SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN HEADQUARTERS , U.S. ARMY GARRISON FORT RITCHIE, MARYLAND

FINAL

April 1993

Prepared For:
U. S. Army Environmental Center
Aberdeen Proving Ground, MD

Contract NO. DAAA15-90-D-0001, Task 13

Prepared By:
Advanced Sciences, Inc.
165 Mitchell Road
Oak Ridge, TN 37830

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN HEADQUARTERS , U.S. ARMY GARRISON FORT RITCHIE, MARYLAND

FINAL

April 1993

Prepared For:
U. S. Army Environmental Center
Aberdeen Proving Ground, MD

Contract NO. DAAA15-90-D-0001, Task 13

Prepared By:
Advanced Sciences, Inc.
165 Mitchell Road
Oak Ridge, TN 37830

AEC Form 45, Feb 93 replaces THAMA Form 45 which is obselete

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY (LEAVE BLANK)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	April 1993	FINAL - April, 1993

4. TITLE AND SUBTITLE

Spill Prevention Control and Countermeasure Plan

5. FUNDING NUMBERS

DAAA15-90-D-0001

6. AUTHOR(S) Mr. Ben Ford
Ms. Joann Hunter

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Advanced Sciences, Inc.
165 Mitchell Road
Oak Ridge, TN 37830

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

U.S. Army Environmental Center
Aberdeen Proving Ground, MD

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

12b. DISTRIBUTION CODE

13. [illegible]

This Spill Prevention, Control and Countermeasure (SPCC) Plan has been prepared to comply with Title 40, Code of Federal Regulations, Part 112 (40 CFR 112) and applicable Maryland and Pennsylvania Regulations as directed by Army Regulation (AR) 200-1. This plan addresses spill prevention measures for all fuel, oil and hazardous substance storage areas within Fort Ritchie, Site R, Site C, and Site D.

14. SUBJECT TERMS

15. NUMBER OF PAGES

57 & Appendix

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN

HEADQUARTERS, U.S. ARMY GARRISON FORT RITCHIE
FORT RITCHIE, MARYLAND
AND
ALTERNATE JOINT COMMUNICATIONS CENTER
ADAMS COUNTY, PENNSYLVANIA
APRIL 1993

To be amended in April 1995

CERTIFICATION

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR 112 and 40 CFR 265, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

_____

Printed Name of Professional Engineer

_____

Signature of Professional Engineer

Date _____ Registration No. _____ State ____

RECORD OF BIENNIAL REVIEW

As described in Section 1, this SPCC Plan must be reviewed and recertified at least once every two years by a registered professional engineer. The Fort Ritchie Director of Engineering and Housing will ensure that this plan is reviewed as required by AR 200-1.

Date	Review Status (No Change or Amendment Req'd	Professional Engineer	Registration No.	State

RECORD OF AMENDMENT

As described in Section 1, all amendments to this SPCC plan will be summarized here. The Fort Ritchie Director of Engineering and Housing will be responsible for keeping the most recent copy of this plan. All amendments to this plan must be reviewed and certified by a registered professional engineer.

Date	Amendments	Professional Engineer	Registration No.	State

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

TABLE OF CONTENTS (continued)

TABLE OF CONTENTS (continued)

TABLE OF CONTENTS (continued)

TABLE OF CONTENTS (continued)

LIST OF FIGURES

LIST OF TABLES

ACRONYMS AND ABBREVIATIONS

AHSC	Alternate Hazardous Substance Coordinator
AJCC	Alternate Joint Communications Center
AR	Army Regulation
CFR	Code of Federal Regulations
COMAR	Code of Maryland Regulations
DEH	Directorate of Engineering and Housing (U.S. Army)
DoD	Department of Defense
DOL	Directorate of Logistics
DOT	U.S. Department of Transportation
DRMO	Defense Reutilization and Marketing Organization
EMA	Emergency Management Agency
EMD	Environmental Management Division
IC	Installation Commander
IOSC	Installation On-Scene Coordinator
IR-IOSC	Initial Response Installation On-Scene Coordinator
IRT	installation response team
ISCP	Installation Spill Contingency Plan
MOGAS	motor gasoline
O&M	operation and maintenance
OSHA	Occupational Safety and Health Administration
P-IOSC	Primary Installation On-Scene Coordinator
PCB	polychlorinated biphenyl
PHSC	Primary Hazardous Substance Coordinator
SOPs	Standard Operating Procedures
SPCC	Spill Prevention Control, and Countermeasure
UST	underground storage tank
WWTP	waste water treatment plant

EXECUTIVE SUMMARY

This Spill Prevention, Control and Countermeasure (SPCC) Plan has been prepared to comply with Title 40, Code of Federal Regulations, Part 112 (40 CFR 112) and applicable Maryland and Pennsylvania Regulations as directed by Army Regulation (AR) 200-1. This plan addresses spill prevention measures for all fuel, oil and hazardous substance storage areas within Fort Ritchie, Site R, Site C, and Site D. Preparation of this plan has been in accordance with the guidance of AR 200-1, Chapter 8, Environmental Protection and Enhancement. This plan serves as a statement of command policy and intent, as well as a working document for personnel involved with oil storage and transfer and the handling of hazardous materials, and for those concerned with spill prevention.

1.0 INTRODUCTION

1.1 OIL AND HAZARDOUS SUBSTANCE SPILL PREVENTION PLANNING REQUIREMENTS

Fort Ritchie, the Alternate Joint Communications Center (AJCC), Site C and Site D are directed by Army Regulation (AR) 200-1 to comply with the requirements of Title 40 (40) Code of Federal Regulations (CFR) 112, 40 CFR 264 and 265, and applicable state and local regulations to develop Spill Prevention, Control, and Countermeasure (SPCC) Plans at facilities for which they are applicable. As used in this document, Fort Ritchie refers to Fort Ritchie-Main Post and all other Fort Ritchie managed properties in the State of Maryland; Site C and Site D. The AJCC is located in the State of Pennsylvania and is treated as a separate facility. The AJCC is also known as Site R, and is referred to as such hereafter in this document.

The Federal regulations specify two conditions which require that a SPCC be prepared.

1. The facility has the potential to discharge oil or hazardous substances to U.S. navigable waterways (as defined in 40 CFR 112).

2. Oil storage capacities at the facility exceed 42,000 gallon (gal) of underground storage and 1320 gal of above-ground storage (40 CFR 112 establishes these exemption levels).

Both of these conditions exist at Fort Ritchie and Site R. This SPCC Plan is an engineering and management plan to prevent Fort Ritchie and Site R from discharging oil or hazardous substances that may adversely affect the quality of U.S. surface waters. AR 200-1 has been used as a guide in developing this SPCC Plan in accordance with 40 CFR 112 and applicable Maryland and Pennsylvania regulations. Although AR 200-1 specifies that the requirements of 40 CFR 264 and 265 also be met, they are not applicable since Fort Ritchie does not maintain a permitted hazardous waste storage facility.

An Installation Spill Contingency Plan (ISCP) also has been prepared (as a separate document) to be used to direct activities that may be necessary to clean up and mitigate the environmental impact of any hazardous substance spill that may occur. The ISCP was prepared in conjunction with the SPCC Plan and is intended to give specific information concerning actions required in the event of a spill.

1.2 SPILL DEFINITION

A spill is broadly defined as any kind of release of petroleum product or hazardous material to the environment. Spill reaction is based largely on the nature of the material spilled. Fort Ritchie handles significant volumes of oils, fuels, and hazardous materials.

For purposes of reporting to Federal, state, and local authorities, an oil spill is defined as any spill that reaches a stream, creek, river, or any other body of water in harmful quantities. "Harmful quantities" are defined by 40 CFR 110 as those quantities which:

- violate applicable water quality standards;
- cause a film or sheen upon, or discoloration of, the surface of the water or adjoining shorelines; or
- cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

Maryland regulations (COMAR 26.10.01) do not specify a minimum quantity for purposes of spill definition, while Pennsylvania Clean Streams Law defines spills in terms of reportable quantities specified in U.S. Environmental Protection Agency regulations under the Comprehensive Environmental Response and Liability Act (40 CFR 302) and the Clean Water Act (40 CFR 116).

1.2.1 Installation On-Scene Coordinator

In the event of an oil spill, the Installation On-Scene Coordinator (IOSC) must be contacted immediately and informed of the spill. Two people are qualified to act as the IOSC. One is the Initial Response IOSC (IR-IOSC) who responds to an emergency, assesses the situation, and handles the emergency if conditions justify. The second IOSC is the Primary Installation On-Scene Coordinator (P-IOSC), who responds when notified by the IR-IOSC that his response is required. Their names and phone numbers follow:

IR-IOSC	Mr. Leon Wolfe Fire Department Chief (301) 878-4536 (duty hours) (301) 241-3088 (after hours)	**P-IOSC**	Mr. Hofmann Environmental Coordinator (301) 878-4159 (duty hours) (717) 762-8681 (after hours)

Alternates for these individuals are as follows:

ALTERNATE		**ALTERNATE**	
IR-IOSC	Mr. Carl Grove	**P-IOSC**	Mr. Phil Marne
	Fire Department Assistant Chief		Environmental Engineer
	(301) 878-5295 (duty hours)		(301) 878-4190 (duty hours)
	(717) 794-2624 (after hours)		(717) 762-1360 (after hours)

1.3 GENERAL INFORMATION

1.3.1 Location

Fort Ritchie and its noncontiguous properties are located in the western arm of Maryland and the immediately adjacent section of western Pennsylvania (Figure 1.1). Fort Ritchie managed properties lie in three counties: Washington County, Maryland, in which the Main Post and Site C are located; Adams County, Pennsylvania, in which Site-R is located; and Howard County, Maryland, in which Site-D is located. The Main Post is located approximately 15 miles northeast of Hagerstown, Maryland, with the nearest communities being Cascade, Maryland (pop. 1100) and Blue Ridge Summit, Pennsylvania (pop. 800) both immediately to the northeast of the Post's main entrance (Figure 1.2). Fort Ritchie properties include 638 acres occupied by the Main Post, 695 acres occupied by Site-R, and small areas occupied by the other outlying properties. This report refers to these areas collectively as Post-managed properties.

The Fort Ritchie Main Post lies in the upper end of a valley surrounded by rolling mountains of the Catoctin Range of the Blue Ridge Mountains. Two man-made lakes (Upper and Lower Lake Royer) occupy the basin in which the Main Post is located, and these lakes are closely surrounded by the majority of the facilities of the Main Post (Figure 1.3). Site C is located atop Quirauk Mountain to the southwest of the Main Post (Figure 1.2). Site-R is located on Ravens Rock Mountain, 6 miles to the northeast of the main post in southern Pennsylvania (Figure 1.2). Site-D is located approximately 50 miles to the southeast of the Main Post, in the rolling area of Maryland to the east of Frederick, Maryland (Figure 1.1).

1.3.2 History

Fort Ritchie was originally the site of the Buena Vista Ice Company and was purchased in 1926 by the State of Maryland for use by the National Guard. In 1942 the Federal Government took control of the installation for wartime intelligence training. The post was returned to the State of Maryland after World

