

FINAL

**ENVIRONMENTAL CONDITION OF
PROPERTY REPORT**

**LEISY HALL AND AMSA 79 - FORT LAWTON
U.S. ARMY RESERVE CENTER (WA030)
4570 TEXAS WAY WEST
SEATTLE, WASHINGTON 98199**

Prepared For:

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APRIL 2007

CERTIFICATION

All information/documentation provided accurately reflects the environmental condition of the property. This ECP Report is in general accordance with the U.S. Department of Defense (DOD) requirements for completion of an Environmental Condition of Property (ECP) Report.

LTC DOUGLAS D. WILLETTS
Environmental Division ARIM
Environmental Division Chief
70th Regional Readiness Command

DATE

The undersigned certifies the contents of this report are in general accordance with DoD policies for the completion of an ECP.



April 23, 2007

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DATE

EXECUTIVE SUMMARY

Lawhon & Associates, Inc. (Lawhon) in conjunction with Fuller, Mossbarger, Scott and May Engineers, Inc. (FMSM), under contract to the U.S. Army Corps of Engineers (USACE) Louisville District, has prepared this Environmental Condition of Property (ECP) Report for the Leisy Hall and Area Maintenance Support Activity 79 (AMSA 79) – Fort Lawton U.S. Army Reserve (USAR) Center (Facility ID WA030), hereafter referred to as the “Site” or “USAR Center”. The Site is located at 4570 Texas Way West, Seattle, King County, Washington, and encompasses approximately 6 acres. The land has been leased by the USAR from the City of Seattle, WA since October 1972.

This ECP Report was conducted in conformance with the primary Department of Defense and Army guidance, the Department of Defense’s Base Redevelopment and Realignment Manual, DoD 4165.66-M (BRRM), Army Regulation 200-1, and the American Society for Testing and Materials (ASTM) Designation D 6008-96 (2005), *Standard Practice for Conducting Environmental Baseline Surveys*.

This ECP Report details the history of the Site, including the Army Reserve use of the Site, any prior uses by earlier tenants or lessors, and the resulting environmental condition of the property. This ECP Report was based on readily available information and describes the environmental condition of the property at the time of termination of the lease.

The USAR Center consists of two adjacent areas which are separated by a roadway and encompasses approximately 6 acres. Leisy Hall is a 67,700 square foot, two-story administration building, and AMSA 79 is a 6,400 square foot, single-story building. The USAR Center is currently occupied by the 70th Regional Readiness Command (RRC).

Based on personnel interviews, aerial photographs, and United States Geological Survey (USGS) topographical maps dating back to 1897, the Site was developed for military use (barracks and warehouses) during World War II. Leisy Hall and the AMSA 79 buildings are located in a larger area commonly referred to as the Fort Lawton Main Area. Both Leisy Hall and the AMSA 79 building were constructed in 1972. An addition was constructed onto Leisy Hall in 1976.

Areas of potential environmental concern were reviewed and Lawhon found no adverse conditions relating to the environmental condition of the property during the USAR usage of the Site. No reportable quantities of hazardous substances have been stored at the Site and no spills or releases were documented or reported.

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LIST OF ACRONYMS

ACM	Asbestos Containing Material
AIRS	Aerometric Information Retrieval System
AMSA	Area Maintenance Support Activity
AR	Army Regulation
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
BRAC	Base Realignment and Closure
C-DOCKET	Criminal Docket System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	CERCLA Information System
CESQGs	Conditionally Exempt Small Quantity Generators
CFR	Code of Federal Regulations
CSCSL	Confirmed & Suspected Contaminated Sites List
DERP	Defense Environmental Restoration Program
DOCKET	Enforcement Docket
DOD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
E2M	Engineering-Environmental Management, Inc.
ECP	Environmental Condition of Property
EDR	Environmental Data Resources, Inc.
FEMA	Federal Emergency Management Agency

FFIS	Federal Facilities Information System
FINDS	Facility Index System/Facility Registry System
FLARC	Fort Lawton Army Reserve Complex
FMSM	Fuller, Mossbarger, Scott and May Engineers, Inc.
FURS	Federal Underground Injection Control
kg	Kilogram
Hazmat	Hazardous Materials
HSWA	Hazardous and Solid Waste Amendments
ICI	ICI, LLC (Contractor to the 70 th Regional Readiness Command)
ICR	Independent Cleanup Reports
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
KPFF	KPFF Consulting Engineers
Lawhon	Lawhon & Associates, Inc.
LBP	Lead Based Paint
LQG	Large Quantity Generators
LUST	Leaking Underground Storage Tank
MEC	Munitions and Explosives of Concern
MEP	Military Equipment Parking
NEPA	National Environmental Policy Act
NFA	No Further Action
NHPA	National Historic Preservation Act
OMS	Organizational Maintenance Shop

OWS	Oil/Water Separator
PADS	PCB Activity Data System
PAS	Performance Abatement Services
PCBs	Polychlorinated Biphenyls
pCi/l	PicoCuries per Liter of Air
PCS	Permit Compliance System
POL	Petroleum, Oil, and Lubricant
POV	Privately-Owned Vehicle
PSE	Puget Sound Energy
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
RQ	Reportable Quantity
RRC	Regional Readiness Command
Site	U.S. Army Reserve Center (WA030)
SQGs	Small Quantity Generators
STATE	State Environmental Laws and Statute
STATSGO	State Soil Geographic Database
SOW	Scope of Work
SPCCP	Spill Prevention Control and Countermeasures Plan
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, or Disposal
TPH	Total Petroleum Hydrocarbons
UPS	Uninterruptible Power Source

USACE	United States Army Corps of Engineers
USAR	United States Army Reserve
USARC	United States Army Reserve Center
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VCP	Voluntary Cleanup Program
WDOE	State of Washington Department of Ecology

1.0 INTRODUCTION

Lawhon, in conjunction with FMSM was contracted by the USACE – Louisville District to prepare an ECP Report for the Leisy Hall and AMSA 79 – Fort Lawton U.S. Army Reserve (USAR) Center (Facility ID WA030). The facility is located at 4570 Texas Way West, Seattle, King County, Washington, and is hereafter referred to as the “Site” or “USAR Center”. In support of the ECP Report, a site visit was conducted on August 29, 2006. The purpose of the site visit was to visually obtain information indicating the environmental condition of property during the USAR lease of the Site.

1.1 PURPOSE OF ENVIRONMENTAL CONDITION OF PROPERTY

The Military Department with real property accountability shall assess, determine and document the environmental condition of all transferable property in an ECP Report. This ECP Report is based on readily available information. Pursuant to the Department of Defense’s policy, set forth in the Base Redevelopment and Realignment Manual (DoD 4165.66-M, March 1, 2006) Section C8.3 (BRRM), the primary purposes of the ECP Report include the following:

- Provide the public with information relative to the environmental condition of the property;
- Assist in community planning for the reuse of Base Realignment and Closure (BRAC) property;
- Assist Federal agencies during the property screening process;
- Provide information for prospective buyers;
- Assist prospective new owners in meeting the requirements under EPA’s “All Appropriate Inquiry” regulations;
- Provide information about completed remedial and corrective actions at the property;
- Assist in determining appropriate responsibilities, asset valuation, and liabilities with other parties to a transaction.

The ECP Report contains the information required to comply with the provisions of 40 Code of Federal Regulations (CFR) Part 373, which require that a notice accompany contracts for the sale of, and deeds entered into, for the transfer of federal property on which any hazardous substance was stored, released or disposed of. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 120(h) stipulates that a notice is required if certain quantities of designated

hazardous substances have been stored on the property for 1 year or more – specifically, quantities exceeding 1,000 kilograms or the reportable quantity, whichever is greater, of the substances specified in 40 CFR 302.4 or 1 kilogram of acutely hazardous waste as defined in 40 CFR 261.30. A notice is also required if hazardous substances have been disposed of or released on the property in an amount greater than or equal to the reportable quantity. Army Regulation (AR) 200-1 requires that the ECP Report address asbestos, lead-based paint, radon and other substances potentially hazardous to human health.

This ECP Report used the American Society for Testing and materials (ASTM) Designation D 6008-96 (2005), *Standard Practice for Conducting Environmental Baseline Surveys* as a guideline when not inconsistent with the BRRM, CERCLA § 120, Army regulations and other applicable Army guidance.

1.2 SCOPE OF SERVICES

This ECP report covers the approximate 6-acre USAR Center located at 4570 Texas Way West, Seattle, King County, Washington 98199. The Site is developed with an administration building (Leisy Hall) and an AMSA 79 building. Army Reserve building number designations for Leisy Hall and the AMSA 79 building are 220 and 222, respectively. These buildings are situated in a larger area commonly referred to as the Fort Lawton Main Area. The Main Area consists of numerous other Army Reserve structures that are not part of the area assessed for the purpose of this ECP Report. Site maps are provided in Appendix A. Appendix B provides photographs taken during the August 2006 Site visit. Appendix C provides chain of title and environmental lien information. Historical environmental documents and reports are provided in Appendix D, while Appendix E contains the Environmental Data Resources, Inc. (EDR) reports.

2.0 SITE LOCATION AND PHYSICAL DESCRIPTION

2.1 SITE LOCATION

The USAR Center is located in the northwest portion of King County, Washington, within the city limits of Seattle, Washington. The Site is located in a primarily residential and public park area. Figure 1 in Appendix A provides a general site location map.

2.2 ASSET INFORMATION

Facility Name and Address: Leisy Hall and AMSA 79 - Fort Lawton U.S. Army Reserve Center (WA030)
4570 Texas Way West
Seattle, Washington 98199

Property Owner: City of Seattle, WA

Date of Lease: October, 1972

Current Occupant: 70th Regional Readiness Command

Zoning: *SF7200: Residential

County, State: King County, Washington

USGS Quadrangle(s): Shilshole Bay, Washington

Section/Township/Range: Section 10, Township 25 North, Range 3 East

Latitude/Longitude: 47° 39' 38.8" N; 122° 24' 14.6" W

Legal Description: Being that parcel or tract of land, known as the AMSA No. 79, situated and lying in Section 15, Township 25 North, Range 3 East in the City of Seattle, King County, State of Washington. Assessor's Parcel Number: 1525039012 (portion)

*Obtained from the City of Seattle Department of Planning and Development's website. According to the Environmental Assessment (EA) Report for the Relocation and Replacement of Army Reserve Facilities at Fort Lawton (dated March 1997) (Section 3.5.1), the City of Seattle does not have special zoning designations for park or institutional land uses.

