ADEM Use:

Reviewed by: _____ Date: _____

Comments: _____

_____

_____

_____

_____

_____

_____

_____

GRWATER3
WP+ 1538
10/5/92

Attachment: UST Closure Guidelines
(Remove from closure letter)

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

Facility I.D. No: 11953-015-015840

Date of this Report: January 18, 1995

Incident No. (If applicable)
UST _____ - _____ - _____

UST Owner: Fort McClellan

Facility County: Calhoun

Facility Name: Building

Address: Fort McClellan, AL 36205

Location: Fort McClellan

Contact: Mr. Ray Murphy/Lee Jaye

Address: Ft. McClellan, Alabama 36205

Contact Telephone No.:
(205) 848-6155/(205) 848-3539

Name of Consultant who performed calculations: Braun Intertec Corporation

Consultants Phone Number: (612) 683-8737

NO STOCKPILE CREATED FOR THIS SITE

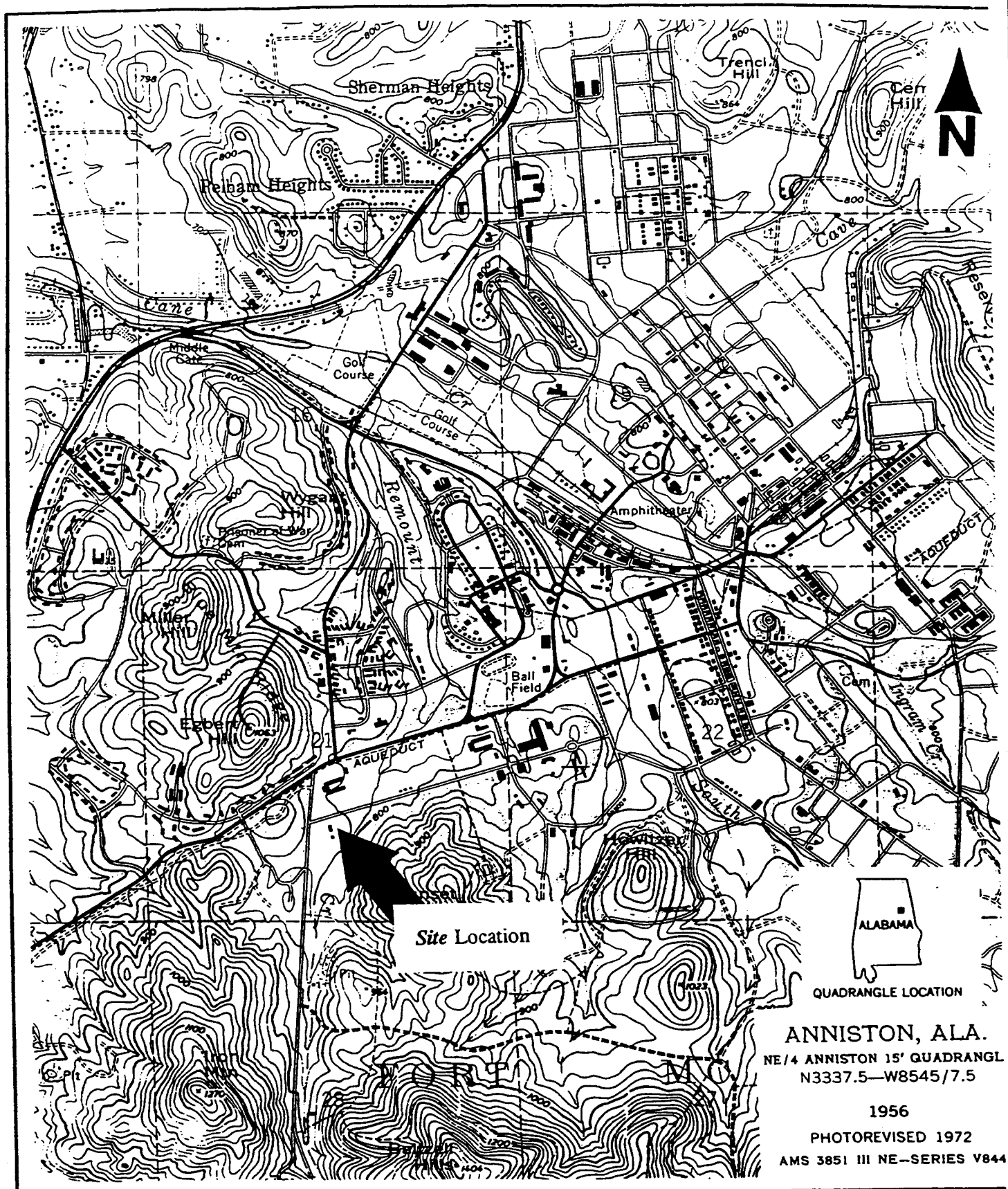
Sample 1	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 2	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 3	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 4	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 5	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emiss
Sample 6	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 7	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 0	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 9	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 10	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 11	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 12	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 13	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 14	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 15	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 16	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 17	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 18	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 19	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
Sample 20	_____	ppm	x	_____	cyds	x	.002	= _____ lbs VOC emissions
							TOTAL POTENTIAL EMISSIONS	_____ lbs VOC emissi

* Note - If more samples are taken than indicated on this form, please attach additional pages as necessary.