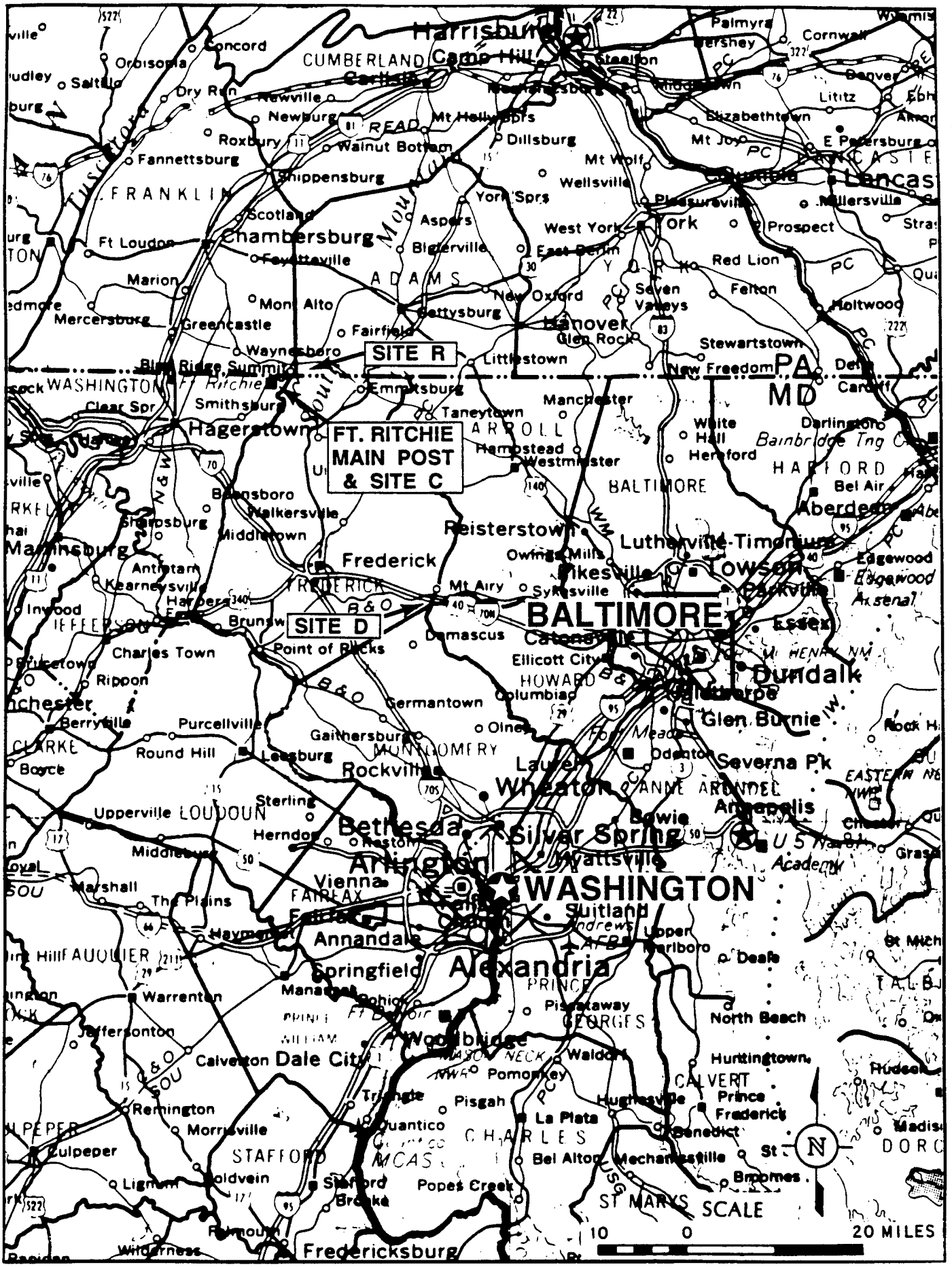


FIGURE 1.1. FORT RITCHIE VICINITY AND PROPERTIES MAP

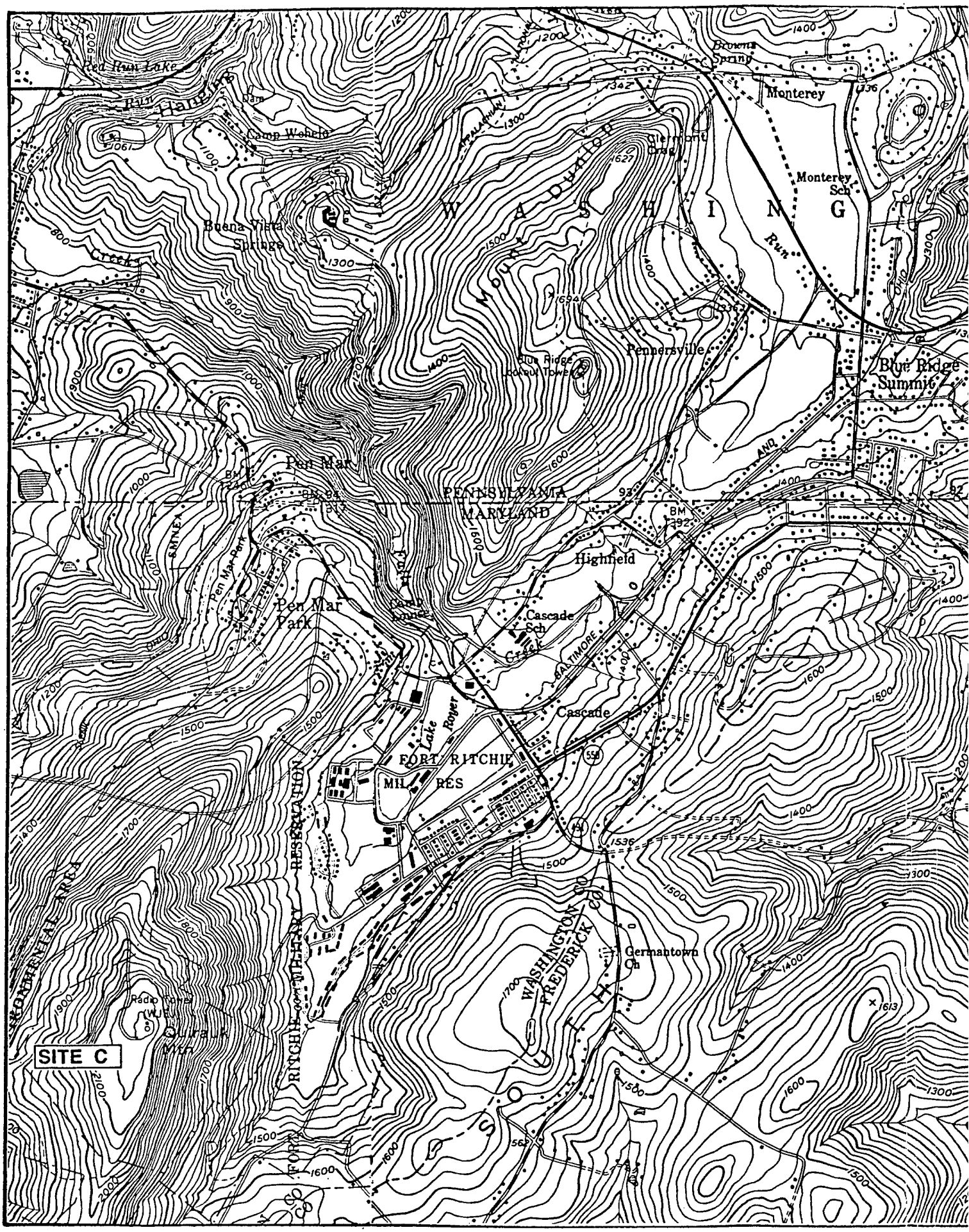
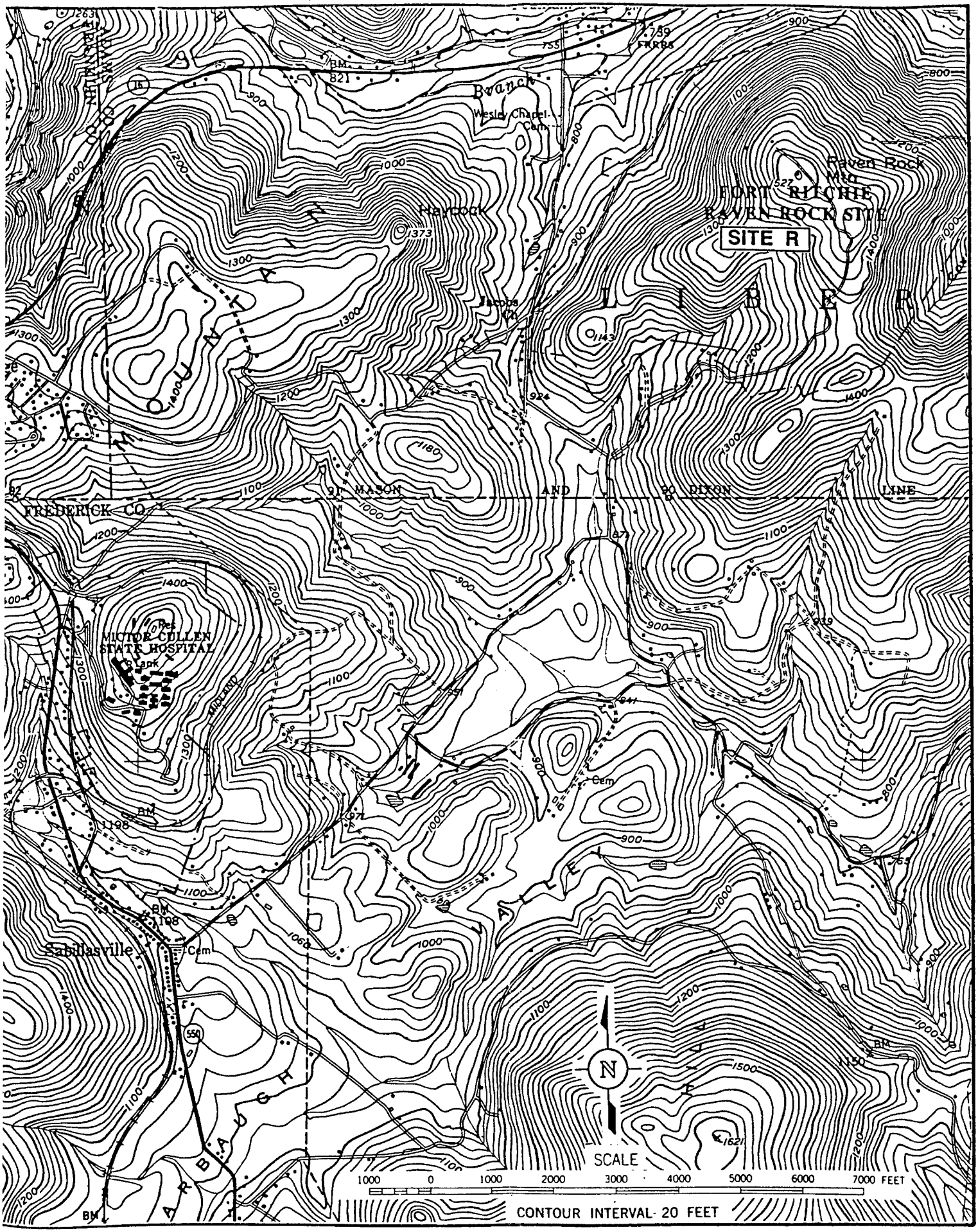


FIGURE 1.2. FORT RITCHIE AND VI



VICINITY GENERAL DRAINAGE MAP.

KEY TO AREA LOCATIONS:

1. DEH Maintenance - Bldg. 734
2. Photographic Laboratory - Bldg. 301
3. Directorate of Logistics
4. Incinerator/Waste Water Treatment Plant Area
5. Building 602 Storage Area (ColeJon)
6. Building 601 Warehouse Storage (ColeJon)
7. Spill Containment Area Outside Building 601 (ColeJon)
8. Building 601 Paint Shop (ColeJon)
9. Building 101
10. Pesticide and Herbicide Storage (Bldg. 401 Basement)
11. Golf Course Maintenance Shop (Bldg. 5)
12. Fort Ritchie Bowling Alley
13. Post Exchange Service Station (Bldg. 515)
14. Post Exchange Store (Bldg. 100)
15. Auto Craft Shop (Bldg. 401)
16. Skill Development Center - Wood Crafts (Bldg. 346)
17. Fort Ritchie Dispensary
18. Dental Clinic (Bldg. 332)
19. Motor Pool (Bldg. 700)

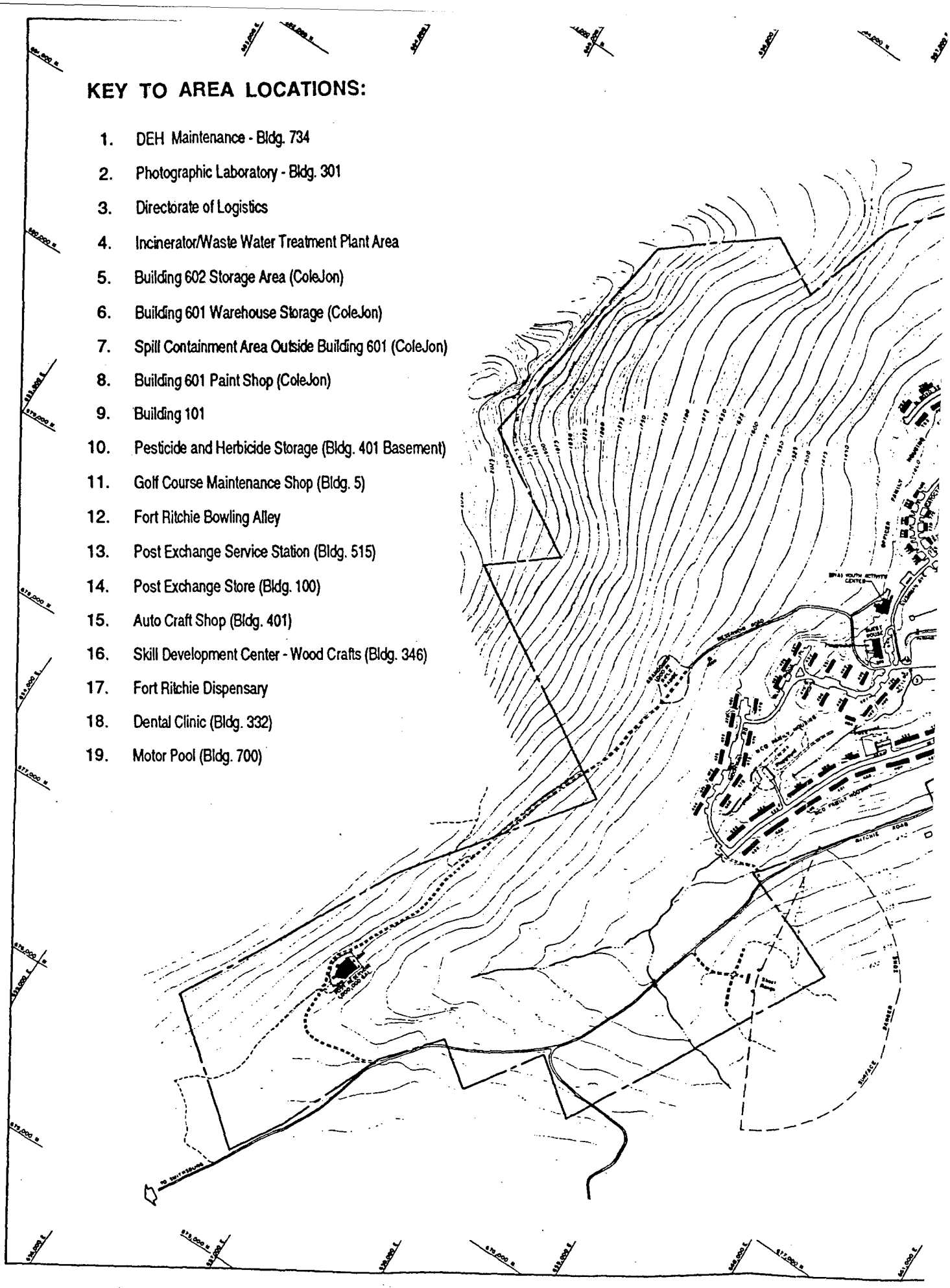
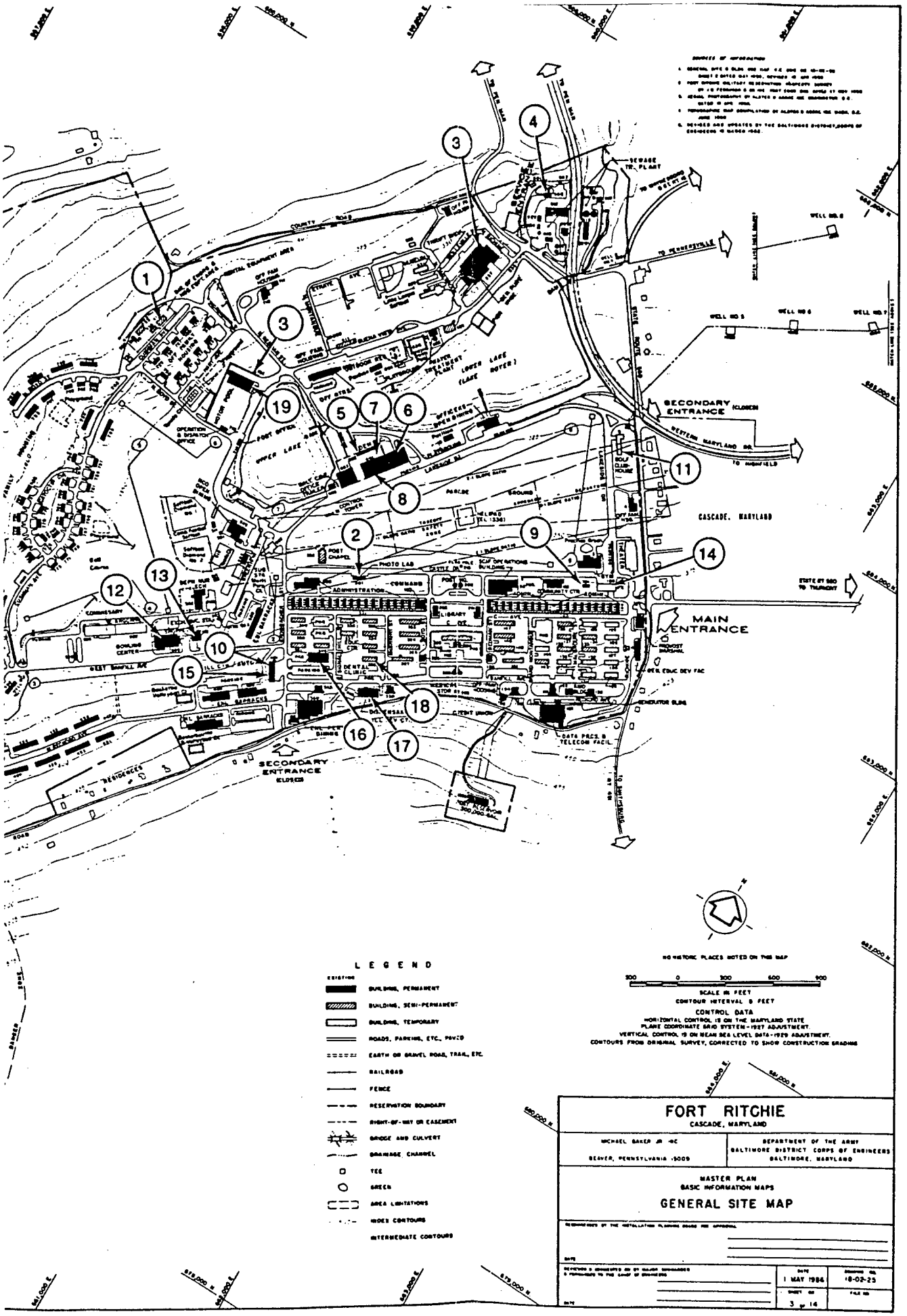


FIGURE 1.3. FORT RITCHIE MAIN P



IN POST DRAINAGE MAP.