2.3 PHYSICAL DESCRIPTION

The USAR Center consists of approximately 6 acres and is a portion of a larger parcel (Figure 2 in Appendix A). The Site consists of an administration building, known as Leisy Hall, and the AMSA 79 building, a vehicle and maintenance service facility. Both buildings are of concrete block construction with decorative aggregate rock and mortar exteriors with built-up sloped roofing systems on concrete slab. Leisy Hall and the AMSA 79 buildings are located in a larger area commonly referred to as the Fort Lawton Main Area. The Main Area consists of numerous other structures that are not part of the area assessed for the purpose of this ECP report. Generally, Leisy Hall and AMSA 79 are situated in the central and eastern central portions of the Fort Lawton Main Area. Figure 2 in Appendix A provides a current plan view layout of the Site. Appendix B also provides photographs taken during the August 2006 Site visit.

Leisy Hall is a two-story structure that is approximately 67,700 square feet constructed in 1972 with a subsequent addition in 1976. Photograph 1 in Appendix B provides a front (north) view of the exterior of the building. Photograph 2 in Appendix B provides a view of the eastern exterior. Photograph 3 in Appendix B provides a view of Leisy Hall from the south looking north. A generator and 4000 gallon diesel aboveground storage tank (AST) are situated on the southern exterior of the Leisy Hall along with a grease trap (Photographs 4 and 5 in Appendix B). An inactive freight elevator is also located on the southern exterior of Leisy Hall (Photograph 6 in Appendix B). Leisy Hall contains administrative offices, an assembly drill hall, conference rooms, kitchen, and a computer server room. A locked weapons vault is also located within the administration building. Site personnel indicated that small quantities of small arms ammunition were stored in the arms vault. Photographs 8 through 11 in Appendix B provide interior views of Leisy Hall. Figures 3 and 4 in Appendix A provide interior layouts of Leisy Hall.

The AMSA 79 building (Photograph 12 in Appendix B) is situated west of Leisy Hall and consists of an approximately 6,400 square foot single-story structure. The AMSA 79 building was also constructed in 1972 and based on review of historical documents reviewed for this ECP Report, has also been referred to as the AMSA 7 or AMSA 7G. Photograph 14 in Appendix B provides a front (west) view of the exterior of the building. Photograph 13 in Appendix B provides a view of the southern and eastern exteriors. The AMSA 79 contains five vehicle service bays, an office area, parts room, battery storage room, and break room. Five overhead metal, retractable doors are located on the west wall of the AMSA 79. Photographs 25 through 34 in Appendix B show the interior of the AMSA 79. Figure 5 in Appendix A provides a layout of the interior of the AMSA 79 building. One 200 gallon capacity AST utilized to store hydraulic fuel for a hydraulic oil powered vehicle lift is situated in a storage room of the AMSA 79 building.

A Hazmat Storage Structure (Photograph 19 in Appendix B) and two portable Hazmat Storage Sheds (Photographs 15 and 18 in Appendix B) are situated along the western

perimeter of the AMSA 79 portion of the Site. One 500-gallon capacity AST utilized for the storage of used oil collected in maintenance operations is located within one of the portable Hazardous Materials (hazmat) storage. A former petroleum, oil, and lubricant (POL) Storage Shed constructed of concrete with an attached lean-to (Photograph 20 in Appendix B) constructed of a corrugated metal roof and enclosed with a chain link fence are situated along the south central perimeter of the AMSA 79 portion of the Site. A portable plastic drum unit is also located along the southern perimeter of the AMSA 79 portion of the Site. The northern half of the AMSA 79 portion of the Site contains a military equipment parking (MEP) area. A chain-link security fencing encloses the AMSA 79 portion of the Site. Approximately 90% of the Site is covered by impervious surface features (e.g., asphalt parking areas, driveways, concrete walkways, building footprints, etc.). The remaining ground surface is covered by lawn, gravel and a sparse population of landscape shrubs and trees.

Topographically, the area in the vicinity of the Site slopes towards the north-northeast. The asphalt paved parking lot areas north and east of Leisy Hall were graded to direct surface runoff toward an oil/water separator (OWS) (Photograph 7 in Appendix B) located in the northeastern portion of the privately owned vehicle (POV) area. A second smaller parking lot situated northeast of Leisy Hall also was graded to direct surface water to an OWS. Two OWSs are affiliated with the AMSA 79 portion of the Site. One of the OWSs is associated with the wash rack located north of the AMSA 79 building (Photograph 22 in Appendix B). The second OWS (Photograph 23 in Appendix B) is located in the sidewalk area just outside of the fenced area northeast of the AMSA 79 portion of the Site. Surface water in the area of the AMSA 79 portion of the Site is directed toward the north to the drain located at the wash rack area or to a storm drain located on the northeastern portion of the MEP area. According to information contained in a Draft Survey of Drains, Pollution Control Equipment, and Discharge Points for Leisy Hall United States Army Reserve Center (USARC) and AMSA 79, prepared in September 2004 (Sections 3.5.3 and 3.5.4) water that passes through the OWS systems is ultimately discharged through the City of Seattle maintained sewer system that reportedly drains to the Puget Sound. (Note: The 2004 Draft Survey of Drains, Pollution Control Equipment, and Discharge Points states that OWS1 and OWS3 discharge to the city storm sewer. The text for OWS2 states it discharges into the city sanitary sewer, but a figure shows that it discharges to the city sanitary sewer. The text for OWS4 states that it discharges to the city storm sewer, but the figure shows that it discharges to the city sanitary sewer. No additional information is provided.) In addition, the report states The OWS systems are reportedly inspected and serviced by an outside contractor when needed, which is approximately once a year.

2.4 SITE HYDROLOGY AND GEOLOGY

2.4.1 Surface Water Characteristics

Figure 6 in Appendix A provides a portion of the 1983 Shilshole Bay, Washington, United States Geological Survey (USGS) topographic map which includes the Site. As shown, the Site is situated atop Magnolia bluff above the Shilshole and Salmon Bays, at an elevation ranging between approximately 100 and 165 feet above mean sea level with the highest point to the southwest sloping north-northeasterly. Surface water runoff at the Site is directed towards drains situated north of the AMSA 79 building and in the POV areas located north of Leisy Hall. Additional information concerning the drains at the Site is discussed below in Sections 3.5.3 and 3.5.4. Surface water reportedly discharges to the City of Seattle maintained storm sewer system.

No surface water features are located in the immediate vicinity of the Site. Salmon Bay and Shilshole Bay are located approximately 1,000 feet north and approximately 3,000 feet northwest of the northernmost point of the Site, respectively. These waterways lead to the Puget Sound which is situated approximately 0.75-mile to the northwest-west of the Site.

According to the EDR Report which references the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Community Panel 53033C0320F, the Site is not included in either the 100-year flood plain elevation or the 500-year flood plain elevation. Figure 7 in Appendix A provides a map depicting the extent of the nearest 100-year flood plain in relation to the Site.

2.4.2 Geology/Hydrogeological Characteristics

Geology information was obtained from a report prepared for the 70th reserve installations in Washington called the Integrated Cultural Resources Management Plan (ICRMP) which is summarized in Section 3.5.12. The Puget Trough, which lies in the western Washington area, is described to contain lake beds, alluvium, and glacial deposits. The deposits are weathered and are parent material for Red and Yellow Podzols and are dated pre-Wisconsin in age. The Wisconsin and younger deposits are parent material for Gray-Brown Podzols. The soils that are situated along the Puget lowland and foothill areas were glacially deposited. Soils with a silica-cemented hardpan that impedes drainage and root penetration occur on gravelly till deposits. Excessively drained, coarse textured soils with low water-holding capacity occur in sandy and gravelly outwash deposits. Fine textured, poorly drained soils occur in silty and clayey lake and marine deposits. On the floor of depressions in the glacial drift, soils are poorly drained and have accumulations of organic matter.

The Site is located on Magnolia bluff, and the sediments that comprise the bluff are glacial outwash (sand and gravel mixtures) and till deposits (dense clay, silt, sand and gravel mixtures).

According to information in the EDR Report acquired from the Soil Conservation Service's (Natural Resource Conservation Service) State Soil Geographic Database (STATSGO) for King County, Washington, specific types of soil at the Site are from the Pilchuck Series. According to information provided in the EDR Geocheck Report, this soil does not meet the requirements for a hydric soil.

The surface soil consists of loamy sand described to have slow infiltration rates with layers impeding downward movement of water, or soils with moderately fine or fine textures. In a typical profile, the surface layer extends to a depth of approximately 20 inches, beneath which is sand to approximately 38 inches, underlain by gravelly sand to 60 inches, below which are fine sandy loams extending to depths of approximately 70 inches.

Groundwater flow direction for the immediate Site vicinity has not been reported, however, based on the local topography is expected to flow in a north-northeasterly direction towards Shilshole and Salmon Bays.

2.5 SITE UTILITIES

Water Service – The City of Seattle provides potable water service to the Site.

Sanitary Sewer System – The City of Seattle provides sanitary sewer service to the Site. The primary source of wastewater that is directed to the city sewer system includes non-process wastewater (bathrooms, sinks, etc.). Stormwater drains off-site to the City stormwater sewer system.

Gas & Electric – Puget Sound Energy (PSE) and Seattle City Light provides natural gas and electric service to the Site, respectively.

2.6 WATER SUPPLY WELLS & SEPTIC SYSTEMS

Based upon a review of available historical site and agency records and interviews with site personnel, neither a water supply well nor a septic system is or was located at the Site.