This form must be completed and submitted with the ADEM UST Closure Assessment Form.

Appendix B

Site Location



ANNISTON, ALA.
NE/4 ANNISTON 15' QUADRANGL
N3337.5—W8545/7.5

1956
PHOTOREVISED 1972
AMS 3851 III NE—SERIES V844

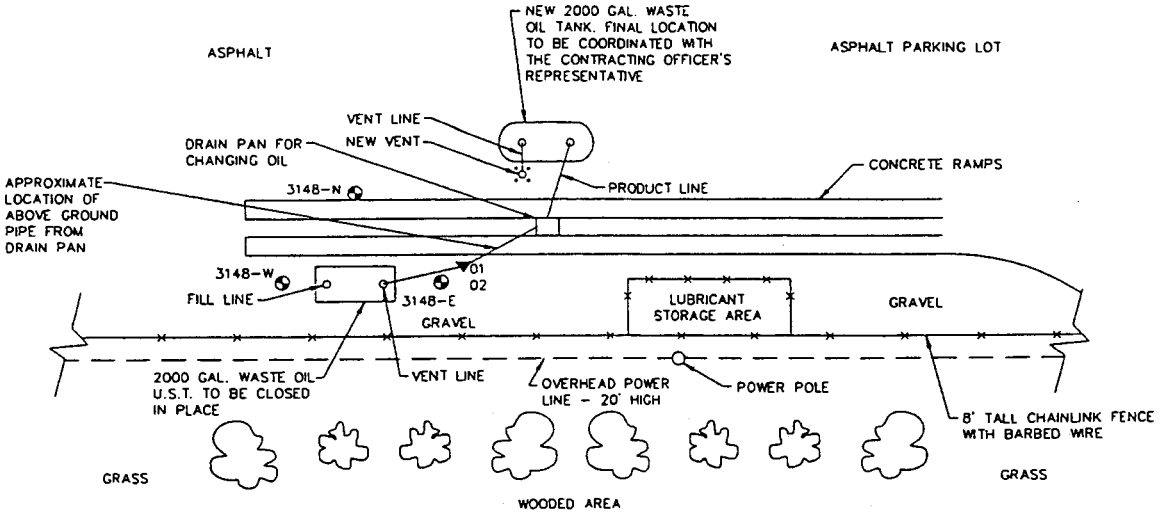
BRAUN INTERTEC

***Site* Location Map**
Waste oil UST program
Building 3148
Fort McClellan, Alabama

INT	DATE	SHI
DRAWN BY: KLB	1-20-95	
APP'D BY:		C
JOB NO. CMKX-93-0180		
DWG. NO. NA	FIGURE NO.	
SCALE 1:24,000	1	

Appendix C

Site Plan with Sample Locations



LEGEND

⊕ SOIL BORING LOCATION

▼ 94-0506- / 94-0506- LAB ID NO. - "A" & "B" SAMPLES

Appendix D

Hazardous Waste Manifest and Certificate of Disposal

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

297

Form Approved. OMB No. 2050-0039. Expir

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. ALA210020562	Manifest Document No. 94001	2. Page 1 of 1	Information in the shaded areas i required by Federal law.

3. Generator's Name and Mailing Address
FORT MCCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205-

4. Generator's Phone ((205) 848-6155

A. State Manifest Document Number FIS 0026468

B. State Generator's ID

5. Transporter 1 Company Name: FISHER INDUSTRIAL SERVICES, INC.

6. US EPA ID Number: ALD981020894

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Fisher Industrial Service, Inc.
402 Webster Chapel Rd.
Glencoe, AL 35905

10. US EPA ID Number: ALD981020894

G. State Facility's ID ALD981020894

H. Facility's Phone 205-492-8340

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste N
a. [illegible], NOT REGULATED FIS Profile #: 18001	40	DM	2200	G	
b. FIS Profile #:					
c. FIS Profile #:					
d. FIS Profile #:					

J. Additional Descriptions for Materials Listed Above — Transporter has E.R.G. Book.
State of Origin:

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information — 24 Hr. Emergency Response Name/Number: /

005319/940406 — DAVE DOBLE — CD

Work Order #: — Purchase Order #:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, pa marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practi and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environ OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and can afford.