2

War II, but was reclaimed for the Army in 1948 to support the soon to be constructed Alternate Joint Communication Center referred to as Site-R, and became operational in 1954. The Post was redesignedas a military Class II Installation in 1964 under the U.S. Army Strategic Communications Command which moved its headquarters to Fort Ritchie in 1971. The command's name was changed to the U.S. Army Communications Command in 1973 and then became the 7th Signal Command in 1975.

1.3.3 Soils

Soil groups present within the Fort Ritchie and Site R areas are similar and include upland soils and colluvial deposits. Upland soils are developed from materials weathered from the underlying rock, and colluvial deposits consist of materials moved down the sides of slopes, filling depressions and drainageways, and spreading over valley floors. The Fort Ritchie Main Post area consists of the colluvial deposits while the surrounding mountains, including the area occupied by Site-R, are upland soils. From the standpoint of both soils and land conditions, all areas occupied by Fort Ritchie properties, are well drained. There are no true swamps or marshes present in any of the counties in which Fort Ritchie properties, the AJCC or any downstream bodies of water are located.

1.3.4 Potentially Affected Water Bodies

All water draining from the Main Post area flows into drainage ditches, concrete culverts and a storm sewer system. This system drains into two connecting lakes, upper and lower Lake Royer which cover 24 acres and contain 80 million gallons of water. Flow from Lake Royer, and all drainage from Washington County, is part of the tributary system of the Potomac River and is subject to contamination from any spills associated with Fort Ritchie.

Flow from Lake Royer is ultimately to the Chesapeake Bay via the Potomac River, Antietam Creek, Red Run, and Falls Creek. Falls Creek is the outflow of Lake Royer. Flow from Site R in Pennsylvania is also ultimately to the Chesapeake Bay via the Potomac River, Monocacy River and Miney Branch. All flow from any other Fort Ritchie property in Maryland or Pennsylvania is to the Potomac river and Chesapeake Bay via either Antietam Creek or the Monocacy River.

Groundwater in the basin where the Fort Ritchie Main Post is located also could be affected by spills of oil and hazardous substances due to it being as shallow as five feet below the surface in the areas surrounding Lake Royer.

1.3.5 Surface Water Use

In addition to swimming, boating, and fishing Lake Royer provides supplemental drinking water supplies during certain months of the year. Sites C, D, and R contain no significant quantities of surface water. Site R run-off and drainage could be significant during heavy precipitation, and the site is located directly upgradient from and within one-half mile of a free flowing body of water (Miney Branch).

1.4 OIL AND HAZARDOUS SUBSTANCE USE AND SPILL HISTORY AT FORT RITCHIE

Fort Ritchie uses heating oil, diesel fuel and unleaded gasoline in its normal operations. Waste engine oil is also stored on the Post. The majority of these materials are stored in underground storage tanks (USTs).

Hazardous substances at Fort Ritchie include paints and related solvents used during normal maintenance operations which are stored in maintenance work areas. Although photographic chemicals are used in the photo laboratory as well as in the two medical facilities, silver is removed from exhausted photographic solutions, and this renders them non-hazardous. Pesticides and herbicides for control of weeds and vermin are stored at the golf course and entomologist shop areas.

There are several indoor facilities that store/use fuel or other hazardous materials at Site R. These include the card fab room where halogenated solvents are used, Site R graphics where photographic chemicals are used, Nuclear Biological Chemical (NBC) where DS2 and ST Bleach are stored, custodial supply area where caustic cleaning solvents are stored, and maintenance shops where oil and degreasing solvents are used.

There has been only one minor small-quantity spill at Fort Ritchie during the one year period prior to the preparation of this document. This spill occurred at the T-5 facility. It has been determined that the Fort Ritchie Fire Department and EMD responded appropriately and made necessary notifications associated with this particular spill event. No spill events at Site R are documented.

1.5 DESIGNATION OF RESPONSIBILITY

The responsibility for prevention of spills of oil and/or hazardous substances at Fort Ritchie lies ultimately with the Fort Ritchie Installation Commander (IC). A Garrison Commander is similarly responsible at Site R. A chain of command, however, has been established to ensure compliance with the various components of this SPCC plan. The following section lists individuals and organizations who are

responsible for implementing this plan. Fort Ritchie and Maryland properties are discussed first, and Site R is discussed subsequently.

1.5.1 Fort Ritchie and Maryland Properties

1.5.1.1 Contractor Personnel

Fort Ritchie utilizes a contractor to perform operational maintenance and small construction projects. The operation and maintenance (O&M) contractor has a non-military management structure and chain of command related to the SPCC Plan, as outlined below.

1. Employees—O&M contractor employees have the following responsibilities associated with implementation of the SPCC Plan:

    a. to inspect equipment in their work areas daily for evidence of faulty equipment or potential equipment failure that could result in a spill of fuel or hazardous substances, and

    b. to report any spills or suspected spills to the O&M contractor shop foreman or other member of management.

2. O&M contractor shop foreman—The shop foreman acts as the Alternate Hazardous Substance Coordinator (AHSC). The Shop Foreman's responsibilities for implementation of the SPCC Plan include:

    a. to regularly inspect all fuel or hazardous substance tanks, drums, and storage areas for leaks, spills, or damage;

    b. to initiate corrective actions for deficiencies found during inspections;

    c. to identify and in minor cases, implement preventative maintenance;

    d. to notify the O&M contractor project manager in the event of a spill and call 4500 and notify the Fire Department.

3. O&M Contractor Project Manager—The project manager acts as the Primary Hazardous Substance Coordinator (PHSC). The project manager's responsibilities for implementation of the SPCC Plan include:

   a. appointing shop foremen to act as AHSCs;

   b. implementing notification procedures established with the Environmental Management Division (EMD) and the Fire Department. The notification procedures would generally involve calling the Fire Department at 4500 and P-IOSC (EMD), and containing the spill until help arrives if it is safe to do so.

   c. supervising the actions taken by the shop foreman during a spill emergency and participate in the implementation of the Fort Ritchie ISCP as required,

   d. bearing responsibility for spill prevention and control at areas for which the O&M contractor is responsible (this should be done in coordination with the Contracting Officer's Representative);

   e. coordinating with the EMD in the development of the safety and security of equipment and facilities under the Project Manager's cognizance, (this should be done in coordination with the Contracting Officers Representative) and for facility inspection logs; and

   f. identifying which employees need training and to coordinate the necessary spill prevention training with the EMD.

4. Quality Assurance (QA)/Safety Manager--The safety manager assists with the management of activities during a spill emergency. In addition, his responsibilities include:

   a. inspecting hazardous substances, leaks, or spills; and

   b. being responsible to the contracting officer for all matters regarding oil or hazardous substance spills and spill prevention.

1.5.1.2 Fort Ritchie Personnel

Fort Ritchie personnel may witness or be involved with a spill occurrence. Their responsibilities in the event of a spill are as follows:

1. *Employees*—An employee of Fort Ritchie not associated with O&M contractor activities has the following responsibilities:

   a. to inspect equipment in work areas daily for evidence of faulty equipment or potential equipment failure that could result in a spill of fuel or hazardous substance,

   b. to implement notification procedures established with the EMD and the Fire Department. The notification procedures would generally involve calling the Fire Department at 4500 and P-IOSC (EMD), and containing the spill until help arrives if it is safe to do so, and

   c. to notify a supervisor immediately upon discovering an oil, fuel, or hazardous substance spill.

2. *Environmental Management Division (EMD)*—The Chief of DEH is responsible to the IC for confirmation, classification, and technical supervision of control and cleanup of spills at the Post. EMD performs these functions through the P-IOSC (Hofmann), with the following responsibilities:

   a. to inspect (quarterly) spill control equipment at each Post-managed facility;

   b. to respond to hazardous substance spills and ensure that cleanup/decontamination procedures are implemented correctly;

   c. to establish the installation response team (IRT);

   d. to provide proper training for the IRT and individuals responsible for spill clean-up at Post-managed facilities;

   e. to conduct facility surveys at least once every 2 years to determine whether modifications are needed to achieve compliance with SPCC guidelines;

   f. to review all plans and drawings related to oil or hazardous substance storage, handling, and transfer facilities for new construction, maintenance, or remodeling to determine whether amendments to the SPCC plan are required;

   g. to initiate facilities modifications to achieve compliance with the SPCC Plan guidelines by submitting projects as soon as possible, and no later than six months, after the change in design, construction, or maintenance operations have occurred;

h. to provide periodic training to Post employees to ensure that they understand their responsibilities concerning implementation of the SPCC Plan, as required by 40 CFR 112 and AR 200-1 and to ensure that records of personnel training, dates, and attendance are maintained;

i. To direct required SPCC and ISCP training exercises at least annually as required by AR 200-1 (8-5.d(2)).

3. *IRT leader*—The IRT leader is the Fort Ritchie Fire Chief. His responsibilities are:

a. to regularly inspect and become familiar with the various Post-managed facilities and the chemicals, hazardous substances, and wastes used or stored at each;

b. to regularly inspect all spill control equipment at each facility to ensure that it is accounted for and operational;

c. to attend all training sessions concerning spill control and cleanup;

d. to respond to all calls involving oil or hazardous substance spills and to contact other team members when a spill alert occurs; and

f. to coordinate with the Chief of the exercise evaluation team (EET) on timely, realistic exercises and evaluations. The EET consists of representatives of the Operations Division who are familiar with the Fort Ritchie and Site R Disaster Preparedness Program. Other selected individuals will also participate as needed as numbers of the EET for evaluation of specific aspects of the exercises.

4. *Operations Division*—The responsibilities of this group are:

a. to assume overall responsibility for the Fort Ritchie Disaster Preparedness Program,

b. to ensure that an evaluation team is established to evaluate spill response exercises.

c. to maintain close contact with local authorities to ensure the coordination of plans and procedures of mutual interest.

5. *Directorate of Logistics (DOL)*—DOL has the responsibility:

   a. to inform the appropriate authorities of dangerous material storage and/or movement of such materials on Fort Ritchie properties, and

   b. to coordinate activities that involve movement of hazardous substances over off-Post roads with the appropriate authorities, since Post-managed properties cover several different counties.

6. *Installation On-Scene Coordinator (IOSC)*—Two people are qualified to act as IOSC. One is the Initial Response IOSC (IR-IOSC) (who responds to an emergency, assesses the situation, and handles the emergency if conditions justify) and the other is the P-IOSC (who responds when notified by the IR-IOSC that his response is required). Their names and phone numbers as well as those of alternates for both IOSCs are listed in Section 1.2.1. These IOSCs are responsible for responding to emergencies at all sites associated with Fort Ritchie-Main Post, Site C, Site D, and Site R.

1.5.3 Responsibility for Spill Prevention and Control

The O&M contractor project manager is responsible for spill prevention and control at all areas assigned to his organization. His phone number is (301) 878-4257 or (301) 878-4839.

The EMD environmental coordinator the (P-IOSC) is responsible for spill prevention and control at all other Fort Ritchie sites, including Site C, Site D, and Site R. His phone number is (301) 878-4159.

1.6 Plan Review and Amendment

This plan supersedes any previous plan that may have been prepared for Fort Ritchie and Site C, D, and R. Pursuant to AR 200-1, this SPCC Plan will be effective for 2 years following its implementation date. AR 200-1 requires that the SPCC plan be reviewed at least every 2 years.

When DEH determines that there is a change in a facility design, construction, operation, or maintenance that materially affects the potential for an oil or hazardous substance spill, the plan will be amended accordingly.

After two years, a complete audit of the Fort Ritchie managed facilities handling oil and/or hazardous substances will be performed to verify conformance with the requirements of 40 CFR 112 and AR 200-1. This review also will include an assessment of new spill prevention technologies that have become available since the SPCC Plan was last reviewed. This review and evaluation process could result in amendment to the Plan to include more effective technologies (if they would significantly reduce the likelihood of a spill event and if they have been field proven). Amendment must occur within 6 months of the review and evaluation. The facility 2-year review and any amendments shall be certified by a Registered Professional Engineer.

1.7 Guidelines for Spill Prevention

Title 40 CFR 112 requires that appropriate containment and/or diversionary structures or equipment be in place to prevent discharged oil from reaching a navigable waterway. It recommends the following guidelines as a minimum.

1.7.1 Storage Tanks and Pipelines

Minimum requirements for storage tanks and pipelines are that they be:

- compatible with the material being stored,
- periodically tested,
- inspected daily for signs of leakage,
- corrosion protected,
- equipped with overfill prevention devices,
- equipped with adequate pipe supports, and
- equipped with provisions for traffic protection and early departure prevention (early departure is the departure of vehicle from a fueling area before being disconnected from it).

1.7.2 Spill Containment System Requirements

Spill containment systems must include:

- dikes, berms, or retaining walls sufficiently impervious to contain spilled oil;
- curbing;
- culverts, gutters, or other drainage systems;
- spill diversion ponds;

- retention ponds; and
- sorbent materials.

Spill containment systems such as those listed above should be provided at all sites where oil, fuel, and hazardous substances are handled. Sites with above ground storage tanks should use earthen berms lined with impervious liners (if located outdoors), and drip pans or curbing (if they are indoors) to contain spilled substances. Drainage systems should route site drainage toward low areas where spills can be contained before they reach the drainage paths that lead directly into the stormwater drainage system. Oil/water separators should be employed to collect petroleum materials which may enter drainage systems in and around facilities where these materials are stored or used. All containment, drainage and separator systems should be evaluated periodically to determine if they are capable of containing and holding the amounts of petroleum materials which could potentially be washed into storm water drainage systems at the Fort Ritchie Main Post, Site R and other areas.

If it is determined that the installation of structures or equipment to prevent discharged oil from reaching the navigable waterways described in this section is not practicable, the installation environmental staff should clearly demonstrate such impracticability and provide:

1. a strong oil spill contingency plan pursuant to 40 CFR 109, and

2. a written commitment of manpower, equipment, and materials required to expeditiously control and remove any harmful quantity of oil that may be discharged.

1.7.3 Facility Requirements

Minimum requirements for the facilities covered by this SPCC Plan follow. Facilities to which these requirements apply are those covered by facility SPCC plans in Section 2.0 and listed in Table 2.1. Facility personnel must:

- provide facility drainage control by ensuring that all flow pathways from the facility are accounted for and do not present an restricted conduit to U.S. navigable waterways;

- use written standard operating procedures (SOPs) detailing facility-specific requirements;

- routinely perform inspections to ensure proper operation of equipment;

- maintain records to document inspection programs;

- provide security systems to protect a site when it is not in operation;
- close and lock tank valves when a facility is unattended;
- lock pump starter controls in the off position when pumps are in standby mode;
- cap or blank flange loading/unloading lines when they are in standby mode;
- provide adequate facility lighting to allow discovery of spills and to prevent vandalism;
- have a designated person, who reports to line management. accountable for prevention of oil spills; and
- schedule and conduct spill prevention briefings describing known spill events or failures, malfunctioning components, and recently developed precautionary measures (briefings should be frequent enough to assure adequate understanding of the SPCC Plan for the facility).