A search of Federal and State water well databases in the EDR Report identified thirteen wells located within a 1 mile radius of the Site. None of the wells are directly adjacent to the Site. The purpose of the wells includes private, irrigation, industrial and observation. No public water supply wells are located within 1 mile of the Site.

3.0 SITE HISTORY

3.1 HISTORY OF OWNERSHIP

A Historical Chain of Title Report provided by EDR (Appendix C) indicates that the "United States of America acquired title to the lands comprising Fort Lawton from eighteen (18) separate deeds in the late 1800s." According to information provided in the chain of title report, a large portion (approximately 390.9 acres) of lands, within Fort Lawton were conveyed to the City of Seattle on October 6, 1972. EDR also provided an Environmental Lien Report (Appendix C) that indicates there have been no reported use limitations nor any environmental liens filed against the Site.

Available business directories including City, cross-reference, and telephone directories were reviewed, if available, at select years from 1920 through 2005. According to a City Directory provided by EDR and dated July 21, 2006, no addresses were listed along Texas Way West. It should be noted, that based on information contained in the 1997 EA Report, that improvements to the easterly adjoining 36th Avenue West were proposed. Improvements included blocking off the entrance drives to the USARC thereby making Texas Way West the main roadway access to the Main Area of Fort Lawton. Addresses historically associated with the Site are 4515 36th Avenue West (Leisy Hall) and 4575 36th Avenue West (AMSA 79 building). The present day Site address associated with Leisy Hall (4570 Texas Way West) was the address that was utilized in requesting EDR database reports. A copy of the City Directory is included in Appendix E.

3.2 PAST USES AND OPERATIONS

According to the 1997 EA Report (Section 3.5.2) and review of USGS topographic maps, prior to construction of the existing on-Site buildings, the Site vicinity was developed for military use (barracks and warehouses) during World War II.

The existing Site buildings were constructed in 1972, with an addition to the eastern portion of Leisy Hall in 1976. Based on interviews conducted with facility personnel, Leisy Hall underwent extensive renovations within the last ten years. Evidence of interior renovations within the office portion of the AMSA 79 building was observed during the August 2006 Site reconnaissance. According to facility personnel, operations conducted at the Site have generally remained the same since its development in 1972. Prior to the tenancy of RRC and administrative personnel at Leisy Hall, it was occupied by the 50th General Hospital Reserve Unit, a Dental Unit and other units to support Fort Lawton.

According to Site personnel, currently and historically, the AMSA 79 has been used to perform limited maintenance activities on military vehicles and equipment. Activities inside the AMSA 79 include general vehicle servicing such as performing oil changes

and preventative maintenance checks. The former POL Storage Shed was constructed in approximately 1972 and its use was discontinued in approximately 1990 when the existing POL Hazmat Storage Structure was constructed.

According to information provided by the 70th RRC, the previous wastewater systems discharged to the City of Seattle maintained storm sewer system. The current OWS systems were reportedly installed in approximately 1993 to treat runoff from the wash rack and MEP area on the AMSA 79 portion of the Site and the POV areas around Leisy Hall where higher concentrations of oil might be expected.

Historical documents, personnel interviews and historical aerial photographs and topographic maps were the primary sources of information on the past use and operations at the Site. Figure 6 and Figures 8 through 14 in Appendix A provide USGS topographical maps and aerial views of the Site and surrounding areas in 1897, 1909, 1949, 1968, 1977, 1985, and 1990.

The 1897 USGS topographical map (Figure 8 in Appendix A) does not show development on the Site or in the immediate site vicinity. The 1909 USGS topographical map (Figure 9 in Appendix A) shows the Site area labeled as Fort Lawton a few small structures are depicted in the vicinity of the Site. The 1949 USGS topographical map (Figure 10 in Appendix A) shows numerous structures and roadways on and in the vicinity of the Site which correlates to documented records indicating that the Site area was developed with barracks and warehouse type buildings during World War II.

The 1968 USGS topographic map (Figure 11 in Appendix A) is generally unchanged relative to the previous map with the exception that there are no longer any structures in the vicinity of the present day location of the western parking lot.

The 1977 aerial photograph (Figure 12 in Appendix A) shows the Site developed with the existing Site structures, Leisy Hall and the AMSA 79 building. The area just north of the AMSA 79 and west of Leisy Hall is developed with the western parking lot.

The 1983 USGS topographic shows buildings configured similar to the existing Site buildings. No significant changes to the Site in the 1985 and 1990 aerial photographs (Figures 13 and 14 in Appendix A) were noted relative to the 1977 photograph. It should be noted that the 1990 aerial appears to be overexposed.

3.3 PAST USE, STORAGE, DISPOSAL, AND RELEASE OF HAZARDOUS SUBSTANCES

3.3.1 Past Use and Storage of Hazardous Substances

Information related to the past use and storage of hazardous substances at the Site was compiled through review of available Site records, search of federal and state environmental databases, and interviews with Army Reserve personnel.

Chemicals formerly used and stored at the Site were associated with vehicle and facility maintenance activities and janitorial services. Janitorial chemicals and building maintenance-related products were stored in the designated storage area within the janitorial closets located in Leisy Hall. From approximately 1972 through 1990, POL products were stored within the former POL Storage Shed or in a designated area within the AMSA 79 building. After 1990, these products were stored in a newly constructed Hazmat Storage Structure, in one of the two portable Hazmat Storage Sheds, in a portable drum storage container noted on the southern central perimeter of the AMSA 79 portion of the Site or in a designated area within the AMSA 79 building.

Certain types of chemical products historically used and stored at the Site would have contained CERCLA hazardous substances and would have been stored on a rotational basis in amounts necessary to support the unit through direct support level maintenance. However, there is no indication that CERCLA hazardous substances were stored at the Site for one year or more in excess of corresponding reportable quantities.

3.3.2 Past Disposal and Release of Hazardous Substances

Information related to past disposal and potential release of hazardous substances at the Site was compiled through review of available site records, search of federal and state environmental databases, and interviews with Army Reserve personnel. According to Army Reserve personnel and site records, on-Site disposal of hazardous materials or wastes has not occurred at the Site. No stained soil or stressed vegetation was observed during the August 2006 Site visit. Additionally, the MEP and POV parking areas only showed very minor signs of staining and no noxious or foul odors were noted during the Site visit.

3.4 PAST PRESENCE OF BULK PETROLEUM STORAGE TANKS

No evidence of current USTs were observed during the 2006 Site reconnaissance. Site records (Section 3.5.1) and records from the Washington Department of Ecology (WDOE) (Section 5.2.2) indicate that three USTs were removed in 1990. According to Site personnel, a former fuel island area was situated on the northwestern corner of the AMSA 79 portion of the Site, where one gasoline UST, one diesel UST and two dispenser areas were located. Site personnel also indicated that the third UST was

utilized for waste oil storage, and was situated on the southern central perimeter of the AMSA 79 portion of the Site, in the unpaved area near the existing lean-to structure.

The approximate locations of the former USTs are depicted in Figure 2 in Appendix A and Photograph 24 in Appendix B shows the yard area where the two former fuel dispensing USTs were located.

3.5 REVIEW OF PREVIOUS ENVIRONMENTAL REPORTS

A review of site records produced several reports pertaining to the Site. The following subsections provide a brief summary of these reports. Copies of the reports, unless otherwise specified, are provided in Appendix D.

3.5.1 September 1991, Final Report Work Order UST Removal, Cleaning, and Disposal of Underground Storage Tanks and Corrective Action

Pegasus Environmental Management Services, Inc., prepared this report (dated September 15, 1991) for various USARC properties throughout Washington and Oregon. Based on the general information contained in this report, two USTs were removed from the 'Leisy' area of the Site in October 1990. Based on information provided to Lawhon during the Site reconnaissance, and the WDOE UST database information contained in the EDR report, a total of three UST's were removed. It is believed that the two UST's reference in the Pegasus report were a gasoline and diesel tanks in the area of the AMSA 79 building. According to the report, the USTs were removed, cleaned and transported to an off-site location for proper disposal. No "visual or olfactory evidence of soil contamination" was reported and no groundwater was encountered during the excavation activities. Analysis of samples after excavation showed no total petroleum hydrocarbons (TPH) detected or levels well below the WDOE action levels at the time of tank removal.

Other ancillary documentation related to the removal of USTs provided by facility personnel include a fax transmission and payment records related to the City of Seattle removal permit. A brief discussion of these documents is presented below and copies are provided in Appendix D.

A copy of a Department of the Army fax transmission (dated April 16) contains "Notice of Permanent Closure" of UST(s) forms for two "site numbers" 000607 and 008724 that are related to two former Site addresses 4575 36th Avenue West and 4515 36th Avenue West Building 220, respectively. Based on information collected from facility personnel and review of a facility layout figure for the Main Area of Fort Lawton, 4575 36th Avenue West is associated with the AMSA 79 building and 4515 36th Avenue West Building 220 is associated with Leisy Hall. These addresses correlate to the UST database listings in the EDR Report (Section 5).

A copy of an invoice from the Seattle Fire Department (dated October 15, 1990) was also provided to Lawhon. Attached to the invoice document is a "Temporary Underground Tank Removal/Abandonment Permit" indicating that Pegasus, as a sub-contractor to the US Army Corps of Engineers was to remove one 4,000 gallon diesel UST and one 2,000 gallon gasoline UST. A Department of the Army Memorandum for Leisy Hall, 4515 36th Avenue West Building 220, indicates that payment should be initiated to the Fire Department for removal permit fees. It appears that documentation related to the removal of USTs at the AMSA 79 portion of the Site was recorded under both the former address related to the AMSA 79 building and the former address related to Leisy Hall.