Printed/Typed Name	Signature	Month	Day
NOLAN L. JAYE, JR	Nolan L Jaye		

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day
John W. Oliver	John W. Oliver	06	06

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day
David J Doyle	David J Doyle	06	06

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day
NOLAN L. JAYE, JR. NR	Nolan L Jaye NR		

EPA Form 8700-22 (Rev. 9-88) Previous edition obsolete.

GENERATOR'S COPY

7-BLC-M5 (Rev. 1

FISHER
INDUSTRIAL SERVICE, INC.

MAILING ADDRESS:
P.O. Box 5410
Glencoe, Alabama 35905
SHIPPING ADDRESS:
402 Webster Chapel Road
Glencoe, Alabama 35905

FACILITY EPA ID NUMBER: ALD981020894

FACILITY TELEPHO
(205) 492-8340
Fax (205) 492-833
SALES TELEPHON
(205) 492-3002
Fax (205) 492-082

FORT McCLELLAN
SOMMERALL GATE
ANNISTON, AL 36205

Site Id.: ALA210020562

CERTIFICATE OF DISPOSAL

Fisher Industrial Service, Inc. has received waste material from FORT McCLELLAN described on Federal Manifest Document Number 94001 (and State Manifest Number: FIS0026468) and received on Tuesday, June 7, 1994.

Line	Profile No.	Qty. & Type	On-Site Treatment Code(s)	Off-Site Treatment Code(s
11A	18901	40 DM	N/A	N/A

Fisher Industrial Service, Inc. hereby certifies that the waste materia identified above was received and disposed of in compliance with State and Federal Regulations.

AUTHORIZED SIGNATURE: Deborah Dean DATE: 6-20-9

Appendix E

Soil Boring Logs

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellen

Ft. McClellen, Alabama

BORING: 3148-N

LOCATION:
See attached sketch.

DATE: 4/25/94

SCALE: 1" = 4

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.8	0.0		FILL: Silty Sand with Gravel, fine to coarse grained, with Bituminous fragments, brown, moist to waterbearing.			
			-waterbearing at 2 feet.	15		
95.8	3.0	SC	CLAYEY SAND, fine to medium grained, brown, waterbearing, medium dense. (Loess)	18		
92.8	6.0		-waterbearing at 6 feet.			
		CL	LEAN CLAY, brown, wet, hard. (Residual Clay)	33		
90.8	8.0		END OF BORING			
			Water not observed immediately after withdrawal of auger.			
			Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellen

Ft. McClellen, Alabama

BORING: 3148-W

LOCATION:
See attached sketch.

DATE: 4/25/94

SCALE: 1" =

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Note
99.0	0.0		FILL: Silty Sand with Gravel, fine to medium grained, with Bituminous fragments, brown, moist.			
96.0	3.0			16		
		SC	CLAYEY SAND, fine grained, brown, moist, medium dense. (Loess)			
			-waterbearing at 6 feet.	26		
91.0	8.0			25		
			END OF BORING			
			Water down 6 feet immediately after withdrawal of auger.			
			Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 3148-E

LOCATION:
See attached sketch.

DATE: 5/18/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.8	0.0		FILL: Poorly Graded Sand with Silt and Gravel, fine to medium grained, with Bituminous fragments, brown, moist.	15		Asssumed elevation of 100.0 feet established on the floor slab of bldg. 3139.
95.8	3.0	SC SM	SILTY CLAYEY SAND, fine to medium grained, brown, moist, medium dense. (Loess)	21		
92.8	6.0		-waterbearing at 6 feet.			
		CL	LEAN CLAY, brown, wet, hard. (Residual Clay)	35		
90.8	8.0		END OF BORING Water down 6 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 3148-N

LOCATION:
See attached sketch.

DATE: 4/25/94

SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
98.8	0.0		FILL: Silty Sand with Gravel, fine to coarse grained, with Bituminous fragments, brown, moist to waterbearing.			
			-waterbearing at 2 feet.	15		
95.8	3.0	SC	CLAYEY SAND, fine to medium grained, brown, waterbearing, medium dense. (Loess)			
				18		
92.8	6.0		-waterbearing at 6 feet.			
		CL	LEAN CLAY, brown, wet, hard. (Residual Clay)			
90.8	8.0			33		
			END OF BORING			
			Water not observed immediately after withdrawal of auger.			
			Boring then backfilled with cuttings.			

LOG OF BORING

PROJECT: CMKX-93-0180
WASTE OIL UST PROGRAM

Ft. McClellan

Ft. McClellan, Alabama

BORING: 3148-W

LOCATION:
See attached sketch.