1.8 Required On-Site Training and Exercises

Fort Ritchie shall provide Safety and Occupational Health training as required by Occupational Safety and Health Act (OSHA) for site personnel responsible for emergency response to on-site spills and personnel handling hazardous substances on a day-to-day basis. Periodic health monitoring is required for IRT members and others who may be exposed to hazardous substances on a daily basis. The following training is required for site personnel.

- Personnel likely to come into contact with hazardous substances in the performance of their jobs must receive hazardous communication (right-to-know) training pursuant to the requirements of 29 CFR 1910.120.
- Personnel working at locations where hazardous substances are stored must be trained in the operation and maintenance of equipment to prevent discharges of hazardous substances and in applicable pollution control laws, rules, and regulations in accordance with 40 CFR 112.7.

Spill prevention briefings shall be regularly conducted often enough to ensure adequate understanding of the SPCC Plan relative to the requirements of 40 CFR 112.7. These briefings must be conducted at least once a year for all operating personnel at facilities where hazardous substances are stored and should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

2.0 FACILITY SPCC PLANS

This section contains discussions of the individual sites within Fort Ritchie Main Post, Site C, Site D and Site R that have the potential for an oil, fuel or hazardous substance spill, of any quantity, into U.S. navigable waterways.

Table 2.1 provides a summary of all potential spill areas. Appendix A contains a list of all USTs on Post-managed properties. This includes a large number of nonregulated home heating oil USTs.

The general procedures for handling fuel and hazardous substances that are followed at Post-managed properties are outlined in the following paragraphs.

Fuel Handling Organizations Several organizations are responsible for handling fuel at Fort Ritchie including DEH, DOL, O&M contractor and the Post exchange. All fuel is delivered to Fort Ritchie by a commercial fuel distributor who delivers motor gasoline (MOGAS) and diesel fuel to organizations that use and further distribute these materials. Heating oil storage tanks and other storage tanks on Post-managed properties are also filled by a commercial fuel distributor.

Hazardous Substance Handling Hazardous substances that are utilized by various activities at Fort Ritchie managed properties and Site R are received through DOL and stored in various storage areas ranging from hazardous material (HAZMAT) sheds to work area storage shelves and lockers. Hazardous substances generated by post activities do not collectively amount to enough waste to warrant the establishment and maintenance of a permitted hazardous waste storage facility. Small quantities of hazardous substances (less than 55 gal combined volume) from Fort Ritchie activities are held by DOL while turn-in requests are processed through an off-site Defence Reutilization and Marketing Office (DRMO). DRMO contracts for direct pick-up of the wastes, including manifesting, from Fort Ritchie for transport to a treatment, storage, and disposal facility. The individual SPCC plans in the following section relate only the handling of these small quantities of hazardous wastes.

Table 2.1. Fort Ritchie Oil or Hazardous Substance Potential Spill Areas

Site Name	Description of Spillable Materials on Site
1 DEH Maintenance - Bldg 734	- 500 gal waste oil UST - Antifreeze (55-gal drum) - Pesticides/herbicides (small quantities)
2 Photographic Laboratory - Bldg 301	- Unused photographic chemicals (200 gal) - Exhausted fixer solution containing silver
3 Directorate of Logistics	- Various small quantities of hazardous materials
4 Incinerator/Waste Water Treatment Plant Area	one 500 gal diesel AST one 275 gal kerosene AST one 500 gal gasoline AST Oil-filled transformers (total approximately 200 gal)
5 Building 602 Storage Area (ColeJon)	- Paint and paint thinner (15 gal)
6 Building 601 Warehouse Storage (ColeJon)	- fuel additive (55 gal) - paint (180 gal total) - algicide (55 gal) - sodium bisulfite - lube oil (200 gal) - ethylene glycol (55 gal) - detergent (30 gal)
7 Spill Containment Area Outside Building 601 (ColeJon)	- Drum storage - 500-gal fuel tank (trailer mounted)
8 Building 601 Paint Shop (ColeJon)	Paint (50-gal total)
9 Building 101	Fuel oil AST (275 gal)
10 Pesticide/Herbicide Storage (Bldg 401 Basement)	Various pesticides and herbicides (150-gal total)
11 Golf Course Maintenance Shop	- various pesticides, fungicides and herbicides (20-gal total) - gasoline (35 gal)
12 Fort Ritchie Bowling Alley	- ethyl alcohol (55 gal) - paint (8 gal)

Table 2.1. Fort Ritchie Oil or Hazardous Substance Potential Spill Areas

Site Name	Description of Spillable Materials on Site
13 Post Exchange Service Station (Bldg 515)	- three 10,000-gal gasoline USTs - unused lube oil (250 gal) - lead-acid batteries - ethylene glycol (75 gal) - bleach (5 gal)
14 Post Exchange Store (Bldg 100)	- Various pesticides and herbicides (90 gal total)
15 Auto Craft Shop (Bldg 401)	- waste oil (550-gal AST) - waste antifreeze (275-gal AST) - degreasing solvent (5 gal) - petroleum naphtha solvent (10 gal)
16 Skill Development Center - Wood Crafts (Bldgs 346 and 347)	Small quantities of paint, thinner, stains, sealers and polyurethane
17 Fort Ritchie Medical Clinic	Small quantities of developer and fixer solutions
18 Dental Clinic (Bldg 332)	Small quantities of developer and fixer solutions and the following laboratory chemicals: acetone, methanol, butanol, glycerine, chloroform, formaldehyde, and adhesives.
19 Motor Pool (Bldg 700)	- 6,000-gal diesel UST - 10,000-gal unleaded gasoline UST
20 Satellite Communications Area - Site C	- 4,000-gal UST containing heating oil
21 Site D (Damascus, Maryland)	- 6,000-gal fuel oil UST
22 Raven Rock Site (Site R) - Outside	- 2,500-gal diesel UST (at helipad) - 275-gal diesel AST (at helipad) - 6,000-gal heating oil UST (at RT) - 20,000-gal UST (at fuel shed) - 2,500-gal diesel UST (at waste water treatment plant) - 2,000-gal ASTs (at wells 2 and 3)

Table 2.1. Fort Ritchie Oil or Hazardous Substance Potential Spill Areas

Site Name	Description of Spillable Materials on Site
23 Raven Rock Site (Site R) - Inside	- Acetone, isopropyl alcohol, lead facid batteries (100 16 total) - Waste oil (110 gal) - Used photographic fixer containing silver (35 gal) - Iron chloride (25-30 gal) - 1,1,1-trichloroethane (15 gal) - HCI (1 gal) - trichlorogluore methane dimethylbenzyl amanoium cloride sodium hydroxide (70 gal total) - Lubricating oil (unused) (2500 gal) - Waste oil (600 gal) - Fuel oil (Large quantity) - hydraulic oil (55 gal) - Depressing solvent (55 gal) - Floor wax stripper (KOH) (25 gal)

Notes:

UST - underground storage tank

AST - above-ground storage tank

2.1 BUILDING 734 - DEH/COLEJON MAINTENANCE

Building 734 is a vehicle maintenance facility with a vehicle washrack and drainage system. The facility is constructed as a standard frame building with a concrete floor and no floor drains. Hazardous materials (HAZMAT) sheds are located nearby.

2.1.1 Storage

A 500-gallon UST, adjacent to this building, stores waste oil. Two HAZMAT sheds associated with this facility are used to store materials that include antifreeze in 55-gal drums, pesticides, and herbicides.

2.1.2 Transfer and Loading/Unloading Procedures

Oil and antifreeze are brought into the maintenance and storage areas in 55-gal drums. Pesticides and herbicides are stored and handled in smaller containers.

2.1.3 Spill Prediction

Spill likelihood at this facility is not great. However, a significant spill, in conjunction with surface water runoff during heavy rains could result in flow of oil and hazardous substances into the concrete culvert immediately behind Building 734. This culvert leads directly into the Fort Ritchie storm water drainage system.

2.1.4 Containment

The concrete floor in the shop area is not curbed and contains neither floor drain nor oil-water separator system. The HAZMAT storage sheds are designed and built specifically for storage of hazardous materials and include containment capacity under the grated floor of the structures.

2.1.5 Facility Drainage Control

No specifically designed facility drainage control exists that would prevent a major spill from reaching the Fort Ritchie storm drainage system which ultimately empties into Lake Royer through an oil/water separator. It is possible that large quantities of spilled material from this and/or other facilities could combine to produce a quantity that the oil/water separator could not handle. Minor spills in the maintenance facility and surrounding area could also be washed into the storm drain system by rainwater or other surface water flowing through the area.

2.1.6 Security

A fence with a gate that is locked during non-working hours surrounds the facility.

2.1.7 Administration of SPCC Plan

Operations at the Building 734 Maintenance Facility generally precludes spills. Good housekeeping procedures are followed with respect to storage and handling of the oil and hazardous substances used in the facility. However, there are no operating procedures, plans or guidelines formally established and administered in this area which specifically address spill prevention, control and cleanup. In addition, it is not documented that any individual is assigned the responsibility of administering the general procedures described Section 1.7 of this SPCC Plan that would include regular inspections and documentation (Section 1.7.3).

2.1.8 Recommendations

Drainage controls need to be installed to minimize the potential for spills, in the facility and surrounding work and parking areas, to flow or be washed into the Fort Ritchie storm drainage system. This would consist of floor drains and dikes around work areas where oil and hazardous materials are handled. Facility-specific operating procedures should be generated as necessary to meet the requirements of Section 1.7 of this SPCC plan.

2.2 BUILDING 301 - PHOTOGRAPHIC LABORATORY

This facility provides film, negative and print processing services for Fort Ritchie activities and tenants. Self-contained processing machines are used for film and print processing in the laboratory. A graphics machine which utilizes a bleach material is also used in the laboratory area. Silver is recovered from the used fixer solutions in a silver recovery unit, rendering the resulting waste fixer solutions non-hazardous. A HAZWRAP storage shed is located nearby.

2.2.1 Storage

All liquid photographic materials are stored in the specially designed HAZMAT shed outside the laboratory. Approximately 200 gal of liquid are stored in the HAZMAT shed. No photographic chemicals or other hazardous substances are stored in the lab itself.

2.2.2 Transfer and Loading/Unloading Procedures

Materials are carried by hand from the HAZMAT shed to the laboratory, about 100 ft across a paved parking area.

2.2.3 Spill Prediction

Boxes and cartons of photographic materials could be dropped and spilled during transfer from the HAZMAT shed to the laboratory. Processing chemicals used in the self-contained apparatus and graphics machine do not present a significant spill hazard because the quantities are small. A total of less than 20 gal of liquid materials is present in the lab area at any given time.

2.2.4 Containment

The HAZMAT storage shed is specifically designed for storage of hazardous materials, including a containment capacity under the grated floor of the building. The photographic laboratory itself has no containment dikes in areas where chemicals and processing machines are used. Because of the small quantities of liquids used in these areas, however, containment is not considered to be inadequate.

2.2.5 Facility Drainage Control

There is no facility drainage control at the photographic laboratory area, but as indicated in the previous section, this is not considered to be of significant concern. Drainage control associated with the HAZMAT storage shed would only be of concern if the entire contents of the building were to be released by a catastrophic event such as an explosion or the crashing of a large vehicle into the structure. If this were to happen, spill of the liquids would be only about 500 ft upgradient from Lake Royer.

2.2.6 Security

The photographic laboratory is locked except during duty hours when the staff is present. The HAZMAT storage shed is locked at all times except when materials are being transferred into or out of it.

2.2.7 Administration of SPCC Plan

The laboratory staff follows unwritten procedures that cover the use of small quantities of hazardous substances in the processing equipment and the secure storage of hazardous materials in the HAZMAT

storage shed. These procedures are generally in accordance with the procedures specified in Section 1.7 of the SPCC Plan but are not documented in standard operating procedures (SOPs) for the activity.

2.2.8 Recommendations

Waste handling and disposal procedures should be documented (including silver recovery operations) to ensure that all employees are aware of the correct procedures. Inspection with documentation of the HAZMAT storage shed should be performed daily by assigned personnel in accordance with written SOPs specifically generated to cover all aspects of the photographic laboratory operations in accordance with the general procedure guidelines procedure of Section 1.7.3.

2.3 BUILDING 837 - DIRECTORATE OF LOGISTICS

Materials are received when they arrive at Fort Ritchie via military and private carriers, at building 837 is the DOL warehouse. Hazardous materials are briefly stored in this warehouse. All hazardous materials for disposal are kept in two HAZMAT sheds which are adjacent to Building 700, the Motor Pool garage.

2.3.1 Storage

Various hazardous liquid and solid materials are stored in the HAZMAT sheds adjacent to Building 700. They are segregated by compatibility in each of the storage structures. Materials are stored in these areas during the time when paperwork and hazardous material transport are being arranged through DRMO at Letterkenny Arsenal. Typically, a total of less than 55 gal of total volume is stored in these HAZMAT sheds at any one time.

2.3.2 Transfer and Loading/Unloading Procedures

Material is transferred by hand loading and unloading from trucks, which transport the hazardous materials to and from the HAZMAT sheds.

2.3.3 Spill Prediction

Spills could only occur if materials were to be dropped during transfer to or from the HAZMAT sheds. The sheds have spill containment capacity under the floors inside the structures, so any materials dropped and leaking there would be contained. Materials dropped outside these buildings would fall on a concrete or asphalt surface which would initially prevent them from soaking into the ground.

2.3.4 Containment

As mentioned above, containment is provided in the HAZMAT sheds. No other containment structures are located outside the HAZMAT sheds, but no additional containment appears to be necessary due to the small quantities of liquid materials being stored in the sheds.

2.3.5 Facility Drainage Control

Drainage control in the vicinity of the HAZMAT sheds is intended solely for control of storm water. Drainage would, however, carry off spilled materials if heavy rains occurred in conjunction with a spill or leak that occurred or reached the area outside any the HAZMAT sheds. Drainage from the HAZMAT sheds could flow directly into Lake Royer due to the close proximity to the lake (approximately 300 feet).

2.3.6 Security

All buildings are locked when personnel are not present.

2.3.7 Administration of SPCC Plan

No SPCC plan is currently followed or administered in the operation of the DOL facilities. No regular inspection of HAZMAT storage sheds and documentation thereof is performed by assigned personnel in accordance with written SOPs specifically generated to cover all aspects of DOL operations in accordance with the general guideline procedures of Section 1.7 of this SPCC plan.

2.3.8 Recommendations

Procedures should be generated and implemented to control and direct operations at the DOL HAZMAT sheds, as well as the 837 Warehouse to ensure that activities are carried out in a consistent and proper manner to avoid and minimize the occurrence of spills of hazardous materials.

2.4 BUILDING 907, 908, 909 - INCINERATOR/WASTE WATER TREATMENT PLANT AREA

This area includes the current incinerator building (908) and two adjacent buildings (907 and 909) where transformers are stored along with fuel for maintenance vehicles and equipment. The Waste Water Treatment Plant (WWTP) is also located in this vicinity but no hazardous liquids are used there.