3.5.2 March 1997, Environmental Assessment for the Relocation and Replacement of Army Reserve Facilities at Fort Lawton

This report was prepared by the USARC in conjunction with the 70th RRC, to evaluate potential environmental effects pursuant to the National Environmental Policy Act (NEPA) associated with the proposed Fort Lawton improvements. The 1997 EA Report includes information related to the evaluation of potential environmental effects associated with the proposed relocation and replacement of Army Reserve facilities in the Main Area due to the substandard conditions of the former 500 Area of Fort Lawton. Information pertinent to the Site's development obtained from the 1997 EA Report include a general historical summary of Fort Lawton; proposed improvements to 36th Avenue West (thereby eliminating access to Leisy Hall via this roadway); cultural and natural resources information; and information related to the development and use of a parking lot situated west of Leisy Hall and south-southwest of AMSA 79, referred to as the "western parking lot." Pertinent historical information as it pertains specifically to the areas assessed for purposes of this report are included in the appropriate subsections of this ECP Report. Excerpts of this report are provided in Appendix D.

3.5.3 September 2004, Draft Survey of Drains, Pollution Control Equipment, and Discharge Points, Leisy USARC

The Draft Survey of Drains, Pollution Control Equipment, and Discharge Points for Leisy USARC, which included the Fort Lawton Army Reserve Complex (FLARC) OMS building, was prepared for 70th RRC by ICI. A layout plan included in the report shows a grease trap and seven drainage areas around Leisy Hall. The grease trap is shown south of Leisy Hall and is described as a concrete basin with steel inlet and outlet pipes. According to this report, the grease trap was "extremely dirty and caused influent structures to back up during testing" and notes indicate that it may need cleaning. Two OWSs are shown north of Leisy Hall: one OWS is in the POV area immediately north of Leisy Hall and a second OWS is in the smaller POV parking lot area northeast of Leisy Hall. Water that passes through the OWS systems eventually flows to the City of Seattle maintained storm sewer. According to facility personnel, water discharged to

the storm sewer drains to the Puget Sound. Details related to the location, size, and notable conditions are provided for the exterior drain system at Leisy Hall. With the exception to the presence of excess leaves on the inlet side of the OWS located in the smaller POV parking lot area northeast of Leisy Hall, no issues or problems associated with the OWS systems were noted in this report.

3.5.4 September 2004, Draft Survey of Drains, Pollution Control Equipment, and Discharge Points, AMSA 79

The Draft Survey of Drains, Pollution Control Equipment, and Discharge Points for AMSA 79, was prepared for 70th RRC by ICI. A layout plan included in the report depicts three drainage areas around AMSA 79. Surface water in the MEP area is directed toward either a drain located at the wash rack situated immediately north of the AMSA 79 building or to an OWS located in a concrete sidewalk area northeast of the AMSA 79 Site area. A “grit trap” is shown north of the wash rack, however, during the August 2006 Site reconnaissance, this feature was referred to by facility personnel as an OWS. The wash rack is described as a rectangular concrete wash pad that slopes to a trench drain. Water that passes through the trench drain is directed north to the “grit trap”/OWS. According to notes in the report pertaining to the wash rack, a biodegradable degreaser is used occasionally for vehicle washing. With the exception of the presence of excess leaves on the inlet side of the OWS located northeast of the AMSA 79 area, no issues or problems associated with the wash rack or OWS systems were noted in this report.

3.5.5 May 1993, Oil/Water Separators and Storm Drainage System Improvements

KPFF Consulting Engineers (KPFF) prepared this report (dated May 21, 1993) for numerous USAR Center locations throughout Oregon and Washington. The former drainage system at the Site is grouped with other adjoining USAR installations in the Fort Lawton Main Area. Six distinct parking areas are described for the Main Area of Fort Lawton. According to this report, the surface runoff on the western portion of the Main Area in the general vicinity of the present day western parking lot was directed to a grassy swale which flowed westerly to an area for dispersion. The area situated on the northeastern portion of the Main Area in the approximate location of the present day adjoining Fort Lawton OMS building is described as having a “main discharge point” and according to interviews conducted with Site personnel, likely drained to the City of Seattle storm sewer system. The parking lot in the vicinity of a maintenance building, believed to be the AMSA 79 building, is described as having a catch basin which drains to the main discharge point in the northernmost parking area. Proposed improvements to the drainage systems at the Main Area indicate that a separation of systems be designed and that OWS systems be installed near maintenance buildings. Improvements also included the re-grading of pavement in the area north of Leisy Hall

to allow runoff to be collected in a new catch basin and then flow through an OWS. No improvements to the western parking lot in were proposed in the KPFF Report.

3.5.6 August 1995, AMSA 79 Fort Lawton Spill Prevention Control and Countermeasure Plan (SPCCP)

The SPCCP (dated August 1, 1995) was prepared by Woodward-Clyde, Inc., to outline the routine steps to be taken in the event of a spill in daily operations to reduce the amount of waste generated and likelihood of a spill. The report describes the AMSA 79 building as being equipped with overhead air and lubrication lines and a hydraulic lift. Other pertinent information described includes a battery room with a fume hood for battery filling and a small arms maintenance and storage area. Based on observations and on-Site interviews performed in August 2006 only limited filling of batteries occurs at the Site and no small arms are stored at the AMSA 79 portion of the Site. Additional information concerning current Site observations is provided in the appropriate subsections of Section 6. A Site layout plan provided in this report depicts the surface water flow pattern to flow in a north-northeasterly direction to either the drain situated in the wash rack area or to the drain situated in the sidewalk area northeast of the AMSA 79 area. An interior layout plan depicts the five service bays, battery room, and locations of oil, lubricants and parts washer within the building. Tables which contain information related to the use, storage and management practices (including frequency of disposal) are provided in this report and generally reflect the storage and disposal practices that were observed during the August 2006 Site visit.

3.5.7 August 1995, Print Shop at Leisy Hall USARC Spill Plan and Pollution Prevention Plan (SPPP)

This report was prepared by Woodward-Clyde (dated August 1, 1995) and addresses activities conducted at a print shop formerly located within Leisy Hall. According to a Site plan contained in the report, the former print shop was located in the southwestern portion of Leisy Hall. An inventory of hazardous materials indicates that printing related chemicals included cleaners, solvents, photographic and duplicating chemicals (i.e. fixer and developer) and oil for machine maintenance needs. Hazardous wastes, including used solvents, were disposed of by a private contractor assigned by Defense Reutilization and Marketing Office (DRMO). It appears that storage of hazardous materials and potentially hazardous wastes occurred (without secondary containment) on shelves, within a storage locker, on the floor of the print shop, or outside of the print shop. During the August 2006 Site reconnaissance, no floor drains were noted within the area of the former print shop and there was no evidence such as staining that would indicate a spill had historically occurred within this room. Additionally, no exterior drains were noted in the area outside of the print shop. According to facility personnel, use of the print shop was discontinued sometime prior to 2001.

3.5.8 January 2006, Fort Lawton Spill Prevention, Control, and Countermeasures Plan (SPCCP)

The SPCCP (dated January 19, 2006) was prepared by Shaw Environmental, Inc. The SPCCP addresses two maintenance facilities at Fort Lawton: the AMSA 79 and the Fort Lawton OMS building. The latter facility is not part of the area assessed for purposes of this ECP Report. The AMSA 79 is described as a “fully equipped maintenance and repair facility for Army Reserve ground vehicles and boats.” The area surrounding the AMSA 79 building is described to be paved with concrete and asphalt with catch basins that discharge to the storm sewer system. General information concerning the storage and use of oil products related to on-Site operations is provided in the SPCCP. New products were reportedly stored within containers on top of spill pallets and connected to overhead lines that transport oil to lube guns in the maintenance bays. Used oil generated from on-Site maintenance activities is reportedly stored within a 500-gallon capacity, double-walled rectangular steel AST located in a portable hazmat storage shed situated on the west side of the AMSA 79 portion of the Site. A table provided in the SPCCP indicates that oil products at the AMSA 79 building include oil, transmission fluid, used oil contained within 55-gallon drums (situated on spill pallets within the AMSA 79 building), the aforementioned 500-gallon used oil AST, and 55-gallon drums of antifreeze stored in plastic secondary containment and new and used oil drums in a portable hazmat storage shed. Storage and quantities of such materials is similar to observations by Lawhon during the August 2006 Site reconnaissance (Section 6.5). A SPCCP Site diagram provided in the report depicts the locations of OWS systems with drainage lines extending to northerly areas off-site ultimately discharging to the local storm sewer.

3.5.9 March 2005, Final PCB-Containing Equipment Inventory Summary Report, Seattle Area Facilities

Engineering-Environmental Management, Inc. (E2M), prepared this report for the 70th RRC in order to comply with the Toxic Substances Control Act (TSCA) and AR 200-1. This report provides an inventory of equipment at the Site that contain PCBs. Two non-PCB containing transformers were reported for AMSA 79. Light fixtures and ballasts were replaced throughout the AMSA 79 building in 1998. With the exception of two unmarked ballasts observed in the hazardous waste accumulation area, no other potential PCB-containing equipment was noted in the report section for the AMSA 79 building.

At the time that this report was prepared, Leisy Hall was apparently undergoing renovation activities and 315 of the approximately 600 light fixtures and no PCB-containing ballasts had been found. Several transformers had been identified at Leisy Hall; however, they were noted to be dry-type (non-PCB) transformers. Removal documentation referenced in the report indicates the replacement of old fixtures, the

removal of PCB-containing ballasts and transformers, and the removal of PCB electrical equipment. The Final PCB-Containing Equipment Inventory Summary Report concluded there “appears to be no remaining PCB-containing equipment at the Leisy Hall USARC.”

3.5.10 September 2005, Work Plan and Certificate of Final Completion for Asbestos Abatement, BGP Conference Room

These documents were prepared by Performance Abatement Services, (PAS) in September 2005. The Work Plan presents the methods and procedures that PAS employed in the abatement of asbestos containing materials (ACM) at the GBP Conference Room in Leisy Hall. The certificate issued (dated September 22, 2005) indicates the removal of identified non-friable ACMs from the GBP Conference Room.