DATE: 4/25/94

SCALE: 1" =

Elev.	Depth	ASTM Symbol	Description of Materials (ASTM D2488)	BPF	WL	Tests or Notes
99.0	0.0		FILL: Silty Sand with Gravel, fine to medium grained, with Bituminous fragments, brown, moist.	16		
96.0	3.0	SC	CLAYEY SAND, fine grained, brown, moist, medium dense. (Loess)	26		
			-waterbearing at 6 feet.			
91.0	8.0			25		
			END OF BORING Water down 6 feet immediately after withdrawal of auger. Boring then backfilled with cuttings.			

Appendix F

Organic Vapor Field Data Sheets

Organic Vapor Field Data Sheet

Boring Identification: 3148W *Project No.:* CMKX-93-0180 *Date:* 4-25-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-25-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0.5	5.2	
5		0	2.9	
7.5		0	4.8	

Organic Vapor Field Data Sheet

Boring Identification: 3148N *Project No.:* CMKX-93-0180 *Date:* 4-25-94

Weather Conditions: Clear, 80 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 4-25-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0.4	5.7	
5		0	4.0	
7.5		0	5.5	

Organic Vapor Field Data Sheet

Boring Identification: 3148E *Project No.:* CMKX-93-0180 *Date:* 5-18-94

Weather Conditions: Clear, 90 F

Field Personnel: DJD

Auger Steam Cleaned: *Yes* X *No* _____

Sampler Cleaned Between Samples: *Yes* X *No* _____

Method: TSP & water rinse

Detector: *FID:* _____ *PID:* *10.0eV* _____
10.2eV X
10.6eV _____
11.7eV _____
11.8eV _____

Calibration: *Gas:* Benzene
Date: 5-18-94

Depth (feet)	Auger (ppm)	Split Spoon (ppm)	Headspace (ppm)	Notes/Geology
2.5		0	0	
5.0		0	5.1	
7.5		0	2.3	

ATTACHMENT 7
ARMY RESPONSES TO ADEM COMMENTS
ARMY RESPONSES TO EPA COMMENTS

(With Comments Included)

Army Reponses to ADEM Comments on the Draft Finding of Suitability to Lease the Parks and Recreation Facilities to the City of Anniston at Fort McClellan, Alabama, dated April 15, 1999

Comment:
Because environmental investigations are incomplete, ADEM is unable to ascertain the environmental condition of the property. Since the environmental condition of the property is unknown, we cannot support a Finding of Suitability to Lease (FOSL) at this time.

RESPONSE:
Potential releases that are areas of concern and investigation involve pesticides, herbicides, and petroleum products. It should be noted that environmental regulators have never expressed beyond a level of concern that these "potentials" expose the current users of the facilities to an unwarranted or unacceptable risk to human health or impacts to the environment. The potential releases on these parcels are nothing more than potential releases that must be considered on similar facilities that exist off the installation. Obviously, if site investigations uncover conditions that would present impacts to human health or the environment immediate remedial action will be taken, and if necessary, parcels removed from the lease.

Telephonic Comment:
Per telephonic conversation with Mr. Ron Levy (FTMC BEC) on July 14, 1999, Mr. Chris Johnson (ADEM) stated that his issues/concerns with the Parks and Recreation Finding of Suitability to Lease mirrored those of Mr. Bart Reedy's (EPA) as stated in the EPA's comments on the FOSL dated July 7, 1999.

RESPONSE:
ADEM will be provided a copy of Army responses to EPA comments on the FOSL.

Army Reponses to EPA Comments on the Draft Finding of Suitability to Lease the Parks and Recreation Facilities to the City of Anniston at Fort McClellan, Alabama, dated April 15, 1999

I. GENERAL COMMENTS

2.0 Comment:

1.) These comments are governed by CERCLA,

> "In the case of a lease entered into after September 30, 1995, with respect to real property located at an installation approved for closure or realignment under a base closure law, the agency leasing the property, in consultation with the Administrator, shall determine before leasing the property that the property is suitable for lease, that the uses contemplated for the lease are consistent with protection of human health and the environment, and that there are adequate assurances that the United States shall take all remedial action referred to in subparagraph (A)(ii) that has not been taken on the date of the lease."[1]

and further informed by Public Law 102-426 [H.R. 4016] Community Environmental Response Facilitation Act (CERFA) of October 19, 1992, CERCLA § 120(h) and Memorandum of Understanding Between the U.S. Environmental Protection Agency and the U.S. Department of Defense regarding Procedures to Determine Environmental Suitability for Leasing Property Available as a Result of a Base Closure or Realignment (MOU).

From the documents provided, it is unclear what actions the Army intends to take and what actions the Army does not intend on taking to ensure protection of Human Health and the Environment. Further, the documents do not provide "adequate assurances" that the Army shall take all remedial actions necessary.