2.4.1 Storage

Hazardous materials stored at this location include:

- one 500-gal diesel AST
- one 275-gal kerosene AST
- one 500-gal gasoline AST
- oil-filled transformers totaling 200 gal

2.4.2 Transfer and Loading/Unloading Procedures

Fuel is transferred to and from the ASTs by hoses with dispensing nozzles. Transformers are loaded and unloaded from trucks by forklift or handcart. The ASTs are refilled from transport trucks.

2.4.3 Spill Prediction

No containment is provided for any of the fuel storage tanks at this location. Therefore, spills resulting from transfer of fuel, tank rupture, or leakage would flow directly onto the underlying soil. The fuel tank area is located is approximately 400 ft upgradient from running water (outflow from Lake Royer). Heavy rain combined with significant tank leakage or a spill could result in hazardous materials reaching the free flowing surface water downgradient from this area.

The transformers are stored in several locations. Some transformers are stored in drip pans; others are stored directly on the ground. Possibility of spill or leakage from these transformers is considerable due to their age and possible corroded condition. No indoor storage of transformers was observed at this location.

2.4.4 Containment

No containment is provided around any of the fuel storage tanks which are stored directly on the ground. Some of the transformers sit in drip pans. None are stored indoors or in an area protected from weather, or in areas surrounded by curbs or berms.

2.4.5 Facility Drainage Control

No drainage control is provided for this area. All surface water runoff flows across the ground and pavement of the area, directly towards the downgradient waterflow.

2.4.6 Security

The area in which fuel and transformers are stored is fenced gated, and locked during non-working hours.

2.4.7 Administration of SPCC Plan

No personnel are assigned to administer the requirements of Section 1.7 of this SPCC plan in the WWTP area including inspections, spill prevention, and control. SOPs should be generated to cover site specific operations in this area, in accordance with general guideline procedures of Section 1.7 of this SPCC plan.

2.4.8 Recommendations

Secondary containment in the form of dikes, berms, or drip pans should be provided for the fuel storage tanks and transformer storage areas. Indoor storage with containment should be provided for the transformers to prevent corrosion and possible leakage. Storage of neither fuel nor oil-filled transformers should be allowed directly on the ground. A hazardous materials coordinator should be assigned to administer a SPCC Plan in this area.

2.5 BUILDING 602 - STORAGE AREA (COLEJON)

This area is a storage room in building 602, where hazardous materials are stored.

2.5.1 Storage

A total of about 15 gal of paint and paint thinner materials were observed in this storage room.

2.5.2 Transfer and Loading/Unloading Procedures

Materials are brought in and out of this room by hand and handcart.

2.5.3 Spill Prediction

Because of the amount of material being kept in this room is small and the facility is infrequently used, it is not likely that a major spill would occur. The room is not designed or modified to mitigate or control a spill, if it were to occur. Materials were observed stored in metal cans which, due to damp air in the room, could occur and leak.

2.5.4 Containment

The room has a concrete floor and a metal door. No outlet is possible from the room other than the door. No dikes or curbing are present to prevent spills from running under the door to outside the building.

2.5.5 Facility Drainage Control

Drainage from the room is through only one door and is not controlled by a raised door sill or other curbing. Drainage out of the room is across a paved parking lot to storm sewers and eventually to Lake Royer. A spill control kit is provided at the site to control the flow of any spills inside or out of the room.

2.5.6 Security

The room is locked except when it is in use or being inspected.

2.5.7 Administration of SPCC Plan

No one is specifically assigned the duty of spill control or routine inspection of this storage room.

2.5.8 Recommendations

Regular inspections of the room should be conducted to check for spills and integrity of containers, in accordance with procedures of Section 1.7 of the SPCC, Plan Site specific SOPs should be generated for all ColeJon hazardous material handling in accordance with Section 1.7.3 of this SPCC Plan.

2.6 Building 601 - Warehouse Storage, (ColeJon)

This building houses the O&M Contractor's maintenance shops and storage areas. Storage in Building 601 includes the main body of inventory which ColeJon maintains to support the operation and maintenance functions which they perform on Fort Ritchie properties.

2.6.1 Storage

Hazardous materials stored in Building 601 include:

- 55 gal of fuel additive,
- 180 gal total volume of paint,
- 55 gal of algicide,
- Sodium bisulfite (boiler water treatment),
- 200 gal lubricating oil,
- 55 gal of ethylene glycol (antifreeze), and
- 30 gal of detergent.

Storage of these materials is on shelves and on pallets in a typical warehouse arrangement.

2.6.2 Transfer and Loading/Unloading Procedures

Materials are transferred in and out of this warehouse facility with handcarts, and forklifts and by hand.

2.6.3 Spill Prediction

Good housekeeping in the Building 601 Warehouse minimizes the potential for accidents, which would be normal cause of spills.

2.6.4 Containment

No dikes, berms, curbing or other spill control or flow diversion mechanisms protect against spills in the Building 601 warehouse. If a large spill were to occur, material would be likely to spread evenly on the concrete floor and run under shelves and other fixtures.

2.6.5 Facility Drainage Control

No floor drains or other conduits exist to convey spilled materials out of the building, so it is unlikely that liquid hazardous material could exit the building by flowing over the floor and onto the ground outside except in the case of a very large spill. A spill control kit is provided in areas designated for storage of containers holding hazardous materials in the warehouse.

2.6.6 Security

Building 601 is locked during non-working hours, and a security person is on duty. The building is controlled by supervisory personnel during daytime working hours.

2.6.7 Administration of SPCC Plan

There is currently no personnel assigned to the duty of implementing the procedures Section 1.7 of this SPCC Plan.

2.6.8 Recommendations

A hazardous materials supervisor/coordinator should be assigned to ensure that all areas of the warehouse that contain hazardous materials are safe and inspected with documentation in accordance with SOP requirements of Section 1.7.3 of this SPCC Plan.

2.7 Spill Containment Area (Outside Building 601)

This is a covered area, 15 ft by 25 ft, that is asphalt paved with 6 in. curbing on the outside.

2.7.1 Storage

Storage in this area is for drums and parking of a mobile 500-gal fuel tank when it is not in use.

2.7.2 Transfer and Loading/Unloading Procedures

A forklift is used to transfer of drums into and out of this storage area. The tank in which fuel for the forklift is stored is mounted on a wheeled trailer and pulled over the curbing on a built-in ramp.

2.7.3 Spill Prediction

No conditions exist which would cause a greater than average risk of a spill associated with normal drum handling activities in this storage area.

2.7.4 Containment

The area is concrete with six-in. curbing surrounding the storage area. If a spill were to occur, the spilled material would be prevented from escaping the curbed area, and a trap basin in provided to collect spilled material.

2.7.5 Facility Drainage Control

Although drainage is controlled within the bermed area, drainage in the adjacent parking area is directed into a storm drain grating approximately 120 ft from the storage area. The storm drain leads to Lake Royer.

2.7.6 Security

There are no fences or access controls directly around the storage area. The general area in which the storage area is located is fenced and gated and is locked during non-working hours with a security person on duty.

2.7.7 Administration of SPCC Plan

The responsibility for spill prevention or control in the storage area outside Building 601 is not currently assigned to any employee(s).

2.7.8 Recommendations

A hazardous materials supervisor/coordinator should be assigned to oversee safety and regular inspection, and to coordinate the initial response to any spills that may occur in accordance with Section 1.7 of this plan.

2.8 BUILDING 601 - PAINT SHOP

Painting for ColeJon maintenance activities and projects is done in this shop.

2.8.1 Storage

A total of approximately total 50 gal of paint is stored in metal lockers.

2.8.2 Transfer and Loading/Unloading Procedures

Paint materials are hand carried into and out of this shop.

2.8.3 Spill Prediction

It is highly unlikely that than one can of paint would be spilled at any given time.

2.8.4 Containment

Even though there are no containment structures present in the shop, spills that may occur should not pose a problem due to the small amounts of materials involved.

2.8.5 Facility Drainage Control

Even though there are no drainage control structures present in the shop, spills that may occur should not pose a problem due to the small amounts of materials involved. The floor surface in the room is flat concrete (from which any spill of paint or other material could be removed) and no floor drains that could carry spilled materials from the shop.

2.8.6 Security

The cabinets and lockers in the Paint Shop are locked during non-working hours.

2.8.7 Administration of SPCC Plan

The responsibility for spill prevention or control in the building 601 Paint Shop area is not currently assigned to Base personnel. It is expected that the Paint Shop would be included along with the administration of a SPCC plan for all of Building 601.

2.8.8 Recommendations

Include the Paint Shop under spill control administration for all of Building 601. Assign the Paint Shop supervisor should be responsible for day-to-day spill control related inspections and housekeeping activities.

2.9 BUILDING 101

This is a small stone building with a 275 gal AST located in the basement.

2.9.1 Storage

An above-ground storage tank in this building is used to store heating oil.

2.9.2 Transfer and Loading/Unloading Procedures

The filling point for the tank is located outside the building and runs to the tank. Fuel is transferred into the tank from a tank truck (or other container transferred to the site by vehicle) through a line that is accessed from outside the building.

2.9.3 Spill Prediction

Fuel spills could occur during filling operations, but no conditions exist which would make this site especially susceptible to a spill event. Spills or leaks could occur inside the building if the tank or its associated plumbing were to leak.

2.9.4 Containment

No containment exists for spills resulting from leakage of the tank and associated piping. Drainage would go to the floor of the room in which the tank is located and would exit the room under the door to the outside and immediately come in contact with the soil. It is estimated that the leakage of 25 gal or more would result in a spill which would reach the outside and come in contact with the ground. No containment exists for spills resulting from filling operations.

2.9.5 Facility Drainage Control

No drainage controls exist that would prevent the flow of any significant spill or leakage from reaching the outside environment, which is an unpaved grass area.

2.9.6 Security

The room in which the tank is located is kept locked at all times.

2.9.7 Administration of SPCC Plan

The responsibility duty of spill control or routine inspection at this site is not assigned to any employee(s).

2.9.8 Recommendations

Routine monitoring of the tank should be performed to detect any spills or leaks as soon as possible. Secondary containment in the form of a dike or spill pan under the tank should be implemented.

2.10 BUILDING 401, BASEMENT - PESTICIDE/HERBICIDE STORAGE

Chemicals are stored and mixed in the basement of the building by the Fort Ritchie entomologist.

2.10.1 Storage

The following pesticide/herbicide liquids and their respective amounts are listed below are stored in the Building 401 basement:

2.10.2 Transfer and Loading/Unloading Procedures

All materials are hand carried into and out of the storage/mixing area.

2.10.3 Spill Prediction

The possibility that a spill in the storage/mixing area (that could reach the outside environment) is small. Mixing is done in an area away from the outside entrance and quantities of materials in both concentrated and mixed states are too small to flow very far. Housekeeping is also very good in this area, which minimizes the possibility of spills.

2.10.4 Containment

There is no containment around the entrance to this area to prevent the flow of materials to the outside environment. However, as indicated in the previous section, quantities of hazardous materials handled in this area are small enough to make flow to the outside very unlikely.

Table 2.2. Pesticide/Herbicide Storage at Building 401

Pesticide/Herbicide	Amount Stored
Korlan	2 gal
pyrethrin (3%)	6 gal
pyrethrin PT65	22 cans
pyrethrin (fogger)	26 oz (fogger)
precore ec	8 oz
PT400	1 gal
dursban	24 oz
dursban	7 gal
dipel	4 oz
malathion	22 gal
cygon 2E	1 gal
phosdren	1 gal
diazonon	2 gal
diazonon o.s.	14 gal

2.10.5 Facility Drainage Control

Facility drainage control is the same as the discussion on containment in the previous section. Drainage in the immediate area does not flow directly into storm drains.

2.10.6 Security

The door to the pesticide/herbicide storage and mixing area is kept locked during times when no personnel is present in the area.

2.10.7 Administration of SPCC Plan

The entomologist performs all functions necessary to administer an SPCC Plan for the pesticide/herbicide storage area. However these are not documented in procedures.

2.10.8 Recommendations

It is recommended that a dike be constructed near the entrance to this area to prevent any large spills from flowing to the outside.

2.11 BUILDING 5 - GOLF COURSE MAINTENANCE SHOP,

Activities performed in this area include maintaining and servicing gras cutting equipment and mixing of herbicides and pesticides for use on the golf course.

2.11.1 Storage

Small amounts of pesticides and herbicides are stored in the Golf Course Maintenance Shop area. Gasoline and waste oil associated with maintenance and service of gras cutting equipment also are stored in this area.

2.11.2 Transfer and Loading/Unloading Procedures

All materials are hand carried into and out of the areas by hand.

2.11.3 Spill Prediction

No conditions exist in the Golf Course Maintenance Shop area that would increase the likelihood of any spills beyond that normally associated such activities. Housekeeping is generally good, which also minimizes the potential for spills. Gasoline is stored in a flammable stored in a cabinet located outside to the rear of the shop area, which makes spillage of this material very unlikely except during transfer to and filling of the grass cutting equipment.

2.11.4 Containment

Due to the small amounts of materials that are handled in the shop area, containment is not considered to be a significant factor in this area. Secondary containment is provided in the flammable storage cabinet should any spill or leak occur.

2.11.5 Facility Drainage Control

The facility is surrounded by a grassy lawn area. Were a spill to occur with enough volume to flow into this grassy area, coincident with heavy precipitation, hazardous substances could be carried in the general direction of Lower Lake Royer, approximately 500 ft away from the golf course.

2.11.6 Security

The shop area and the flammable storage cabinet are locked when no personnel are present.

2.11.7 Administration of SPCC Plan

No one is specifically assigned the duty of spill control and routine inspection of the storage areas in this facility in accordance with the general guideline procedures of Section 1.7 of this SPCC plan. The shop foreman performs inspections on an irregular basis, but these are not documented in accordance with requirements specified in Section 1.7.3 of this SPCC Plan.

2.11.8 Recommendations

The shop foreman should be assigned official duties involving inspection and spill control at the facility in accordance with procedures of Section 1.7.3 of this SPCC Plan.

2.12 FORT RITCHIE BOWLING ALLEY

2.12.1 Storage

A 5 ft^3 metal storage container is located outside the rear of the Bowling Alley where 55 gal of ethyl alcohol and 8 gal of paint are stored.

2.12.2 Transfer and Loading/Unloading Procedures

Transfer of materials into and out of the storage container is by hand.

2.12.3 Spill Prediction

All materials stored in the container are packaged in closed cans or drums and one or more of these containers would have to be dropped for a significant spill to occur.

2.12.4 Containment

No drip pans or other containment are included in the 55-gal drum.

2.12.5 Facility Drainage Control

No drainage control exists around the storage container to prevent a spill from flowing or being washed into nearby storm drains which lead to Lakes Royer.

2.12.6 Security

The storage container is kept locked at all times except when materials are being added or removed by employees of the bowling alley.

2.12.7 Administration of SPCC Plan

No one is currently assigned the specific duty of spill prevention inspection at this site.

2.12.8 Recommendations

Spill containment and regular inspections are recommended to minimize the possibility and effects of spills or leaks that could occur at this site.