3.5.11 February 2003 (updated 2005), Integrated Natural Resources Management Plan (INRMP) and Environmental Assessment

Gene Stout and Associates prepared this report for the Environmental Division of the Army Reserve Installation Management 70th RRC which documents the plan of action for the conservation of natural resources. The INRMP was prepared in order to comply with federal and state laws, most notably laws associated with environmental documentation, wetlands, endangered species, water quality, and wildlife management in general. Findings contained in the INRMP included environmental assessment elements which indicated that implementation of the INRMP would not result in significant adverse effects or beneficial effects on the resource areas evaluated.

Based on information contained in the INRMP related to Fort Lawton, there are no wetland areas on Fort Lawton. Special status species known to nest in Discovery Park which adjoins Fort Lawton to the south and west include the bald eagle, *Haliaeetus leucocephalus*, which is classified by the United States Fish and Wildlife Service (USFWS) as a threatened species. Another species that the state considers as a ‘priority species’ is the great blue heron which nests in the Kiwanis Ravine, an undeveloped reserve situated east of Fort Lawton (east of the adjoining residential area).

Based on cultural resource information contained in the INRMP, there are no specific sites of cultural significance on Fort Lawton. An area situated approximately 0.5-mile west of the Main Area of Fort Lawton of historical significance is the Fort Lawton Historic District that consists of historic residential and service buildings which were part of the original fort constructed in 1898. The Fort Lawton Historic District was listed in the National Register of Historic Places in 1978 and was declared a City of Seattle Landmark District in 1988.

Other pertinent information obtained from the INRMP is provided and referenced in the appropriate sections of this ECP Report. Excerpts from the INRMP are provided in Appendix D.

3.5.12 January 2003, Integrated Cultural Resources Management Plan (ICRMP) Historic Properties Component

This report was compiled by Parsons, Inc., in conjunction with the USARC. The Historic Properties Component was documented in order to comply with Section 106 of the National Historic Preservation Act (NHPA). The INCRMP states that “to date, there are no properties of traditional religious and cultural importance identified on the 70th RRC facilities within the state of Washington.” The INCRMP addresses the historical significance of Fort Lawton Historic District and provides a listing of other Fort Lawton installations (i.e., Leisy USARC and the 500 Area) that are not part of this ECP Report. No other pertinent Site specific information was contained in the INCRMP. Excerpts from this report are provided in Appendix D.

4.0 ADJACENT PROPERTIES

Figure 14 in Appendix A provides a 1990 aerial view of the Site and adjacent properties. Undeveloped land and the adjoining Discovery Park are shown west and south of the AMSA 79 building. The western parking lot is shown north of the AMSA 79 building and west of Leisy Hall. Other USAR buildings not part of this assessment include the Fort Lawton OMS building and Harvey Hall (a.k.a. Building 216) which adjoin Leisy Hall to the north and south, respectively. Residential dwellings are shown east of Leisy Hall (across 36th Avenue West). Table 1 provides a list of adjacent properties with their directional location in regards to the AMSA 79 building and Leisy Hall, respectively. Photographs 35 and 38 in Appendix B provide views of adjacent properties and surrounding land use.

TABLE 1 LIST OF ADJACENT PROPERTIES			
Direction From Site	Name/Type of Property	Address	Zoning
North	"Western parking lot" and the Fort Lawton Army Reserve Complex OMS building	4585 Texas Way West	*SF: Single Family Residential
South	Discovery Park and Harvey Hall	3801 West Government Way and 4510 Texas Way West	*SF: Single Family Residential
East	Harvey Hall and Magnolia Single Family Residential Area	4510 Texas Way West and numerous residential listings	*SF: Single Family Residential
West	FLARC administration building and the western parking lot	4585 Texas Way West	*SF: Single Family Residential

*According to the 1997 EA Report, the City of Seattle does not have special zoning designations for park or institutional land uses.

5.0 REVIEW OF REGULATORY INFORMATION

A component of the ECP Report is the review of reasonably obtainable Federal, State, and local government records for the Site, where there has been a release or likely release of a hazardous substance or any petroleum product, and which is likely to cause or contribute to a release or threatened release of a hazardous substance or petroleum product by the USAR on the leased property. A regulatory database summary was acquired from EDR on July 25, 2006. The regulatory database summary consolidates standard Federal, State, Local, and tribal environmental record sources based on ASTM recommended minimum search distances from the Site. A copy of the complete EDR report is included in Appendix E.

5.1 FEDERAL ENVIRONMENTAL RECORDS

The regulatory information presented below was obtained from the EDR federal regulatory database search report.

5.1.1 RCRA Small Quantity Generator (SQG)

RCRAInfo is USEPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the RCRA. Conditionally exempt small quantity generators (CESQG) generate less than 100 kilograms (kg) of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQG) generate over 1,000 kg of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste.

According to the EDR Report, the USAR Center is on the RCRA SQG list, and is listed as conditionally exempt with no reported violations.

5.1.2 Facility Index System/Facility Registry System (FINDS) Site

The FINDS List contains both facility information and "pointers" to other sources that contain more detail. The EDR report includes the following FINDS databases in this report: Permit Compliance System, Aerometric Information Retrieval System; Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes, Federal Underground Injection Control; Criminal Docket System used to track criminal enforcement actions for all environmental

statutes: Federal Facilities Information System, State Environmental Laws and Statute, and PCB Activity Data System.

According to the EDR report, the USAR Center is in the FINDS list. There is no specific additional information provided in the EDR report.

5.2 STATE AND LOCAL ENVIRONMENTAL RECORDS

The regulatory information presented below was obtained from the EDR State and Local regulatory database search report.

5.2.1 Confirmed & Suspected Contaminated Sites List - (CSCSL)

This database lists properties that are confirmed and/or are suspected of contamination. Although the EDR report lists the Site as on the CSCSL list, additional information presented in Section 3.5.1 and in the UST list below, it was determined that this listing is for other portions of the Fort Lawton main area, and not the Site.

5.2.2 Registered Underground Storage Tanks - UST

UST's are regulated under Subtitle I of the RCRA and must be registered with the State department responsible for administering the UST program. Available information varies by State program. Inclusion on this list is for is not indicative of a release.

Both Leisy Hall and AMSA 79 are listed in the UST database, both with identical information. It is believed that this is repeated information. The database lists the Site as having 3 UST's removed. The tanks are labeled as Tank 1 – containing unleaded gasoline, Tank 2 – containing unknown substance (Site personnel believe that this UST contained diesel), and Tank 3 – containing used oil/waste oil. No additional information is provided.

5.2.3 MANIFEST Listing

This database is maintained by the WDOE and is a collection of facilities that have reported Hazardous Waste Manifest Data information. Inclusion on this list is for is not indicative of a release. The AMSA 79 portion of the Site was listed on this database, with no additional information.

5.3 ENVIRONMENTAL REGULATORY AGENCY INQUIRIES

A summary of information obtained agencies contacted is presented below. Correspondence and information obtained are provided in Appendix D. The following divisions of the Washington Department of Ecology (WDOE) were contacted to request environmental records available for the Site:

- Air Quality Program - An environmental records review was requested August 10, 2006 from the Division of Air Quality. The reply dated August 23, 2006, states that they had no environmental records for the Site.
- Division of Water Quality - An environmental records review was requested August 10, 2006 from the Division of Water Quality. The reply dated August 23, 2006, states that they had no environmental records for the Site.
- Division of Waste Management - An environmental records review was requested August 10, 2006 from the Division of Waste Management. The reply dated August 23, 2006, provided a database printout for the Site, confirming the facility as an exempt SQG.

5.4 TRIBAL ENVIRONMENTAL RECORDS

According to the EDR Report, the Site was not identified on the Tribal Database.

5.5 EDR PROPRIETARY RECORDS

According to the EDR report, the Site was not identified on the EDR Proprietary Databases.

6.0 SITE INVESTIGATION AND REVIEW OF HAZARDS

Findings documented in the following subsections are based on the August 29, 2006, Site assessment and area reconnaissance, a review of available site records, and information obtained from U.S. Army Reserve personnel.

6.1 ABOVEGROUND STORAGE TANKS (ASTs)

One 4,000 gallon capacity AST (Photograph 4 in Appendix B) is located on the southern exterior of Leisy Hall. The AST stores diesel fuel to power an emergency generator which is located adjacent to the AST. A copy of the City of Seattle Fire Marshal's Office AST Permit (#7-72528) issued March 13, 2006 is provided in Appendix D. According to Site personnel, the generator is utilized for a back-up emergency power source to service exit lighting and the computer server room. The computer server room also has an uninterruptible power source (UPS) in the event of an electrical outage. No issues of leaks associated with the AST were observed or reported during the August 2006 Site reconnaissance.

One 200 gallon capacity AST (Photograph 29 in Appendix B) utilized to store hydraulic oil was observed in a storage room within the AMSA 79 building and is used to service the subsurface hydraulic lift in service bay #3. No evidence of staining that would indicate a past release in the vicinity of the AST was observed during the August 2006 Site reconnaissance nor did facility personnel indicate there were any problems associated with the subsurface lift system.

One 500-gallon capacity AST (Photograph 16 in Appendix B) utilized to store used oil is located in the portable Hazmat Storage Shed (Hazmat Storage Shed #1, Photograph 15 in Appendix B). Used oil generated during maintenance activities in the AMSA 79 building is reportedly collected in 5-gallon buckets and then transported to the AST. The contents of the AST are removed on an as-needed basis by an off-site contractor. No issues of leaks associated with the AST were observed or reported during the August 2006 Site reconnaissance.

6.2 ASBESTOS CONTAINING MATERIAL

With the exception to the asbestos abatement performed in the GBP Conference Room (Section 3.5.10) no survey reports or other asbestos related documents were provided to Lawhon. Based on discussions with Site personnel, Leisy Hall underwent renovations within the last ten years and reportedly, ACMs were removed.

6.3 HAZARDOUS SUBSTANCES

Visual and physical inspections for hazardous substances and petroleum products were also conducted. The Site is listed under EPA's RCRIS as a RCRA SQG, EPA ID#

WA3210090095. A RCRA SQG is defined as a site which generates between 100 kg and 1,000 kg of hazardous waste per month.