RESPONSE:

Just as the documents we submitted point out, it is the Army's intention to lease the aforementioned properties. The Army is fully aware of and prepared to comply with all aspects of CERCLA. Nowhere in the documents does the Army attempt to aggregate or transfer responsibilities that CERCLA imposes upon the agency. The Army is willing to commit to the recognition of its responsibilities to CERCLA in any attendant lease. In fact, there is no law that would allow the Army to do otherwise. The Army does not intend to omit any course of action that would ensure protection of Human Health and the Environment under CERLA.

The Army's intent and the City of Anniston's desire (by and through the LRA) is to use the golf course and other recreational/maintenance facilities in a manner substantially identical to their current use. No evidence exists that the use of these facilities in their continued intended use would have impacts on human health or the environment.

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[1] CERCLA § 120(h)(3)(B).

The Army intends to pursue any and all information associated with releases on the property. To that end, all property has been programmed for and will continue through the CERCLA process for investigations and if necessary, and any remedial actions that would follow. The MOU Between EPA and DOD SUBJECT: Procedures to Determine Environmental Suitability for Leasing Property Available as a Result of a Base Closure or Realignment dated May 4, 1994, expired September 30, 1998. To the extent that this memorandum recites current environmental law or implements current DOD environmental policy this command will adhere to such.

Comment:

2.) DoD policy requires that the BRAC Environmental Coordinator (BEC) notify regulatory agencies at the initiation of a FOSL and provide the agency an adequate opportunity to express their views.[2] Before the Environmental Protection Agency can with finality comment on the Lease or FOSL, EPA will be afforded an opportunity to review final documents. The Agency will forward final comment on the FOSL expressly contingent upon final documents being provided by DoD for EPA review.

RESPONSE:

The Army will provide EPA and ADEM copies of all final documents. The Army will adhere to current policy that the Draft FOSL is the regulators' opportunity to comment upon the proposed action.

Comment:

3.) Lease terms are required to be provided together with attendant lease restrictions. In the instant case, lease restrictions have been attached to the FOSL, but the remaining lease terms have not been provided.[3] Please provide a copy of the lease inclusive of all lease terms and lease restrictions both prior to and after the lease's execution to properly augment EPA Records and ensure the inclusion of any unresolved regulatory comments.[4] EPA reserves the right to alter our opinion of the FOSL upon receipt of the entire lease.

RESPONSE:

As stated in response to General Comment Number 2, the submission of all final documentation will include all terms and conditions in the lease.

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[2]MOU, § IV(A).

[3]EPA's comment on whether the uses contemplated for the lease are consistent with protection of human health and the environment assumes that nothing in the remainder of the lease will contradict the lease terms provided during this review.

[4]EPA expects to attach any of its comments, to the extent it considers them significant and they have not been incorporated into or addressed by the final FOSL and/or Lease, as an appendix to the documents.

II. SPECIFIC COMMENTS

Comment:

The MOU serves to provide a basis under which the DoD "consults" with the Administrator underCERCLA §120(h)(3) to determine that the uses contemplated for the lease are consistent with protection of Human Health and the Environment. The guidelines established in the MOU instruct that the Army shall determine that the property is suitable to lease for the intended purpose based on one of the following:

a. Hazardous substance notice need not be given because no hazardous substances or petroleum products were stored for one year or more, know to have been released, treated or disposed of on the parcel;

b. Hazardous substance notice will be given of the type and quantity of hazardous substances or petroleum products, and the time at which storage for one year or more, release, treatment or disposal took place, but the property is not now contaminated with hazardous substances or petroleum products (e.g., storage for one year or more but no release, a release has occurred but no response action is required, or a response action has been completed); or

c. The property contains some level of contamination by hazardous substances or petroleum products, and hazardous substance notice will be given of the type and quantity of such hazardous substances or petroleum products, and the time at which storage for one year or more, release, treatment or disposal took place. However, this property can be used pursuant to the proposed lease, with the specified use restrictions in the lease, with acceptable risk to human health or the environment and without interference with the environmental restoration process.

The finding the suitability to lease the subject property was *not* based on one of the above three exclusive bases. Basis number one is not appropriate because hazardous substances or petroleum products were stored for one year or more, known to have been release, treated or disposed of on the property. Basis number two is not appropriate because the statement "but the property is not now contaminated with hazardous substances or petroleum products" cannot be substantiated. Basis number three is not appropriate because the statement, "the property contains some level of contamination by hazardous substances or petroleum products, and hazardous substance notice will be given of the type and quantity of such hazardous substances or petroleum products, and the time at which storage for one year or more, release, treatment or disposal took place" cannot be validated based on the incomplete environmental investigation at Fort McClellan.[5]

Though the reuse of the property replicates the original use by the Army, the Army is not relieved of its obligations under the MOU to base its finding of suitability to lease on one of the above. The MOU, however, allows for modification of the FOSL policy:

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[5]"Because the Property will eventually transfer to new ownership, all seven UST sites have been designated CERFA Category 7 sites..." Category 7 property are those areas which have not been evaluated or require further evaluation.