2.13 POST EXCHANGE SERVICE STATION (BUILDING 515)

This area includes USTs that dispense gasoline and a service area where minor automobile maintenance activities are performed. A convenience store is also associated with this area which sells small quantities of oil, antifreeze and other motor vehicle fluids.

2.13.1 Storage

Various motor vehicle fluids are sold and stored in the maintenance area as well as in the shopping area of the facility. Total volumes of these fluids are:

- 2000 gal fuel oil UST,
- lube oils - 250 gal unused,
- antifreeze (ethylene glycol) - 75 gal,
- bleach - 5 gal;
- Automobile batteries; and
- Three 10,000 gal USTs (gasoline service island).

2.13.2 Transfer and Loading/Unloading Procedures

Materials which are used and sold inside the maintenance and convenience store areas are unloaded by hand and carried into the facility by hand and handcarts. Transfer of fuel into the USTs is from tanker trucks.

2.13.3 Spill Prediction

No unusual storage or operational activities are performed at this facility which that increase the likelihood of a spill occurrence beyond that normally associated with an automobile service station and convenience market. Housekeeping was observed to be adequate, which minimizes the potential for spills caused by clutter and accidents.

2.13.4 Containment

Spills that might occur within the vehicle maintenance facility would normally be contained inside the building, flow into floor drains, and pass through an oil-water separator before being discharged to the Fort Ritchie sanitary sewer system which flows to the WWTP. Spills that might occur in the convenience store area would be sufficiently small to be contained within the immediate area due to the small quantities of materials stored on the shelves within this facility. Spills associated with the fuel dispensing islands could result in the release of small quantities spilled when customers are refueling personal vehicles, but could range up to larger amounts while a tank truck is filling the USTs. The area around the fueling islands is paved with concrete and any small spill would be contained in the immediate area and would not flow onto unpaved areas or into storm drains. UST leakage directly into the ground can be detected by monitoring devices associated with the UST installation.

2.13.5 Facility Drainage Control

Drainage at the building is adequately controlled with floor drains. All floor drain water and any hazardous materials spilled or leaked pass through an oil-water separator before entering the Fort Ritchie storm drain system. The only way that spilled material could escape being collected by the facility drainage control system would be if a very large quantity of fuel were to be spilled during UST filling or if a significant spill of any kind were to occur outside and in combination with a severe rainstorm.

2.13.6 Security

All areas that contain hazardous materials, oils, or fuel are locked when facility personnel are not present.

2.13.7 Administration of SPCC Plan

No one is currently assigned the specific duty of spill prevention inspection at this site.

2.13.8 Recommendations

Responsibility for inspection for an notification of and for initiating spill response. Should be assigned to specific individuals.

2.14 BUILDING 517 - POST EXCHANGE STORE

2.14.1 Storage

A total of approximately 90 gal of pesticides/herbicides are kept in this building on display for purchase by customers of Post Exchange.

2.14.2 Transfer and Loading/Unloading Procedures

Materials are hand carried or transferred by hand cart into and out of this facility.

2.14.3 Spill Prediction

Spills of more than one 1-gal containers are likely at this location, and would be the result of dropage during normal shopping and inventory replenishment. Housekeeping is good, which minimizes the likelihood of spills.

2.14.4 Containment

Since only small spills are likely at this facility, present containment is considered adequate.

2.14.5 Facility Drainage Control

Due to the small quantities of material associated with potential spills, facility drainage control is considered adequate in this area. No spilled material is expected to exit the building to the outside and be washed to any storm or other drain system.

2.14.6 Security

The Post Exchange is locked at all times when it is not open for business.

2.14.7 Administration of SPCC Plan

No one is currently assigned the specific duty of spill prevention inspection at this site.

2.14.8 Recommendations

Responsibility for inspection for and reporting of spills and for initiating spill response should be assigned to specific individuals.

2.15 BUILDING 401 - AUTO CRAFT SHOP

Individuals from the Post may use this facility and the tools and equipment in it (for a nominal fee) to perform repairs on their personal vehicles.

2.15.1 Storage

Hazardous substances and oil-related materials stored at this facility include:

- waste oil (550-gal tank in building basement),
- waste antifreeze (275-gal tank in building basement),
- parts cleaner containing degreasing solvent (5 gals), and
- petroleum naphtha (degreasing solvent) in a 14 gal tank.

2.15.2 Transfer and Loading/Unloading Procedures

Materials are hand carried in this facility except for waste oil and waste antifreeze which are emptied by a recycler who pumps their contents into a tank truck.

2.15.3 Spill Prediction

A spill could occur during the handling of waste oil or other materials in the facility, but the quantities involved in this type of spill would be small. A spill could also occur during pump-out of the waste oil and waste antifreeze tanks which would probably result in some material spilling on the ground. Leakage or rupture of the waste oil and waste antifreeze tanks could also occur which would result in the spillage of significant amounts of material in the basement of Building 401 that could flow out the entrance and directly onto the ground.

2.15.4 Containment

Inside the shop area there is a floor drain which goes to an oil/water separator. No containment exists around or under the waste oil and waste antifreeze storage tanks.

2.15.5 Facility Drainage Control

Spills that are not collected by the floor drain system inside the shop area would either flow onto the ground or flow over paved areas into storm drains and eventually to Lake Royer.

2.15.6 Security

All areas of this facility are locked when operating personnel are not present.

2.15.7 Administration of SPCC Plan

No one is currently assigned the specific duty of spill prevention inspection, spill reporting, or initiation of spill response at this site.

2.15.8 Recommendations

Spill containment under and around the waste oil and waste antifreeze storage tanks should be provided. Individuals should also be assigned to be responsible for inspecting the facility for spill detection, notification, and purposes response and notification if a spill is observed.

2.16 BUILDING 346 - SKILL DEVELOPMENT CENTER, WOOD CRAFTS

2.16.1 Storage

Materials stored in this facility include: paints, thinners, stains, sealers, and polyurethane, all of which were observed to amount to about 8 gal total stored material.

2.16.2 Transfer and Loading/Unloading Procedures

All materials are hand carried into and out of this facility.

2.16.3 Spill Prediction

The likelihood of a significant spill which could not be cleaned up easily by persons working in the facility would be very small due mainly to the very small amount of hazardous substances present. Some materials are kept in aerosol cans, which makes spillage very unlikely.

2.16.4 Containment

Not applicable

2.16.5 Facility Drainage Control

Not applicable

2.16.6 Security

All areas of this facility are locked when operating personnel are not present.

2.16.7 Administration of SPCC Plan

No one is currently assigned the specific duty of spill prevention inspection at this site.

2.16.8 Recommendations

An individual should be assigned to make periodic checks for leaks or spills.

2.17 FORT RITCHIE MEDICAL CLINIC

This facility provides medical services to Fort Ritchie personnel. No x-ray procedures are performed at this facility, however, so the use of photographic chemicals is minimal.

2.17.1 Storage

A small quantity of photographic developer and fixer are stored at this facility, but they are not considered hazardous since they are new and contain no silver.

2.17.2 Transfer and Loading/Unloading Procedures

All materials are stored in cartons and hand carried.

2.17.3 Spill Prediction

Because very small quantities of materials are used at this facility, significant spills are unlikely.

2.17.4 Containment

Not needed due to small quantities.

2.17.5 Facility Drainage Control

Not applicable.

2.17.6 Security

All areas locked and inaccessible during non-working hours.

2.17.7 Administration of SPCC Plan

No personnel are currently assigned the specific duty of spill prevention inspection at this site.

2.17.8 Recommendations

Assign an individual to make periodic checks to ensure that no leaks or spills have occurred from the containers being stored in this facility. Include the facility in an SPCC procedure.

2.18 BUILDING 332 - DENTAL CLINIC

The Dental Clinic performs standard dental examinations and procedures for Fort Ritchie personnel. A silver recovery unit is used to remove dissolved silver from exhausted fixer solutions before it is discarded through sanitary drains.

2.18.1 Storage

Materials stored in the Dental Clinic facility are unused fixer and developer solutions, acetone, methanol, butanol, glycerine, chloroform, formaldehyde, and adhesives.

All materials except the unused photographic chemicals are stored in a storage cabinet specifically designed for flammable materials.

Flammable Storage Cabinet (total volume of stored material is approximately 20 gal).

2.18.2 Transfer and Loading/Unloading Procedures

Materials are hand carried to and from the dental clinic.

2.18.3 Spill Prediction

Since all materials are hand carried, a spill would occur only during normal material handling. This probably would involve no more than one package or container and an amount less than 1 gal.

2.18.4 Containment

Because material quantities are small, special containment devices are not considered necessary for this facility except in the case of the storage cabinet. Some form of containment should be placed around this cabinet to prevent leaking material from inside the cabinet from soaking into the underlying floor.

2.18.5 Facility Drainage Control

Quantities of hazardous materials kept in this area are too small to involve consideration of facility drainage.

2.18.6 Security

All areas are locked and inaccessible during non-working hours.

2.18.7 Administration of SPCC Plan

No one is currently assigned the specific duty of spill prevention inspection at this site.

2.18.8 Recommendations

Someone should be assigned the responsibility of making periodic checks to ensure that no leaks or spills have occurred from the containers being stored in this facility. Secondary containment should be provided around flammable storage cabinet.

2.19 Building 700 - Motor Pool

The Post Motor Pool operates a self-service refueling station located adjacent to Building 700.

2.19.1 Storage

Fuel is stored in two USTs—a 6000-gal diesel tank and a 10,000-gal unleaded gasoline tank. New lubrication oil, waste automotive engine oil, spray paints, and thinners are stored in Building 701, a small concrete storage building associated with the Motor Pool.

2.19.2 Transfer and Loading/Unloading Procedures

Fuel transfer operations include vehicle refueling and filling of USTs by transfer trucks.

2.19.3 Spill Prediction

Spills could occur during any of the above fuel transfers or maintenance activities.

2.19.4 Containment

There is no containment for spills that might occur in the refueling area or in the storage building. Spills occurring in the refueling area would flow onto a large paved area which drains into a storm drain approximately 100 ft from the fueling island. Spills or leaks originating in the storage building would flow onto the floor and if large enough would flow outside to the paved area in front of the building or onto the ground behind the building. UST installation is of recent design and includes monitoring devices that would indicate the presence of underground leaks from the USTs.

2.19.5 Facility Drainage Control

Drainage from the area around the fueling island flows into a storm drain approximately 100 ft away. This drain leads to a large oil/water separator immediately adjacent to Lake Royer, which discharges into the lake after exiting the oil-water separator. The storage building has no drainage control around it.

2.19.6 Security

All areas of the motor pool area are locked and inaccessible during non-working hours.

2.19.7 Administration of SPCC Plan

No one is currently assigned the specific duty of spill prevention and inspection at this site.

2.19.8 Recommendations

Assign someone to make periodic checks to ensure that no leaks or spills have occurred from the containers being stored in this facility and to check the UST leak monitoring devices. Some kind of secondary containment needs to be provided for the storage building. Include the facility in an SPCC procedure.

2.20 Site C - Satellite Communications Area

Site C is a noncontiguous Fort Ritchie property located atop Quirauk Mountain approximately 0.5 mile to the southwest of the Main Post. It encompasses approximately 5 acres and includes a tower, a communications facility, and associated support facilities.

2.20.1 Storage

There is a 4,000 gal UST in which heating oil is stored.

2.20.2 Transfer and Loading/Unloading Procedures

Fuel is brought in by tanker truck and transferred into the UST.

2.20.3 Spill Prediction

Spillage could occur during tank filling operations. An underground leak from the UST could also result in a loss of significant amounts of fuel directly into the ground. However, the UST installation is in compliance with current UST regulations (which require a leak detection and/or monitor) and this minimizes the possibility of an undetected release of fuel through underground leakage.

2.20.4. Containment

There is no containment associated with the UST which would prevent the escape of fuel if it were to occur during filling operations. Concrete paved areas with curbing over the UST would prevent the immediate seepage of spilled fuel into the ground, and would allow time to contain the spill with absorbent or other barrier to prevent further flow the material.

2.20.5 Facility Drainage Control

No drainage control exists in the area of the UST. All drainage would be generally to the south and sharply downgradient from the location of the UST leading eventually to the Fort Ritchie Main Post area.

2.20.6 Security

The UST area is within a fenced area to which access is controlled at all times.

2.20.7 Administration of SPCC Plan

No one is currently assigned the responsibility for spill control at the Site C facility.

2.20.8 Recommendations

Assign someone the responsibility for ensuring that proper procedures for avoiding spills are followed during UST refilling. Proper monitoring of the UST to detect underground leakage at an early time could also be assigned.

2.21 Site D (Damascus, Maryland)

This is a 2-acre site on which is located an electronic communications tower and an associated support building.

2.21.1 Storage

Fuel oil is stored in a 6000-gal UST at this site.

2.21.2 Transfer and Loading/Unloading Procedures

Refill of the UST is by transfer of fuel from a tanker truck.

2.21.3 Spill Prediction

Spills could occur during filling of the UST, the maximum likely to be the entire contents of one compartment of the fuel tanker truck. A leak in the UST could also occur, which would potentially result in the slow escape of large quantities of fuel oil into the soil. The likelihood of this type of leak occurring is minimal because of the up-to-date installation of the UST, which includes monitoring devices that would detect the presence of leakage.

2.21.4 Containment

As indicated in the previous section, spills leaking from inside the UST would be detected at an early time, and appropriate measures could be taken to empty the UST, minimizing the impact. Containment of spills occurring during the filling of the UST would only be possible if the spill were small or if spill containment devices were used by the tank filling personnel. The pad over the UST is concrete and small spills occurring on it could be contained easily. However, if a larger spill were to occur and escape beyond the pad, it would flow directly onto the soil and be washed along with rainwater and other drainage from the site, which is generally carried to the north towards the road in front of the facility (approximately 150 ft) and eventually drains into area drainage.

2.21.5 Facility Drainage Control

Drainage control is not provided around the pad that lies over the UST and is not normally considered necessary due to the site being a UST which could not release material onto the surface of the ground if it were to leak. Drainage is to the north across a grassy area.

2.21.6 Security

Site D is enclosed by a fence and gate and is locked at all times when personnel are not present.

2.21.7 Administration of SPCC Plan

No one is currently responsible for spill prevention or control at Site D. Routine monitoring of the UST leak monitoring devices is the only spill-related activities considered appropriate for this site.

2.21.8 Recommendations

Activities related to the maintenance of the Site D facility should ensure that UST monitoring is performed.

2.22 Site R (Outdoor Facilities)

Site R outdoor facilities support operations conducted in the Raven Rock Mountain facility.

2.22.1 Storage

Storage in the areas outside Site R consist of fuels storage in ASTs and USTs as follows:

- 2500-gal diesel UST - helipad
- 275-gal diesel AST - helipad
- 6,000-gal heating oil UST - RT
- 20,000 gal UST - fuel shed
- 2000-gal ASTs - Wells 2 and 3, and
- 2,500-gal diesel UST - WWTP

There are also three HAZMAT Sheds for storage of hazardous materials.

2.22.2 Transfer and Loading/Unloading Procedures

Fuel storage tanks are filled by tanker trucks. Materials are hand carried in and out of the HAZMAT sheds.

2.22.3 Spill Prediction

Spills could occur while fuel is being transferred into and out of the storage tanks. Spills could also occur during transfer of materials to and from the HAZMAT sheds. No conditions exist that would increase the

likelihood that spills at any of the fuel or HAZMAT storage sites would be any more frequent than would be generally expected at a well-managed and maintained facility.