Based on information supplied by the 70th RRC, the Site is listed as a RCRA SQG based on the generation of waste from vehicle maintenance at the AMSA 79. Typical wastes noted during the Site reconnaissance were: used oily rags, used oil and oil filters, paint cans, used antifreeze, and other vehicle maintenance waste. Chemicals stored at the AMSA 79 include: motor oil, brake fluid, gear oil, lubrication oil, multi-purpose grease, aerosol spray paints, as well as other typical vehicle maintenance fluids.

Hazardous materials stored at the AMSA portion of the Site were observed in the two portable Hazmat Storage Sheds (#1 and #2), in the Hazmat Storage Structure, in a portable drum storage container, and within the AMSA 79. Generally, oil and other vehicle related maintenance fluids were observed situated on spill containment pallets or within flammable storage cabinets within the AMSA 79 building. The sheds and structure are situated west of the AMSA 79 building. Observed petroleum products and hazardous substances were noted to be properly stored in the sheds or structure at the time of the inspection.

No improper storage techniques or staining was noted in or around the hazardous materials sheds or flammable storage cabinets. Based on a visual inspection, it appears that petroleum products and hazardous waste is being handled properly at the Site and the storage of these relatively small quantities does not appear to pose an environmental threat to the Site at this time.

6.4 HYDRAULIC EQUIPMENT

One hydraulic lift was observed within service bay #3 in the AMSA building. As previously stated in Section 6.2, hydraulic oil is stored within a 200 gallon AST located in adjoining storage room and there have been no reports of leaks or problems associated with the hydraulic lines or AST.

An inactive freight elevator is located on the southern exterior of Leisy Hall. According to the Area Facility Manager for Fort Lawton, the hydraulic lines and reservoir were drained of hydraulic fluid sometime prior to 2001 and has not been utilized since that time. There are no reported problems or issues related to the historical use of the freight elevator, and therefore is not an area of potential environmental concern.

6.5 INVENTORY OF CHEMICALS / HAZARDOUS SUBSTANCES

As previously stated, hazardous materials stored at the Site were observed in two portable Hazmat Storage Sheds (#1 and #2), in the Hazmat Storage Structure, in a portable drum storage container noted on the southern central perimeter of the AMSA

79 portion of the Site, and within the AMSA 79. The following paragraphs provide a brief inventory summary of materials observed during the Site reconnaissance. A copy of the most recent hazmat inventory list (dated September 9, 2005) was provided to Lawhon by facility personnel during the August 2006 Site reconnaissance. A copy of this document is provided in Appendix D.

Hazmat Storage Shed #1 (Photographs 15, 16, and 17 in Appendix B) contained the aforementioned used oil AST (Section 6.2), one 55-gallon drum of absorbent rags, one 55-gallon drum of used oil filters, five 55-gallon drums of engine oil, two 55-gallon drums of transmission fluid, four 5-gallon containers of hydraulic oil, two 5-gallon containers of grease, five 5-gallon containers of engine oil, thirteen 5-gallon containers of gasoline and diesel fuel, and thirteen 1-quart cans of hydraulic oil.

Hazmat Storage Shed #2 (Photograph 18 in Appendix B) is referred to by Site personnel as the 'corrosive shed' and is utilized primarily for used batteries awaiting transport off-site for recycling. At the time of the 2006 Site reconnaissance, approximately fifteen batteries were observed on pallets within this shed. No staining was observed in the area. A radioactive storage cabinet is also located in this shed and reportedly contained compasses and watches. According to facility personnel, these items are no longer used and are awaiting transport to an off-site location in the near future.

The Hazmat Storage Structure (Photograph 19 in Appendix B) contained one 55-gallon drum of transmission fluid and spill kit related items (i.e., absorbent booms).

The portable drum container noted on the southern central perimeter of the AMSA 79 portion of the Site contained one 55-gallon drum of used antifreeze.

Two 55-gallon drums of oil and one 25 gallon drum of grease were observed in the AMSA 79 building at the time of the August 2006 Site reconnaissance. The oil drums were noted to be stored on secondary containment spill pallets (Photograph 26 in Appendix B) and grease drum was noted to be stored on a wood pallet. The concrete area in the vicinity of these stored hazardous materials appeared to be in good condition with no evidence of past spills. Other hazardous materials noted within the service bay area of the AMSA 79 building included one 55-gallon drum of transmission fluid, one 55-gallon drum of antifreeze, one 55-gallon drum of engine lubrication oil, one 55-gallon drum of used oil, and one 55-gallon plastic drum of crushed used oil filters. With the exception of the plastic drum which was located beneath a filter crusher, the drums were noted to be atop portable carts within the service bay area of the AMSA 79 building. One 55-gallon steel drum of empty spray paint and aerosol cans was observed in the AMSA 79 building. Reportedly, the contents of this drum are off-hauled by a private contractor assigned by the DRMO on an as-needed basis. According to interviews with 70th RRC personnel, used oil and antifreeze are removed by an off-site

contractor on an as-needed basis. Manifest documentation associated with used oil and antifreeze generation is maintained by ICI personnel.

A solvent sink (Photograph 27 in Appendix B), consisting of sink over a 35-gallon drum, was located along the south interior wall of service bay #4 in the AMSA 79 building. The concrete flooring in the immediate vicinity of the solvent sink was in good condition with no evidence of past spills. According to interviews with 70th RRC personnel, the solvent sink is serviced by Safety Kleen on a monthly basis. Three flammable storage cabinets and one cabinet designated as 'spill response center' were also located along the south interior wall of service bay #4. A red cabinet (Photograph 27 in Appendix B) contained 'in use' hazardous materials in quantities of less than 5 gallons, such as brake fluid, gear oil and oil filters, which were generally vehicle service materials that were being used by mechanics. The remaining two flammable storage cabinets (Photograph 28 in Appendix B) contained a variety of vehicle and equipment related maintenance materials which included aerosol cans of spray paint, latex paint, brake cleaners, air tool cleaners, lubricants, metal parts protectors, etc. These stored materials were in their original retail containers and there was no evidence of leaks or spills within the flammable storage cabinets. Two additional smaller flammable storage cabinets utilized in the bay areas to store 'in use' spray paints and parts cleaners were also observed within the AMSA 79 building.

A battery charging room (Photograph 33 in Appendix B) is located on the northern portion of the AMSA 79 building and contained new and used batteries ready to be charged. Batteries were noted to be stored on top of spill pallets. According to facility personnel, dead batteries are transported to the aforementioned corrosive shed for removal by an off-site contractor. Other maintenance related materials observed within the AMSA 79 building included a diesel-powered forklift (Photograph 32 in Appendix B) and canisters of acetylene and oxygen (Photograph 31 in Appendix B) which were noted to be properly chained to a portable cart. With the exception of the hydraulic lift noted within service bay #3 (Photograph 30 in Appendix B), no floor drains or other subsurface hydraulic lifts were observed in the AMSA 79 building. Remnants of what appeared to be a former hydraulic lift were noted in service bay #2; however, according to facility personnel this area formerly contained a service pit that was used for access underneath vehicles. Site personnel indicated the pit was filled in due to lack of use. No further information was available regarding the pit or its filling. In general, good housekeeping practices were noted with regard to use and storage of vehicle related maintenance materials.

A former POL Storage building (Photograph 20 in Appendix B) was observed to be empty with no evidence of past spills on the concrete slab surface. No floor drains were observed within the former POL storage building. According to Site personnel, the former POL storage structure was utilized until construction of the Hazmat Storage Structure in approximately 1990.

6.6 LEAD-BASED PAINT (LBP)

According to information provided by the 70th RRC, there are no documented lead-based paint (LBP) surveys or abatement projects at the Site. Based on the reported date of construction (1972), it is likely that LBP exists in the structures. During the August 2006 Site visit, painted surfaces at Leisy Hall and the AMSA 79 building appeared to be in good condition.

6.7 MUNITIONS AND EXPLOSIVES OF CONCERN (MEC)

No evidence of past or current storage, use or disposal of MEC, including UXO, was found during the site reconnaissance and records review.

6.8 NEARBY PROPERTIES

Potential environmental sites of concern, located within corresponding ASTM search radius distances from the Site, were evaluated (Section 5.0). None of the facilities evaluated are classified as "High Risk". "High Risk" properties are those that exhibit environmental conditions that have the probability of adversely affecting the environmental conditions at this Site or another property.

6.9 OIL/WATER SEPARATOR (OWS)

Several OWSs are located at the Site. The information presented below is based on the Draft Survey of Drains, Pollution Control Equipment, and Discharge Points (Sections 3.5.3 and 3.5.4) and on observations during the August 2006 Site reconnaissance. Two OWSs are located in the POV area north of Leisy Hall and intercept surface runoff from the parking lot areas and exterior drains. The POV area was developed to slope to the north so that runoff would discharge to one of the two OWS systems (Photograph 7 in Appendix B). Similarly, the asphalt paved areas to the west of the AMSA 79 building were designed to direct surface water flow toward the north-northeast to a drain at the wash rack (Photograph 21 in Appendix B) that discharged to an OWS (Photograph 22 in Appendix B) or to a drain that leads to an OWS (Photograph 23 in Appendix B) situated northeast of the AMSA 79 portion of the Site. (Note: The 2004 Draft Survey of Drains, Pollution Control Equipment, and Discharge Points states that OWS1 and OWS3 discharge to the city storm sewer. The text for OWS2 states it discharges into the city sanitary sewer, but a figure shows that it discharges to the city sanitary sewer. The text for OWS4 states that it discharges to the city storm sewer, but the figure shows that it discharges to the city sanitary sewer. No additional information is provided.) The OWSs are reportedly inspected and serviced by an outside contractor when needed, which is approximately once a year. With the exception of oily liquid observed in the drain systems at the wash rack, no odors or staining were detected in or around the drainage systems during the Site reconnaissance. According to Site personnel, the

presence of such liquid is an indicator that the OWS associated with the wash rack is due for service.