"DoD prepared the FOSL policy in cooperation with EPA, and any modification of the FOSL policy will be the result of similar cooperation, without requiring modification of this MOU."

EPA feels that the modification of the FOSL policy as it impacts Fort McClellan both to allow for the leasing of the property without the basis of one of the three above findings and to ensure the protection of Human Health and the Environment during the leasing of the property to the Parks and Recreation Department of the City of Anniston can only be undertaken on the condition that the EPA, ADEM and Fort McClellan devise a basewide Institutional Control Plan that will adequately describe a system for the monitoring, maintenance and enforcement of the institutional controls that will be necessary both during and after the investigation and remediation of the subject property. Without such an Institutional Control Plan, EPA sees no alternative but to find that the leasing of the property is, at this time and stage of investigation, premature and inconsistent with protection of Human Health and the Environment, and will not agree to a deviation from jointly agreed upon conditions imposed by the MOU.

RESPONSE:

The Army agrees criteria Numbers 1 and 2 do not form a basis for a Finding of Suitability to Lease.

The Army's position is that conditions of criteria Number 3 can be met such that a Finding of Suitability to Lease can be issued. The Environmental Baseline Survey has established potential areas of concern relative to storage and release of hazardous substances. Certain areas of concern (to include the parcels in question) are defined in the EBS as an environmental condition Category 7 whereby data does not exist to show a specific release at the sites, but is captured as an unevaluated parcel (as agreed upon by the BCT).

Potential releases that are areas of concern and investigation involve pesticides, herbicides, and petroleum products. It should be noted that environmental regulators have never expressed beyond a level of concern that these "potentials" expose the current users of the facilities to an unwarranted or unacceptable risk to human health or impacts to the environment. The potential releases on these parcels are nothing more than potential releases that must be considered on similar facilities that exist off the installation. If site investigations uncover conditions that would present impacts to human health or the environment the will take immediate remedial action will be taken.

The Army proposes the incorporation of the following limitations to the lease based upon EPA's Draft Institutional Control Language Specific to Parks and Recreation FOSL Version 1.1:

The Army agrees that following receipt of the final Site Investigation, should additional investigative or remedial work be required, that work will be accomplished by the Army prior to transfer. Final transfer will not occur until all investigation and remediation is complete as determined by EPA and ADEM.

The Army agrees that the act of leasing the golf course prior to finalization of the subject site investigation is an interim action and shall not be construed as indicative of any intent implied by either EPA or ADEM.

The Army agrees to notify the lessee, prior to finalization of this lease, that the risk to human health and the environment is not quantified.

Their will be no construction or construction activities on the subject property until the site investigation and risk assessment are concluded, and all required remedial actions are taken. Construction activities can not compromise the viability or effectiveness of the remedy, if remediation is necessary.

There will be no well drilling on the subject property without the expressed approval of the Fort McClellan BRAC Environmental Coordinator.

There will be no excavation on the subject property unless expressly approved by the Fort McClellan BRAC Environmental Coordinator. For the purposes of construction, however, as required for repair of underground utilities, this would not apply.

The Army expressly agrees that activities will be limited to those activities commonly associated with similar properties.

ADEM and EPA will have full and complete access to all properties during this lease for the purpose of investigation, oversight and remediation.

The Lessee expressly agrees that the reuse shall be of like use (recreational) only.

Understanding that this Site Specific Institutional Control agreement is premature as the environmental condition of the properties is not quantified, the Army agrees that this list of Institutional Controls (ICs) is not the sum of the ICs nor is this list final, nor is this list the total Institutional Control list that will be on the final transfer documents.

The Army and the Lessee agree that certain parcels within the lease may be eliminated from this lease or the final transfer should environmental conditions pose an unacceptable risk to Human Health and the Environment.

The incorporation of the above use restrictions into the lease will satisfy both the regulator's and DOD policy that the parcels can be leased with no unacceptable risk to human health or the environment and without interference with the environmental restoration process.

The following limitations proposed in EPA's Draft Institutional Control Language Specific to Parks and Reaction FOSL Version 1.1 are not supportable and may be in direct contravention to DOD policy or guidance. Explanations are provided immediately following EPA's proposed limitations:

EPA and ADEM conditionally approve this lease expressly stating that the risks to human health and the environment are not quantified. Continuing, because the environmental condition of the property is unknown, and because the Army is the sole owner and operator of these properties and facilities, the Army is liable for all claims of harm to persons and all claims of environmental and ecological harm, as any waste or contaminant or pollutant is acknowledged as being placed on the property by the Army.