2.22.4 Containment

No containment exists for spills associated with the transfer of fuel from and to the storage tanks. The likelihood of a significant spill occurring around these tanks makes elaborate containment structures inappropriate. Secondary containment is provided for in the design and construction of the HAZMAT sheds.

2.22.5 Facility Drainage Control

All areas of Site R are situated on the lower slopes of Raven Rock Mountain, which slopes sharply down to Miney Branch. Drainage control is provided in paved areas by a storm drain system that empties downgradient from Site R facilities. All spills occurring at Site R during heavy rains or that might otherwise have enough volume to flow a significant distance would either flow directly down the slopes of Raven Rock Mountain or be collected by the storm drain system and exit through an outlet downgradient of Site R which flows into Miney Branch which is a free flowing tributary of the Potomac River.

2.22.6 Security

All areas of Site R are controlled at all times and are not accessible to anyone but authorized personnel.

2.22.7 Administration of SPCC Plan

Administration of an SPCC Plan at Site R should consist of an overall hazardous materials coordinator for the entire site and additional coordinators for the various activities which handle fuel and hazardous substances such as the O&M Contractor and DEH.

2.22.8 Recommendations

It should be verified that any spills which are washed into the storm drain system at Site R can be prevented from reaching beyond the confines of the facility by oil/water separators or other devices.

2.23 Site R (Indoor Facilities)

Indoor facilities at Site R are located inside Raven Rock Mountain.

2.23.1 Storage

Numerous indoor activities at Site R use and store small quantities of oil and hazardous substances. The main source of oil and hazardous material is the power plant operation, which involves a large quantity of stored diesel fuel. These activities and the type and quantity of oil/hazardous materials used are listed in Table 2.3.

2.23.2 Transfer and Loading/Unloading Procedures

Transfer of all materials except fuel is by truck into Site R and then by handcart or hand carrying to the location where they will be used and stored. Transfer of fuel is by pipeline from outside the facility.

2.23.3 Spill Prediction

No circumstances exist which would increase the potential for spills during the storage or use of any of the hazardous materials used by activities inside the Site R facility. Fuel transfer and storage operations are not considered to pose any spill potential beyond that normally associated with fuel transfer and usage.

2.23.4 Containment

Containment is not crucial with respect to the relatively small quantities of hazardous materials associated with all activities inside Site R except the Diesel Shop since the amount of material involved would not be expected to flow very far before it could be controlled, collected in sumps and low areas, and then cleaned up. Containment of the large volume of diesel fuel stored at the Diesel Shop area inside Site R, however, would not be possible under current conditions if a major rupture were to occur. Flow would be to the Site R floor drain system and then to the outside environment via the drainage system described in the following section.

2.23.5 Facility Drainage Control

The Site R floor drain system collects flow from all locations inside Site R and exits the facility by a single line that discharges through an oil/water separator and then through Portal "D" on the downslope

Table 2.3. Oil and Hazardous Substances Used by Activities Located Inside Site R

Activity	Hazardous Material	Amount[1]
Electrical Shop	Acetone, isopropyl alcohol, lead-acid batteries	100 lb (total)
Power Plant	Waste oil	110 gal
Graphics Shop	Used photographic fixer containing silver	35 gal[2]
Electronics Card Fabrication Shop	Iron chloride 1,1,1-trichloroethane HCI	25-30 gal 15 gal 1 gal
Refrigeration Shop	Trichlorofluore methane dimethylbenzyl amoninium chloride sodium hydroxide	70 gal (total)
Diesel Shop	Lubricating oil (unused) waste oil fuel oil hydraulic oil depressing solvent	2500 gal 600 gal Large quantity[3] 55 gal 55 gal
Custodial Area	Floor wax stripper (KOH)	25 gal

[1]Represents relative quantities - exact amounts vary.

[2]Silver is recovered in a silver recovery unit in the shop.

[3]Exact amount is classified.

side of Raven Rock Mountain. If a major fuel leak were to occur inside Site R, the discharge of this material to the environment could not be prevented. Miney Branch is within 0.5 miles of the Site-R facility. Spills which might occur inside the "C" or "D" Portals would flow directly back out of these portals due to their sloping to the outside. No storage of oil or hazardous materials is currently maintained in the "C" or "D" Portal areas.

2.23.6 Security

All indoor areas at Site R are maintained under tight security at all times.

2.23.7 Administration of SPCC Plan

Administration of a SPCC Plan inside Site R should consist of an overall hazardous materials coordinator for the entire site and additional coordinators for the various activities that handle fuel and hazardous materials, such as the O&M Contractor and DEH.

2.23.8 Recommendations

If a large fuel spill were to occur from the diesel storage area inside Site R, it would flow through the floor drain collection system that empties to the outside through a single discharge point. This should be verified and measures should be taken to ensure that major releases of diesel fuel from inside Site R can be adequately contained before reaching bodies of water downgradient of Site R which include Miney Branch Creek, Monocacy River, Potomac River and Chesapeake Bay.

3.0 REFERENCES

Maryland Hazardous and Solid Waste Management Administration, Department of the Environment, "Oil Pollution and Tank Management", Code of Maryland Regulations (COMAR) 26.10.01, July 1, 1991.

Office of the Federal Register, National Archives and Records Administration, 1971, "Criteria for State, Local and Regional Oil Removal Contingency Plans," 40 CFR Part 109.

Office of the Federal Register, National Archives and Records Administration, 1987, "Discharge of Oil", 40 CFR 110.

Office of the Federal Register, National Archives and Records Administration, "Oil Pollution Prevention" 40 CFR 112.

Pennsylvania Department of Environment Resources, Bureau of Water Quality Management, "Pennsylvania Clean Streams Law and Regulations (25 Pa Code, Chapter 101), 1992.

Pennsylvania Department of Environment Resources, Bureau of Water Quality Management, "Pennsylvania Storage Tank and Spill Prevention Act and Regulations (25 Pn Code, Chapter 245, subchapter L), 1992.

U.S. Army Regulation 200-1. Environmental quality, environmental protection and enhancement. 23 April 1990. Washington D.C.

APPENDIX A

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS
	NONE	ADMIN	3	R001A	91	02	6000	HEATING	
	NONE	ADMIN	5	R002A	91	02	1000	HEATING	
	NONE	ADMIN	101	003A			275	HEATING	ABOVE GROUND TANK IN BASE
	NONE	ADMIN	124	R004A	91	03	2500	HEATING	
	NONE	ADMIN	131	R005A	91	03	1000	HEATING	
	NONE	ADMIN	138-39	R006A	91	03	2500	HEATING	
	NONE	ADMIN	141	R007A	91	04	1000	HEATING	
	NONE	ADMIN	147	R008A	91	05	1000	HEATING	
	NONE	ADMIN	148-49	R009A	91	06	2500	HEATING	
	NONE	ADMIN	150	R010A	91	05	1000	HEATING	
	NONE	ADMIN	160	R011A	91	04	6000	HEATING	
	NONE	ADMIN	201	R012A	91	04	1000	HEATING	
	NONE	ADMIN	205	R013A	91	04	1000	HEATING	
	NONE	ADMIN	303	R014A	91	07	2500	HEATING	
	NONE	ADMIN	323	R015A	91	06	1000	HEATING	
	NONE	ADMIN	326	R016A	91	06	1000	HEATING	
	NONE	ADMIN	327	R017A	91	06	1000	HEATING	OLD TANK FILLED WITH CONC
	NONE	ADMIN	332-33	R018A	91	05	1000	HEATING	
	NONE	ADMIN	334-35	R019A	91	01	1000	HEATING	
	NONE	ADMIN	341	R020A	91	08	2500	HEATING	
	NONE	ADMIN	346	R021A	91	05	1000	HEATING	
	NONE	ADMIN	349-50	R022A	91	08	2500	HEATING	
	NONE	ADMIN	351	R023A	91	09	2500	HEATING	PENDING DEMO AS OF MAY 92
	NONE	ADMIN	400	R024A	91	06	10000	HEATING	
	NONE	ADMIN	401	R025A	91	04	1000	HEATING	
	NONE	ADMIN	402-403	R026A	91	07	10000	HEATING	
	NONE	ADMIN	500	R027A	91	08	6000	HEATING	
	NONE	ADMIN	502	X028A	REMOVED				REMOVED 86, NOT REGULATED
	NONE	ADMIN	503	R029A			6000	HEATING	
	NONE	ADMIN	503-R	X030A	REMOVED				REMOVED 91 04
	NONE	ADMIN	700-A	R031A	91	05	6000	HEATING	
	NONE	ADMIN	800	R032A	91	05	6000	HEATING	
	NONE	ADMIN	829-31	R033A	91	05	2500	HEATING	PENDING DEMO AS OF MAY 92
	NONE	ADMIN	835	X034A	REMOVED				REMOVED 90 06, PIPING TO
	NONE	ADMIN	837	R035A	91	05	6000	HEATING	
	NONE	ADMIN	700-D	X036A	66	REMOVED			REMOVED 91 03
	NONE	ADMIN	700-B	R037A	66	91 03	10000	GASOLINE	
	NONE	ADMIN	700-C	R038A	66	91 03	6000	DIESEL	
92	RPL	ADMIN	515	039A	73		850	WASTE OIL	FRP, TEST 90 12 PASSED
92	RPL	ADMIN	515	040A	73		2000	HEATING	FRP, TEST 91 03 FAIL, 90
92	RPL	ADMIN	515-R	041A	73		10000	GASOLINE	FRP, TEST 90 10 PASSED
92	RPL	ADMIN	515-P	042A	73		10000	GASOLINE	FRP, TEST 91 03 FAIL, 90
92	RPL	ADMIN	515-S	043A	73		10000	GASOLINE	FRP, TEST 90 12 PASSED
92	RPL	ADMIN	130	044A	78	11	1000	HEATING	
92	RPL	ADMIN	330	045A	78	12	550	HEATING	
92	RPL	ADMIN	834	046A	79	11	550	HEATING	
92	RPL	ADMIN	836-35	047A	78		2000	HEATING	ALSO PIPED TO BLDG 835
92	RPL	ADMIN	2	048A	79	10	4000	HEATING	
92	RPL	ADMIN	136-37	049A	79	10	2000	HEATING	
92	RPL	ADMIN	151	050A	79	10	1000	HEATING	
92	RPL	ADMIN	202	051A	79	10	1000	HEATING	
92	RPL	ADMIN	302	052A	79	10	1000	HEATING	
92	RPL	ADMIN	302-R	053A	79	10	1000	HEATING	

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS
93	TEST	ADMIN	132-33	054A	80	06	2000	HEATING	TEST UNTIL DEMO
93	TEST	ADMIN	134	055A	80	06	1000	HEATING	TEST UNTIL DEMO
93	RPL	ADMIN	301	056A	80	06	1000	HEATING	
93	RPL	ADMIN	502	057A	80		1000	HEATING	
93	RPL	ADMIN	504	058A	80	06	550	HEATING	
93	RPL	ADMIN	603	059A	80	02	5000	HEATING	
93	RPL	ADMIN	603-R	060A	80	02	4000	HEATING	
93	RPL	ADMIN	716	061A	80		550	HEATING	
93	RPL	ADMIN	11	062A	81	11	8000	HEATING	
93	TEST	ADMIN	143-44	063A	81	10	2000	HEATING	TEST UNTIL DEMO
93	RPL	ADMIN	305	064A	81	03	1000	HEATING	
	NONE	ADMIN	520	065A	90	03	2000	HEATING	RPL 81-11, DBL/STEEL,MEET
93	RPL	ADMIN	735	066A	81		550	WASTE OIL	
93	RPL	ADMIN	100	067A	82	03	5000	HEATING	
93	RPL	ADMIN	102	068A	82	03	5000	HEATING	
93	RPL	ADMIN	113	069A	82	03	10000	HEATING	
93	RPL	ADMIN	123	070A	82	04	3000	HEATING	
93	RPL	ADMIN	203	071A	82	03	5000	HEATING	
93	RPL	ADMIN	313	072A	82	04	10000	HEATING	
93	RPL	ADMIN	343	073A	82	12	1000	HEATING	
93	RPL	ADMIN	360	074A	82	03	10000	HEATING	
93	RPL	ADMIN	507	075A	82	12	10000	HEATING	REMOVE IF NEW BLDG FUNDED
93	RPL	ADMIN	506	076A	83		5000	HEATING	
93	RPL	ADMIN	509	077A	83		3000	HEATING	
93	RPL	ADMIN	521	078A	83		3000	HEATING	
93	RPL	ADMIN	902	079A	83	03	550	HEATING	PENDING SALE TO COUNTY
93	RPL	ADMIN	902-D	080A	83	03	1000	DIESEL	PENDING SALE TO COUNTY
93	RPL	ADMIN	162-D	081A	84	03	4000	DIESEL	
93	RPL	ADMIN	200	082A	85		1000	HEATING	
93	UPGRADE	ADMIN	152	083A	88	07	4000	HEATING	FRP
93	UPGRADE	ADMIN	152-D	084A	88	07	550	DIESEL	FRP
93	RPL	ADMIN	324-25	085A	88	10	1000	HEATING	
	NONE	ADMIN	336-37	086A	89	08	2000	HEATING	DBL/FRP, MEETS 1998
	NONE	ADMIN	700-E	R087A	REMOVED				REMOVED 91 03
	NONE	ADMIN	700-F	R088A	REMOVED				REMOVED 91 03
	NONE	ADMIN	716-A	R089A	REMOVED			GASOLINE	REMOVED 91 07
	NONE	ADMIN	716-B	R090A	REMOVED			GASOLINE	REMOVED 91 07
	NONE	ADMIN	716-C	R091A	REMOVED			GASOLINE	REMOVED 91 07
	NONE	ADMIN	607	092A	90	10	2000	HEATING	DBL/STEEL, MEETS 1998
	NONE	ADMIN	517	093A	92	05		HEATING	DBL/FRP
	NONE	ADMIN	605-A	094A			UNK	GASOLINE	ABANDONED WITH SAND IN 19
	NONE	ADMIN	605-B	095A			UNK	GASOLINE	ABANDONED WITH SAND IN 19
93	UPGRADE	SITE C	SITE C	001C	86	08	4000	HEATING	FRP,CONSIDER ABOVE GROUND

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS
	NONE	SITE D	SITE D-BX001D	REMOVED				HEATING	REMOVED 91 09
	NONE	SITE D	SITE D-AR002D	91	09		6000	HEATING	