6.10 PITS, SUMPS, DRYWELLS, AND CATCH BASINS

With the exception of a sump that is located within the Hazmat Storage Structure and former service pit within the AMSA 79 building, no lagoons, drywells or catch basins were observed at the Site. The Hazmat Storage Structure (Photograph 19 in Appendix B) was designed with a sloped flooring system leading to the sump devised to collect runoff from spills within the area of the structure. The sump is situated at the center of the structure and extends to approximately three feet in depth. According to facility personnel, there have been no spills within the area of the Hazmat Storage Structure that required the sump to be pumped or cleaned. However, facility personnel did indicate that on occasion, rainwater had to be pumped from the sump.

As previously stated in Section 6.5, a former vehicle maintenance pit was located in the AMSA 79 building. Site personnel indicated the pit was filled in due to lack of use. This is not considered an area of potential environmental concern.

6.11 POLYCHLORINATED BIPHENYL CONTAINING (PCB) EQUIPMENT

Based on information contained in a Final PCB-Containing Equipment Inventory Summary Report prepared by E2M (Section 3.5.9) and observations during the August 2006 Site reconnaissance, only dry-type (non-PCB) transformers are located at the Site. According to the aforementioned report, renovation activities were conducted at Leisy Hall and at the AMSA 79 building in 1998 which included upgrades to the lighting system. Additional renovations to Leisy Hall occurred in approximately 2005 and the Final PCB-Containing Equipment Inventory Summary Report concluded there “appears to be no remaining PCB-containing equipment at the Leisy Hall USARC.”

6.12 RADIOLOGICAL MATERIALS

Facility personnel indicated that to their knowledge the Site never had a Nuclear Regulatory permit. Most military facilities will have some low level radiological materials associated with the illumination of various types of military equipment (e.g., watch dials, compasses, aiming circles, etc.). As previously stated in Section 6.5, a radioactive storage cabinet is located in a portable hazmat shed and reportedly contained compasses and watches. According to facility personnel, these items are no longer used and are awaiting transport to an off-site location in the near future. There is no evidence to suggest that any radiological commodities were ever improperly managed at the Site, or that any radionuclides were ever released.

6.13 RADON

The USEPA Map of Radon Zones for King County, Washington, confirms that the county lies within the low potential zone, Zone 3, which has a predicted average indoor screening level less than USEPA's recommended maximum action level of 4.0 PicoCuries per Liter of Air (pCi/l). The EDR Report provides radon test results for the 98199 zip code area. The results concluded that the basements in the area had an average radon activity level of 0.380 pCi/l.

According to information provided by the 70th RRC, a Reserve database printout shows that a radon survey was performed at the Site in November 1991 (Appendix D). The results range from <0.2 pCi/l to 1.8 pCi/l, below the USEPA's permissible exposure limit of 2.5 pCi/l. Radon surveys are currently being performed at the Site by Shaw Environmental Group. The radon surveys commenced in July 2006 and results were not available at the time of this ECP Report preparation.

6.14 UNDERGROUND STORAGE TANKS

No evidence of current USTs were observed during the 2006 Site reconnaissance. Site records (Section 3.5.1) and records from the Washington Department of Ecology (WDOE) (Section 5.2.2) indicate that three USTs were removed in 1990. According to Site personnel, a former fuel island area was situated on the northwestern corner of the AMSA 79 portion of the Site, where one gasoline UST, one diesel UST and two dispenser areas were located. Site personnel also indicated that the third UST was utilized for waste oil storage, and was situated on the southern central perimeter of the AMSA 79 portion of the Site, in the unpaved area near the existing lean-to structure.

The approximate locations of the former USTs are depicted in Figure 2 in Appendix A and Photograph 24 in Appendix B shows the yard area where the two former fuel dispensing USTs were located.

6.15 WASTE DISPOSAL SITES

There were no signs of land-filling or illegal waste disposal activities at the Site during the August 2006 Site reconnaissance. Non-hazardous waste management, such as used oil, is removed from the Site on an as-needed basis by an outside contractor and hazardous wastes and empty aerosol cans (e.g., spray paints) are off-hauled by a private contractor assigned by the DRMO on an as-needed basis. The on-Site solvent sink is serviced by Safety Kleen on a monthly basis. Manifest documentation associated with used oil and antifreeze generation is maintained by ICI personnel.

7.0 CONCLUSIONS

Lawhon, in conjunction with FMSM was contracted to prepare an ECP Report for the Leisy Hall and AMSA 79 – Fort Lawton USAR Center (WA030), located at 4570 Texas Way West, Seattle, King County, Washington. The Site was in use by the 70th RRC at the time of the site reconnaissance. The Site has primarily functioned as an administrative, logistical, and educational facility, with limited vehicle maintenance occurring in the AMSA 79 building.

Findings of this ECP Report are based on existing environmental information, including visual observations, interviews, site records, Federal, State, and local database and file information, related to the storage, release, treatment, or disposal of hazardous substances or petroleum products or derivatives on the property. The following paragraphs present the findings related to areas of potential environmental concern that were evaluated during the ECP process.

- **Aboveground Storage Tanks (ASTs)** – Three ASTs are presently located at the Site. One 4,000 gallon capacity diesel AST is situated on the southern exterior of Leisy Hall and is associated with an emergency generator. One 200 gallon capacity AST utilized to store hydraulic fuel for a vehicle lift is situated in a storage room of the AMSA 79 building. And one 500-gallon capacity AST utilized for the storage of used oil collected in maintenance operations conducted at the AMSA 79 building is located within a portable hazmat storage shed west of the AMSA 79 building. No issues of leaks associated with the ASTs were observed or reported during the August 2006 Site reconnaissance.
- **Asbestos Containing Materials** - According to interviews conducted with facility personnel, Leisy Hall underwent renovations within the last ten years and reportedly, ACMs were removed. With the exception of an asbestos report that documents abatement activities performed in a conference room within Leisy Hall, no asbestos related documents were provided to Lawhon. Based on the construction date of the Site buildings, ACM may be present.
- **Hazardous Substances** - Chemicals containing CERCLA hazardous substances would likely have been used and stored at the Site in amounts necessary to support unit-level vehicle and building maintenance activities. The quantities stored would reportedly not have exceeded corresponding CERCLA reportable quantities. There is no evidence that the chemicals used or stored were improperly handled, released, or disposed at the Site.
- **Hydraulic Equipment** – A hydraulic oil powered vehicle lift and an inactive freight elevator that formerly contained hydraulic oil were observed in the AMSA 79 building and on the southern exterior of Leisy Hall, respectively. According to

facility personnel, there have been no issues of leaks in the hydraulic lines associated with the hydraulic lift in the AMSA 79 building. The hydraulic lines and reservoir associated with the freight elevator were reportedly drained sometime prior to 2001. According to facility personnel, there were no reports of problems associated with the historical use of the freight elevator.

- **Lead-Based Paint (LBP)** - According to information provided by the 70th RRC, there are no documented LBP surveys or abatement projects at the Site. Based on the date of construction (1972), it is likely that LBP exists in the structures. During the August 2006 Site visit, painted surfaces within Leisy Hall and the AMSA 79 building appeared to be in good condition.
- **Munitions and Explosives of Concern (MEC)** - No evidence of past or current storage, use or disposal of MEC, including UXO, was found during the site reconnaissance and records review.
- **Oil/Water Separator (OWS)** - Four OWSs are located at the Site, two are situated in the POV areas north of Leisy Hall; one is situated in a paved sidewalk area northeast of the AMSA 79 portion of the Site; and one north of the wash rack north of the AMSA 79 building. Surface water runoff is directed to exterior drains located in these areas of the Site and eventually passes through one of the four OWSs, which, based on information contained in reports prepared for the Site, discharge to the city storm sewer system. Based on information contained in reports reviewed, with the exception to the presence of excess leaves and dirt observed on the plates of the OWS systems, no issues or problems associated with the OWS systems were noted. The OWSs are not considered to be an area of potential environmental concern.
- **Petroleum Product Storage** – Petroleum storage occurs and historically would have occurred in designated areas within the AMSA 79 building and hazardous material storage sheds/structure located west of the AMSA 79 building. Prior to construction of the present day hazardous material structure (ca. 1990) and use of portable storage sheds at the Site, a concrete constructed shed situated on the south central portion of the AMSA 79 portion of the Site was utilized for the storage of petroleum products. The sheds/structure and areas within the AMSA 79 building where petroleum products are stored were observed to be equipped with secondary containment or with spill containment measures and appeared in good condition at the time of the Site reconnaissance. There is no evidence that non-UST/AST petroleum products in excess of 55 gallons were stored for one year or more on Site.
- **Polychlorinated Biphenyls (PCBs)** - Based on information contained in a previous PCB-Containing Equipment Inventory Report and observations during

the August 2006 Site reconnaissance, only dry-type (non-PCB) transformers are located at the Site. According to the aforementioned report, renovation activities were conducted at Leisy Hall and at the AMSA 79 building in 1998 which included upgrades to the lighting system. Additional renovations to Leisy Hall occurred in approximately 2005 and the Final PCB-Containing Equipment Inventory Summary Report concluded there “appears to be no remaining PCB-containing equipment at the Leisy Hall USARC.”