This limitation is asking the Army to accept strict liability for all environmental torts that may have occurred prior to Army owning the property as well as for contamination that may be caused by outside third parties and those caused by the lessee. Such acceptance of liability violates the Anti Deficiency Act.

The Army agrees that the subject lease is for a period of 5 years, non-renewable.

There is nothing in law or regulation that limits the Army from leasing property beyond the 5-year point or renewing leases as necessary. It is the Army's intention to lease this property for the shortest duration prior to transfer. The intent of the lease is to allow for the completion of all environmental work before final transfer.

The Army agrees that ADEM and EPA reserve the right to non-concur on this lease and the envisioned transfer prior to final transfer, or during the term of this lease, if environmental and ecological data indicate an unacceptable risk to Human Health or the Environment.

The Army intends to take all appropriate and required steps that are necessary to comply with CERCLA in the unlikely event that environmental or ecological data were to indicate an unacceptable risk to human health and the environment.

The Army agrees to disclose the results of all investigations to EPA, ADEM and the transfer recipient prior to the lease through the same disclosure documentation.

The Army agrees to disclose all results of associated investigations to this lease and will include in this information in the Administrative Record and provide it to EPA and ADEM; however, due to the nature of the work it may not be possible to provide this information within the same document. Based on the timelines for leasing this property it is also not possible to provide this information prior to the signing of the lease.

The Army agrees to develop a Base Wide Institutional Control Plan and an individual, site specific, Implementation Plan for each parcel proposed for transfer or lease. Agreement to this lease by the Army, ADEM, and EPA is construed to be an Agreement between the Army, ADEM and EPA for the Army to develop a Base Wide Institutional Control Plan and the follow-on site specific Institutional Control Implementation Plan for this site and all future sites scheduled for transfer or lease. The Base Wide Institutional Control Plan will be approved by EPA and ADEM. The Army will provide the Base Wide Institutional Control Plan within 45 calendar days of signature of this FOSL. The Base Wide Institutional Control Plan will incorporate and reference this site specific Institutional Control/Implementation Plan. The Army agrees to include in the Base Wide Institutional Control Plan the following:

- *Point of Contact within the Army for notification of Institutional Control violations*
- *Point of Contact within the Army for enforcement of the Institutional Controls identified in this agreement and any subsequent Institutional Controls required for protection of Human Health and the Environment. Anticipating closure, EPA expects the Points of Contact to be at the Base Commander level or above and include representatives from Training and Doctrine Command or Department of Army*
- *Monitoring plan for enforcement of Institutional Controls approved by EPA and ADEM*
- *Institutional Control reporting schedule approved by EPA and ADEM*
- *Point of contact for any and all deed recordations that may be required*
- *Point of contact within Army for certification that ICs are in place and effective*
- *Funding guarantees for all required efforts to monitor Institutional Controls*
- *All Points of Contact are notified by Fort McClellan that they are serving in the capacity identified herein. Copies of notification are required by ADEM and EPA. Points of Contact are to be identified envisioning the time when there will be no regular Army presence at the*

facility

- *Procedures for negotiating agreements with local permitting and enforcement entities if they are utilized*
- *Concurrence from EPA and ADEM on all transferred, permitted, contracted, and otherwise delegated liabilities and responsibilities*

There is no legal requirement for the Army to agree to a Base Wide IC plan. The Army will agree to the use of site-specific controls as deemed necessary to protect human health and the environment and which may be needed as part of a remedy selection. This is reflected by our willingness to adopt certain land use controls within the lease as proposed in EPA's comments to this action.

It is our intention to take EPA's proposed Version 1.2, Draft Institutional Control language for a Base wide IC plan and to staff this document through our higher headquarters for review and comment. We are committed to continue to work with EPA and ADEM on the implementation of an IC agreement.

All access to surface water and sediment will be prohibited by the Army unless expressly approved by ADEM and EPA. The Army expressly agrees that surface water and sediment shall not be used for any purpose and access to the surface water will be restricted via signage and active monitoring.

The Army currently has unfettered access to surface water and sediment on the parcels defined in the lease and is not willing, nor do we see the need, to restrict this access under the lease. The controls, which we have agreed to in this document, provide reasonable safety measure to protect human health and the environment.

The Army agrees that should Institutional Controls be part of any final or interim remedy, those controls will be incorporated in the transfer documents, the recorded deed and the base wide IC plan. All Institutional Control Plans are subject to concurrence by EPA and ADEM.

The Army agrees, assuming there is a need, that any IC as part of a remedy selection should incorporate those controls into the deed or other transfer document, however; this process must include input from the community.

Understanding that this Site Specific Institutional Control agreement is premature as the environmental condition of the properties is not quantified, the Army agrees that this list of Institutional Controls (ICs) is not the sum of the ICs nor is this list final, nor is this list the total Institutional Control list that will be on the final lease or transfer documents.