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS
*	REMOVE	HOUSING	450-1	001H			550	HEATING	
*	REMOVE	HOUSING	450-4	R002H	90	11	550	HEATING	RPL>65
*	REMOVE	HOUSING	451-2	003H			550	HEATING	
*	REMOVE	HOUSING	451-3	004H			550	HEATING	
*	REMOVE	HOUSING	452-2	005H			550	HEATING	
*	REMOVE	HOUSING	452-3	006H			550	HEATING	
*	REMOVE	HOUSING	452-4	007H			550	HEATING	
*	REMOVE	HOUSING	453-1	008H			550	HEATING	
*	REMOVE	HOUSING	453-2	R009H	91	03	550	HEATING	RPL>65
*	REMOVE	HOUSING	453-3	010H			550	HEATING	
*	REMOVE	HOUSING	453-4	011H			550	HEATING	
*	REMOVE	HOUSING	454-1	012H			550	HEATING	
*	REMOVE	HOUSING	454-3	013H			550	HEATING	
*	REMOVE	HOUSING	454-4	R014H	92	03	550	HEATING	RPL>65
*	REMOVE	HOUSING	455-1	R015H	90	04	550	HEATING	
*	REMOVE	HOUSING	455-2	R016H	90	04	550	HEATING	
*	REMOVE	HOUSING	455-3	R017H	90	04	550	HEATING	
*	REMOVE	HOUSING	455-4	018H			550	HEATING	
*	REMOVE	HOUSING	457-1	019H			550	HEATING	
*	REMOVE	HOUSING	457-2	020H			550	HEATING	
*	REMOVE	HOUSING	457-4	021H			550	HEATING	
*	REMOVE	HOUSING	458-2	022H			550	HEATING	
*	REMOVE	HOUSING	458-3	023H			550	HEATING	
*	REMOVE	HOUSING	459-2	024H			550	HEATING	
*	REMOVE	HOUSING	459-3	025H			550	HEATING	
*	REMOVE	HOUSING	460-2	026H			550	HEATING	
*	REMOVE	HOUSING	460-3	027H			550	HEATING	
*	REMOVE	HOUSING	461-1	028H			550	HEATING	
*	REMOVE	HOUSING	461-3	029H			550	HEATING	
*	REMOVE	HOUSING	462-1	030H			550	HEATING	
*	REMOVE	HOUSING	462-2	031H			550	HEATING	
*	REMOVE	HOUSING	462-3	032H			550	HEATING	
*	REMOVE	HOUSING	462-4	033H			550	HEATING	
*	REMOVE	HOUSING	463-1	034H			550	HEATING	
*	REMOVE	HOUSING	463-2	035H			550	HEATING	
*	REMOVE	HOUSING	463-4	036H			550	HEATING	
*	REMOVE	HOUSING	464-1	037H			550	HEATING	
*	REMOVE	HOUSING	464-2	038H			550	HEATING	
*	REMOVE	HOUSING	464-3	039H			550	HEATING	
*	REMOVE	HOUSING	464-4	R040H	90	12	550	HEATING	RPL>65
*	REMOVE	HOUSING	465-1	041H			550	HEATING	
*	REMOVE	HOUSING	465-3	042H			550	HEATING	
*	REMOVE	HOUSING	465-4	043H			550	HEATING	
*	REMOVE	HOUSING	466-2	044H			550	HEATING	
*	REMOVE	HOUSING	466-3	045H			550	HEATING	
*	REMOVE	HOUSING	467-2	046H			550	HEATING	
*	REMOVE	HOUSING	467-3	047H			550	HEATING	
	NONE	HOUSING	468-2	X048H	REMOVED				REMOVED 92 01
	NONE	HOUSING	469-1	X049H	REMOVED				REMOVED 91 12
	NONE	HOUSING	469-2	X050H	REMOVED				REMOVED 91 12
	NONE	HOUSING	471-1	X051H	REMOVED				REMOVED 91 12
	NONE	HOUSING	471-2	X052H	REMOVED				REMOVED 91 12
	NONE	HOUSING	472-2	X053H	REMOVED				REMOVED 92 01
	NONE	HOUSING	472-3	X054H	REMOVED				REMOVED 92 01
	NONE	HOUSING	474-2	X055H	REMOVED				REMOVED 92 01

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS
	NONE	HOUSING	475-1	X056H	REMOVED				REMOVED 91 12 MONITORING
	NONE	HOUSING	475-2	X057H	REMOVED				REMOVED 91 12
	NONE	HOUSING	476-2	X058H	REMOVED				REMOVED 91 12
	NONE	HOUSING	477-1	X059H	REMOVED				REMOVED 91 12 MONITORING
	NONE	HOUSING	477-2	X060H	REMOVED				REMOVED 91 12
	NONE	HOUSING	478-1	X061H	REMOVED				REMOVED 92 03
	NONE	HOUSING	478-2	X062H	REMOVED				REMOVED 92 03
	NONE	HOUSING	479-1	X063H	REMOVED				REMOVED 91 12 MONITORING
	NONE	HOUSING	479-2	X064H	REMOVED				REMOVED 91 12
	NONE	HOUSING	481-1	X065H	REMOVED				REMOVED 91 12 MONITORING
	NONE	HOUSING	481-2	X066H	REMOVED				REMOVED 91 12
	NONE	HOUSING	482-1	X067H	REMOVED				REMOVED 92 03 MONITORING
	NONE	HOUSING	482-2	X068H	REMOVED				REMOVED 92 03
	NONE	HOUSING	483-1	X069H	REMOVED				REMOVED 92 03
	NONE	HOUSING	483-2	X070H	REMOVED				REMOVED 92 03
	NONE	HOUSING	484-2	X071H	REMOVED				REMOVED 92 03
	NONE	HOUSING	485-2	X072H	REMOVED				REMOVED 92 03
	NONE	HOUSING	486-1	X073H	REMOVED				REMOVED 91 06 MONITORING
	NONE	HOUSING	487-1	X074H	REMOVED				REMOVED 92 03
	NONE	HOUSING	487-2	X075H	REMOVED				REMOVED 92 03
	NONE	HOUSING	488-2	X076H	REMOVED				REMOVED 92 03
	NONE	HOUSING	489-2	X077H	REMOVED				REMOVED 92 03 MONITORING
	NONE	HOUSING	489-3	X078H	REMOVED				REMOVED 92 03 MONITORING
	NONE	HOUSING	490-1	X079H	REMOVED				REMOVED 92 03
	NONE	HOUSING	490-2	X080H	REMOVED				REMOVED 92 03
	NONE	HOUSING	491-1	X081H	REMOVED				REMOVED 92 03 MONITORING
	NONE	HOUSING	491-2	X082H	REMOVED				REMOVED 92 03 MONITORING
	NONE	HOUSING	493-2	X083H	REMOVED				REMOVED 92 03 MONITORING
	NONE	HOUSING	495-1	X084H	REMOVED				REMOVED 92 03
*	REMOVE	HOUSING	721	085H			550	HEATING	
*	REMOVE	HOUSING	722	086H			550	HEATING	
*	REMOVE	HOUSING	723	087H			550	HEATING	
*	REMOVE	HOUSING	724	088H			550	HEATING	
*	REMOVE	HOUSING	725	089H			550	HEATING	
*	REMOVE	HOUSING	726	090H			550	HEATING	
*	REMOVE	HOUSING	727	R091H	90	09	550	HEATING	RPL>65
*	REMOVE	HOUSING	728	092H			550	HEATING	
*	REMOVE	HOUSING	729	093H			550	HEATING	
*	REMOVE	HOUSING	745	094H			550	HEATING	
*	REMOVE	HOUSING	747	095H			550	HEATING	
*	REMOVE	HOUSING	748-2	096H			550	HEATING	
*	REMOVE	HOUSING	750-2	097H			550	HEATING	
*	REMOVE	HOUSING	751-1	098H			550	HEATING	
*	REMOVE	HOUSING	751-2	099H			550	HEATING	
*	REMOVE	HOUSING	752-1	100H			550	HEATING	
*	REMOVE	HOUSING	752-2	101H			550	HEATING	
*	REMOVE	HOUSING	753-2	102H			550	HEATING	
*	REMOVE	HOUSING	754-2	103H			550	HEATING	
*	REMOVE	HOUSING	755-3	104H			550	HEATING	
*	REMOVE	HOUSING	756	105H			550	HEATING	
*	REMOVE	HOUSING	757	106H			550	HEATING	
*	REMOVE	HOUSING	758	107H			550	HEATING	
*	REMOVE	HOUSING	759	108H			550	HEATING	
*	REMOVE	HOUSING	760	109H			550	HEATING	
*	REMOVE	HOUSING	761	110H			550	HEATING	

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS
*	REMOVE	HOUSING	762	111H			550	HEATING	
*	REMOVE	HOUSING	763	112H			550	HEATING	
*	REMOVE	HOUSING	764	113H			550	HEATING	
*	REMOVE	HOUSING	766	114H			550	HEATING	
*	REMOVE	HOUSING	767	115H			550	HEATING	
*	REMOVE	HOUSING	769	116H			550	HEATING	
*	REMOVE	HOUSING	771	117H			550	HEATING	
*	REMOVE	HOUSING	772	118H			550	HEATING	
*	REMOVE	HOUSING	773	119H			550	HEATING	
*	REMOVE	HOUSING	775	120H			550	HEATING	
*	REMOVE	HOUSING	777	121H			550	HEATING	
*	REMOVE	HOUSING	779	122H			550	HEATING	
*	REMOVE	HOUSING	781	123H			550	HEATING	
*	REMOVE	HOUSING	783	124H			550	HEATING	
*	REMOVE	HOUSING	451-1	125H	77	12	550	HEATING	
*	REMOVE	HOUSING	458-1	126H	79	08	550	HEATING	
*	REMOVE	HOUSING	463-3	127H	79	09	550	HEATING	
	NONE	HOUSING	470-2	X128H	REMOVED				REMOVED 92 01
*	REMOVE	HOUSING	749	129H	79	12	550	HEATING	
	NONE	HOUSING	480-2	X130H	REMOVED				REMOVED 92 03 MONITORING
*	REMOVE	HOUSING	450-3	131H	81	03	550	HEATING	
*	REMOVE	HOUSING	454-2	132H	81	02	550	HEATING	
*	REMOVE	HOUSING	457-3	133H	84	08	550	HEATING	
*	REMOVE	HOUSING	459-1	134H	84		550	HEATING	
*	REMOVE	HOUSING	768	135H	84		550	HEATING	
*	REMOVE	HOUSING	465-2	136H	88	10	550	HEATING	
	NONE	HOUSING	495-2	X137H	REMOVED				REMOVED 92 03
*	REMOVE	HOUSING	720	138H	88	07	1000	HEATING	
*	REMOVE	HOUSING	746-2	139H	88	10	550	HEATING	
*	REMOVE	HOUSING	750-1	140H	88	11	1000	HEATING	
*	REMOVE	HOUSING	765	141H	88	07	1000	HEATING	
*	REMOVE	HOUSING	770	142H	88	03	1000	HEATING	
*	REMOVE	HOUSING	450-2	143H	89	11	550	HEATING	DBL STEEL
*	REMOVE	HOUSING	452-1	144H	89	09	550	HEATING	DBL STEEL
*	REMOVE	HOUSING	461-2	145H	89	11	550	HEATING	DBL STEEL
	NONE	HOUSING	473	X146H	REMOVED				REMOVED 91 02
	NONE	HOUSING	485-1	X147H	REMOVED				REMOVED 92 03
	NONE	HOUSING	486-2	X148H	REMOVED				REMOVED 92 03
*	REMOVE	HOUSING	730	149H	89	08	550	HEATING	DBL STEEL
*	REMOVE	HOUSING	753-1	150H	89	08	550	HEATING	DBL STEEL
*	REMOVE	HOUSING	785	151H	89	01	550	HEATING	

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS
*	REMOVE	NOT REG HSG	458-4	001N			275	HEATING	
*	REMOVE	NOT REG HSG	460-1	002N			275	HEATING	
*	REMOVE	NOT REG HSG	460-4	003N	91	04	275	HEATING	RPL>65
*	REMOVE	NOT REG HSG	466-1	004N			275	HEATING	
*	REMOVE	NOT REG HSG	466-4	005N			275	HEATING	
*	REMOVE	NOT REG HSG	467-1	006N			275	HEATING	
*	REMOVE	NOT REG HSG	467-4	007N			275	HEATING	
	NONE	NOT REG HSG	468-3	X008N	REMOVED				REMOVED 92 01
	NONE	NOT REG HSG	470-1	X009N	REMOVED				REMOVED 92 01 MONITORING
	NONE	NOT REG HSG	470-3	X010N	REMOVED				REMOVED 92 01 MONITORING
	NONE	NOT REG HSG	472-1	X011N	REMOVED				REMOVED 92 01
	NONE	NOT REG HSG	474-1	X012N	REMOVED				REMOVED 92 01
	NONE	NOT REG HSG	476-1	X013N	REMOVED				REMOVED 92 01
	NONE	NOT REG HSG	476-3	X014N	REMOVED				REMOVED 92 01
	NONE	NOT REG HSG	480-1	X015N	REMOVED				REMOVED 92 03
	NONE	NOT REG HSG	480-3	X016N	REMOVED				REMOVED 92 03
	NONE	NOT REG HSG	488-1	X017N	REMOVED				REMOVED 92 03
	NONE	NOT REG HSG	488-3	X018N	REMOVED				REMOVED 92 03
	NONE	NOT REG HSG	493-1	X019N	REMOVED				REMOVED 92 03
	NONE	NOT REG HSG	493-3	X020N	REMOVED				REMOVED 92 03
*	REMOVE	NOT REG HSG	746-1	021N			275	HEATING	
*	REMOVE	NOT REG HSG	746-3	022N			275	HEATING	
*	REMOVE	NOT REG HSG	748-1	023N			275	HEATING	
*	REMOVE	NOT REG HSG	748-3	024N			275	HEATING	
*	REMOVE	NOT REG HSG	748-4	025N			275	HEATING	
*	REMOVE	NOT REG HSG	754-1	026N			275	HEATING	
*	REMOVE	NOT REG HSG	754-3	027N			275	HEATING	
*	REMOVE	NOT REG HSG	754-4	028N			275	HEATING	
*	REMOVE	NOT REG HSG	755-1	029N			275	HEATING	
*	REMOVE	NOT REG HSG	755-2	030N			275	HEATING	
*	REMOVE	NOT REG HSG	755-4	031N			275	HEATING	
	NONE	NOT REG HSG	474-3	X032N	REMOVED				REMOVED 92 01
	NONE	NOT REG HSG	468-1	X033N	REMOVED				REMOVED 92 01
	NONE	NOT REG HSG	484-1	X034N	REMOVED				REMOVED 92 03
	NONE	NOT REG HSG	489-1	X035N	REMOVED				REMOVED 92 03

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS
92	RPL	P QTR/N REG	4	001P			1000	HEATING	
92	RPL	P QTR/N REG	155	002P			550	HEATING	
	NONE	P QTR/N REG	710	X003P	REPLACED				REPLACED 91 12 PROPANE TA
92	RPL	P QTR/N REG	811	004P			550	HEATING	
92	RPL	P QTR/N REG	860	005P			1000	HEATING	

UNDERGROUND STORAGE TANKS

FY	ACTION	DESCRIPTION	TANK NO.	MD #	YR INSTALL	MO	CAPACITY GALLONS	PRODUCT	COMMENTS

* Denotes between FY 90 and FY 93

LEGEND FOR MD #:

xxxA = Administration
xxxC = Site C
xxxD = Site D
xxxH = Housing
xxxN = Housing/Not Regulated
xxxP = Position Quarters/Not Regulated
RxxxA = Replaced Old Tank
XxxxA = Removed

LEGEND FOR COMMENTS:

FRP = Fiberglass Reinforced Plastic
DBL = Double Wall

PROGRAMMING NOTES:

1. Sorted by year only (not by month)
2. LOTUS: MDUST IS ORIGINAL
3. LOTUS: MDUST-C HAS UPDATED CHANGES

LEGEND FOR DATE INSTALLED:

Blank Implies Date Unknown and > 1965