- **Radiological Materials** - Facility personnel indicated that to their knowledge the Site never had a Nuclear Regulatory permit. Most military facilities will have some low level radiological materials associated with the illumination of various types of military equipment (e.g., watch dials, compasses, aiming circles, etc). A radioactive storage cabinet is located in a portable hazmat shed and reportedly contained compasses and watches. According to facility personnel, these items are no longer used and are awaiting transport to an off-site location in the near future. There is no evidence to suggest that any radiological commodities were ever improperly managed at the Site, or that any radionuclides were ever released.
- **Radon** - According to information provided by the 70th RRC, a Reserve database printout shows that a radon survey was performed at the Site in November 1991. The results were found to be below the USEPA’s permissible exposure limit. Radon surveys are currently being performed at the Site by Shaw Environmental Group. The radon surveys commenced in July 2006 and results were not available at the time of this ECP Report preparation.
- **Service Pit** – A service pit formerly used to access the underside of vehicles in the AMSA was filled. No additional was available.
- **Sump** - The Hazmat Storage Structure located on the southwestern perimeter of the AMSA 79 portion of the Site was designed with a sloped flooring system leading to a sump devised to collect runoff from spills within the area of the structure. The sump is situated at the center of the structure and extends to approximately three feet in depth. According to facility personnel, there have been no spills within the area of the Hazmat Storage Structure that required the sump to be pumped or cleaned. However, facility personnel did indicate that on occasion, rainwater had to be pumped from the sump
- **Underground Storage Tanks (USTs)** - No evidence of current USTs were observed during the 2006 Site reconnaissance. Site records and records from WDOE indicate that three USTs were removed in 1990. According to Site personnel, a former fuel island area was situated on the northwestern corner of the AMSA 79 portion of the Site, where one gasoline UST, one diesel UST and

two dispenser areas were located. Site personnel also indicated that the third UST was utilized for waste oil storage, and was situated on the southern central perimeter of the AMSA 79 portion of the Site, in the unpaved area near the existing lean-to structure. Records indicate no "visual or olfactory evidence of soil contamination" was reported and no groundwater was encountered during the excavation. Analysis of samples after excavation showed no total petroleum hydrocarbons (TPH) detected or levels well below the WDOE action levels at the time of tank removal.

- **Wash Water Discharge** - An active wash rack is situated north of the AMSA 79 building. During the August 2006 Site reconnaissance, an oily substance was observed in the drain systems at the wash rack. According to Site personnel, the presence of such liquid is an indicator that the OWS associated with the wash rack is due for service.

Areas of potential environmental concern were reviewed and Lawhon found no adverse conditions relating to the environmental condition of the property during the USAR usage of the Site. No reportable quantities of hazardous substances have been stored at the Site and no spills or releases were documented or reported.

8.0 LIMITATIONS

This ECP Report was prepared to review certain elements of the environmental condition of property related to the storage, release, treatment, or disposal of hazardous substances or petroleum products. It documents efforts to determine or discover the presence or likely presence of a release or threatened release of these materials. Project activities were performed in general conformance with the BRRM, ASTM D6008 guidance, the project prescribed scope of work, and generally accepted practices in the consulting industry. The degree of care and skill is consistent with that generally exercised in the industry under similar conditions.

Lawhon and FMSM have relied on certain information provided by the USACE, USAR, and other parties referenced in the report. This information was assumed to be accurate and complete unless information to the contrary arose during the course of the investigation. Historic documentation (e.g., information on past environmental practices, environmental records, USARC operational changes, unit and equipment changes, chemical/substance inventories and storage, current as-built drawings, etc.) and facility personnel knowledge regarding chemicals used or stored on the Site and the quantities stored, was often limited or non-existent. Therefore, statements regarding storage of chemicals or presence of hazardous substances reflect best available data and are not warranted for either completeness or accuracy over the history of the facility.

In preparing this report, Lawhon and FMSM were required to review previous documents from other sources (collectively referred to herein as the Prior Reports). The Prior Reports may present findings regarding the abatement or remediation of known concerns at the time of their preparation or within the limit of the project scope of work. The Prior Reports may include statements or opinions of the original authors of the Prior Reports as to the satisfactory completion of work. Lawhon and FMSM note that environmental laws and regulations, including abatement or remedial action levels, are periodically reviewed and updated by the various regulatory agencies and may have changed since the respective dates of the Prior Reports.

Lawhon and FMSM have summarized the Prior Reports in fulfilling the prescribed scope of work for the project. This summarization may include statements or opinions as to the satisfactory completion of work. These statements or opinions are those of the original report authors. Lawhon and FMSM neither warrant nor certify the accuracy or completeness of these statements. The summarization of previous documents has not reviewed or updated those conclusions with regards to actions from the time of that document to date, current regulatory agency abatement, or remedial standards. Rather, this summary provides the original author's conclusions at the time the report was prepared. Evaluation of the completeness of previous documents or statements of

abatement or remediation is beyond the current scope of service included in this contract.

A limited site reconnaissance was performed to visually identify materials or conditions representing recognized adverse environmental conditions. Identification of hidden conditions, observation of the effects of activities or incidents occurring after completion of the reconnaissance, buried conditions, conditions obscured by dense foliage, conditions beneath buildings, other structures, or covered by building/paving materials, or conditions otherwise obscured, is beyond the scope of this work. The conditions described in this report are valid only for the time that the observations were made. Some conditions may change with time.

The findings and conclusions contained in this report are based in part on the information available at the time of the study. The findings and conclusions should be considered not as scientific certainties, but as probabilities based on professional judgment of the significance of the limited data gathered in the course of the site evaluation, interviews and literature review. If additional or corrected information becomes available, Lawhon and FMSM request the opportunity to review/modify conclusions, as warranted.

9.0 REFERENCES

9.1 PERSONS CONTACTED

- Mr. Patrick Marchman, Environmental Program Manger, ICI, LLC, U.S. Army Reserves 70th Regional Readiness Command, (206) 301-2091, August 29, 2006.
- Ms Debra Winterton, Environmental Program Manager, ICI, LLC, U.S. Army Reserves 70th Regional Readiness Command, (206) 301-2033, August 29, 2006.
- Mr. David Blount, Area Facility Manager, ICI, LLC, U.S. Army Reserves 70th Regional Readiness Command, (206) 301-2033, August 29, 2006.
- Mr. Ronald Durocher, Mechanic, AMSA 79 Building, Seattle, Washington, (206) 281-3058, August 29, 2006.
- Mr. Keith Leslie, Supervisor, AMSA 79 Building, Seattle, Washington, (206) 281-3058, August 29, 2006.

9.2 RESOURCES CONSULTED

- Environmental Data Resources, Inc. (EDR) Report for the Fort Lawton USAR Complex, July 25, 2006.
- Federal Regulatory Databases
 - National Priorities List (NPL), April 19, 2006
 - Proposed NPL Sites, April 19, 2006
 - Delisted NPL Sites, April 19, 2006
 - Federal Superfund Liens (NPL Liens), October 15, 1991
 - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), February 1, 2006
 - CERCLIS No Further Remedial Action Planned Sites (NFRAP), February 1, 2006
 - Resource Conservation and Recovery Information System (RCRIS) Corrective Action Sites (CORRACTS), March 15, 2005
 - Resource Conservation and Recovery Act Information (RCRA), March 9, 2006

- Emergency Response Notification System (ERNS), December 31, 2005
- Engineering Controls Sites List (US ENG CONTROLS), March 21, 2006
- Listing of Brownfields Sites, April 26, 2006
- Superfund Consent Decrees, December 14, 2004
- Records of Decision (ROD), March 13, 2006
- Department of Defense Sites, December 31, 2004
- Uranium Mill Tailings Sites, November 4, 2005
- Open Dump Inventory (ODI), June 30, 1985
- Toxic Chemical Release Inventory System (TRIS), December 31, 2003
- Toxic Substances Control Act (TSCA), December 31, 2002
- FIFRA/TSCA Tracking System, March 29, 2006
- FTTS INSP, March 31, 2006
- Section 7 Tracking Systems (SSTS), December 31, 2004
- Integrated Compliance Information System (ICIS), February 13, 2006
- PCB Activity Database System (PADS), December 27, 2005
- Material Licensing Tracking System (MLTS), April 12, 2006
- Mines Master Index File (MINES), February 9, 2006
- Facility Index System/Facility Registry System (FINDS), April 27, 2006
- RCRA Administrative Action Tracking System (RAATS), April 17, 1995
- Biennial Reporting System (BRS), December 31, 2003
- State and Local Regulatory Databases
 - Confirmed & Suspected Contaminated Sites List, May 11, 2006
 - Hazardous Sites List, February 22, 2006

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- Leaking Underground Storage Tank List, March 7, 2006
- Underground Storage Tank Data, April 27, 2006
- Aboveground Storage Tank Listing, December 13, 2005
- Manifest, December 13, 2004
- Reported Spills, March 29, 2006
- Institutional Control Site List, June, 6, 2006
- Voluntary Cleanup Program Sites, May 11, 2006
- Independent Cleanup Reports, December 1, 2002
- Drycleaner Facilities Listing, January 12, 2006
- Clandestine Drug Lab Contaminated Site List, May 23, 2006
- Washington Emissions Data System, December 31, 2004
- Inactive Drycleaners, January 12, 2006
- Tribal Records
 - Indian Reservations, December 31, 2004
 - Leaking Underground Storage Tanks on Indian Lands, March 14, 2006
 - Underground Storage Tanks on Indian Lands, April 5, 2006
- EDR Proprietary Records
 - Manufactured Gas Plants
 - Historical Auto Stations
 - Historical Cleaners

- Historical Chain of Title Report for the Fort Lawton USAR Complex, September 13, 2006.
- Environmental Lien Search Report for the Fort Lawton USAR Complex, September 8, 2006.
- State of Washington Department of Ecology, Coastal Zone Management Program, September, 2006,
<http://www.ecy.wa.gov/programs/sea/czm/index.html>.
- USEPA Map of Radon Zones,
<http://www.epa.gov/radon/zonemap/washington.htm>

9.3 AGENCIES CONTACTED

- City of Seattle Department of Planning and Development's website, August 30, 2006.
- FOIA Officer, USEPA, Region 10, Office of External Affairs, 1200 6th Avenue (CEC-142), Seattle, Washington, August 10, 2006.
- Sally Perkins, Washington Department of Ecology, Northwest Regional Office, 3190 160th Avenue SE, Bellevue, Washington, August 10, 2006.

APPENDIX A

FIGURES

APPENDIX B

SITE RECONNAISSANCE PHOTOGRAPHS

APPENDIX C

PROPERTY HISTORICAL CHAIN OF TITLE REPORT AND ENVIRONMENTAL LIEN REPORT

APPENDIX D

**PREVIOUS ENVIRONMENTAL SITE
ASSESSMENT REPORTS**

APPENDIX E

REGULATORY DATABASE SEARCH REPORTS