This point is not applicable since we have not agreed to put together a site-specific IC plan for this or any lease action. Again, the Army believes that appropriate site specific controls will be written into the lease agreement.

The Army and the Lessee agree that should EPA or ADEM choose, additional comments by the regulatory community will be incorporated into a revised lease or addressed and the lease modified, or the comments will be attached as unresolved regulatory comments. Should EPA or ADEM choose to supply additional comments, the Army agrees to negotiate in good faith to resolve those comments.

Your opportunity to comment is at the time we submit the draft FOSL. The Army can either choose to accept your comments or determine they are unresolved. Prior to the time of transfer, a FOST will be developed on the subject property that will incorporate all environmental conditions of the property associated with the completed environmental investigations. All regulatory requirements in accordance with DoD policy and CERCLA 120h will be met at time of transfer of this property.

The Army agrees that Col Treuting is the Point of Contact for the Army should ADEM or EPA need to pursue legal relief in an effort to facilitate site investigations or remediations. Col. Treuting will be the individual responsible for all actions or lack of actions by the Army. Col. Treuting can be reached at 256-848-????. Following closure, the Point of Contact for the Army will be Mr. Benjamin Taylor, of TRADOC, should ADEM or EPA need to pursue legal relief in an effort to facilitate site investigations or remediations. Mr. Taylor will be the individual responsible for all actions or lack of actions by the Army following base closure. Mr. Taylor can be reached at.....

Adequate information is available within documents for responsible agencies handling Army property without citing specific individuals.

The Army agrees to include all of these FOSL contingency approval provisions as covenants in the subject FOSL and lease.

For the reasons set out above and below, as to objections to certain provisions, the Army cannot agree to this provision.

The Army and Lessee acknowledge that there is no base line for contamination discovered at the property covered by the subject lease. Therefore, absent the appropriate binding agreements, the Army and the Lessee agree that the Lessee may be liable for investigation and cleanup costs of undetermined amount should further investigation and cleanup be necessary to protect Human Health and the Environment.

The request for inclusion of this paragraph is in direct conflict with EPA request that the Army accept liability for any and all contamination found on the property.

Comment:
EPA requests the addition of the phrase "and consistent with the reuse plan." in the second paragraph following "The uses contemplated for the Property and facilities included in this Lease to the City of Anniston are consistent with protection of Human Health and the Environment".

RESPONSE:
Text will be revised by adding the phrase "and consistent with the reuse plan."

Comment: The Golf Course, Parcel 178(7)HR(P), 83(7)HS, and 141(7). The text states that no sampling has been conducted at two Golf Course Pesticide Mixing and Storage facilities. EPA notes that these areas pose a heightened risk of hazardous substance and/or petroleum contamination and requests that sampling at these sites be completed and results provided expeditiously to the Lessee, EPA and ADEM.

RESPONSE:
Field work for the two additional groundwater samples at the Pesticide Mixing/Storage Area, Parcel 83(7), will begin early August 1999. Results from this effort and

from the field work performed this past spring will be provided as soon as they are available.

Comment:
EPA requests that documentation supporting the adherence to the Endangered Species Act sections 7 and 9 (16 U.S.C. §§1536 and 1538) be provided in the FOSL. Also, please verify that Environmental Lease Provision 5.3, Notice of the Presence of Endangered Species and Covenant, satisfies same. It appears, from earlier documentation that there are Endangered Species at Fort McClellan that are not referenced in the subject document.

RESPONSE:
The Finding of Suitability to Lease incorporates agreed upon language with the U. S Fish and Wildlife Service relating to the Biological Assessment. The Biological Assessment was done in accordance with Section 7 of the Endangered Species Act. Enclosed is a copy of the Biological Assessment for Fort McClellan. It is the Army's position that we have complied with all provisions of the Endangered Species Act.

Comment: Environmental Protection Provisions. Please modify EPP #2, second to the last sentence, by deleting the phrase "The Lease should acknowledge that."

REPSONSE:
Text will be revised by deleting the phrase "The Lease should acknowledge that."

Comment: Environmental Protection Provisions. We request that the following model lease provisions be added, in compliance with the MOU:

> The Lessee further agrees that in the event of any assignment or sublease of the Leased Premises, it shall provide to the EPA and ADEM by certified mail, a copy of the agreement or sublease of the Leased Premises within fourteen (14) days after the effective date of such transaction. The Lessee may delete the financial terms and any other proprietary information from the copy of any agreement of assignment or sublease furnished pursuant to this condition.[6]

RESPONSE:
The requested model lease provision will be added the Environmental Protection Provisions.

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[6]Model Lease Term No. 9 from the MOU .

[6]The Army contact for this and the following functions may or may not be the same individual