

FINAL

**ENVIRONMENTAL CONDITION OF
PROPERTY REPORT**

**PFC DANIEL L. WAGENAAR
U.S. ARMY RESERVE CENTER WA024
1011 EAST AINSWORTH STREET
PASCO, WA 99301**

Prepared For:

**U.S. Army Corps of Engineers – Louisville District
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MARCH 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.

STEPHEN A. RIVERA
Environmental Division ARIM
Chief Environmental Division
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.



LENARD GUNNELL, P.G.
Project Geologist
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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 PFC Daniel L. Wagenaar U.S. Army Reserve (USAR) Center (Facility ID WA024), hereafter referred to as the "Site" or "USAR Center." The Site is located at 1011 East Ainsworth Street, Pasco, Franklin County, Washington, and encompasses approximately 7 acres.

This ECP Report was prepared in conformance with primary Department of Defense and Army guidance, the Department of Defense's Base Redevelopment and Realignment Manual, DoD 4165.77-M (BRRM), Army regulations and the American Society for Testing and Materials (ASTM) Designation D 6008-96 (2005), *Standard Practice for Conducting Environmental Baseline Surveys*, as secondary guidance when it was not inconsistent with the primary guidance.

This ECP Report details the history of the property, including the U.S. Army Reserve and any prior tenant uses of the Site and the resulting environmental condition of the property.

The USAR Center facility is situated on approximately 7 acres of land, located in a commercial and light industrial area, in the southeastern portion of the City of Pasco, Washington. The Site consists of two permanent buildings: a 16,937 square-foot administration building and a 1,800 square-foot Organizational Maintenance Shop (OMS). The USAR Center is currently occupied by the 737th Transportation Company (out of Yakima, WA) and the 104th Division Drill Sergeants.

Based on a review of aerial photographs dating back to 1978 and U.S. Geological Survey (USGS) topographic maps dating back to 1917, the Site has served as a USAR Center since 1974. The administration building was constructed in 1974, and the OMS was constructed in 2002. The land and buildings are owned by the U.S. Government.

Areas of potential environmental concern were reviewed and Lawhon identified petroleum impacts relating to fuel pipelines that cross the Site. A breach in the 1960's released an unknown quantity of diesel and/or gasoline to the subsurface. Sampling performed in 2004 detected petroleum hydrocarbons in both the soil and groundwater. Concentrations in soil samples were below Washington State Department of Ecology, Model Toxics Control Act (MTCA) Method A cleanup levels. Groundwater samples contained concentrations above the MTCA Method B cleanup levels. Groundwater samples from two down gradient monitoring wells did not contain detectable concentrations indicating that off-site migration has not occurred. Groundwater monitoring is currently in progress. In addition, a burrowing owl nest (burrow) is located on the Site. It is unknown if the nest site is currently active. The burrowing owl is both a

federal candidate species and a state candidate species (based on available [2004] data) and protected as a migratory bird under Executive Order 13186.

In accordance with Department of Defense policy defining the classifications (See Deputy Under Secretary of Defense Goodman Memorandum dated 21 October 1996), the Property has been classified as Category 2. This classification does not include categorizing the property based on *de minimis* conditions that generally do not present material risk of harm to the public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

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LIST OF ACRONYMS

ACM	Asbestos Containing Material
AR	Army Regulation
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
BRAC	Base Realignment and Closure
BRRM	Base Redevelopment and Realignment Manual
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	CERCLA Information System
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
DOD	Department of Defense
DRMO	Defense Reutilization Marketing Office
E2M	Engineering – Environmental Management, Inc.
Ecology	Washington State Department of the Ecology
ECP	Environmental Condition of Property
EDR	Environmental Data Resources, Inc.
FEMA	Federal Emergency Management Agency
FFR	Force Feasibility Review
FMSM	Fuller, Mossbarger, Scott and May Engineers, Inc.
kg	Kilogram
Lawhon	Lawhon & Associates, Inc.
LBP	Lead Based Paint

LUST	Leaking Underground Storage Tank
MTCA	Model Toxics Control Act
MEC	Munitions and Explosives of Concern
MEP	Military Equipment Parking
NPL	National Priorities List
OMS	Organizational Maintenance Shop
PCB	Polychlorinated Biphenyl
pCi/l	Pico Curies per Liter of Air
POV	Privately Owned Vehicle
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity
RRC	Regional Readiness Command
Shaw	Shaw Environmental & Infrastructure, Inc.
Site	U.S. Army Reserve Center WA024
STATSGO	State Soil Geographic Database
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, or Disposal
USACE	United States Army Corps of Engineers
USAR	United States Army Reserve
USATHAMA	States Army Toxic and Hazardous Materials Agency
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

UST Underground Storage Tank
WDFW Washington Department of Fish and Wildlife
WDNR Washington Department of Natural Resources

1.0 INTRODUCTION

Lawhon & Associates, Inc., Columbus, Ohio was authorized to prepare an Environmental Condition of Property report for the PFC Daniel L. Wagenaar U.S. Army Reserve Center WA024. The facility is located at 1011 East Ainsworth Street, Pasco, Franklin County, Washington 99301, hereafter referred to as the "Site" or "USAR Center". In support of the ECP Report, a visual reconnaissance of the Site was conducted on September 11, 2006. The purpose of the visit was to visually obtain information indicating the environmental condition of property at the Site.

1.1 PURPOSE OF ENVIRONMENTAL CONDITION OF PROPERTY REPORT

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 Army with information it may use to make disposal decisions;
- 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 one 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 one 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 7-acre PFC Daniel L. Wagenaar USAR Center located at 1011 East Ainsworth Street, Pasco, Franklin County, Washington 99301. The property is located in the southeast part of the City of Pasco, Washington, approximately 1,000 feet north of the Columbia River. It is bounded by South Maitland Avenue on the west, East Ainsworth Avenue on the south, and open space on the north and east. Site maps and aerial photographs are provided in Appendix A. Appendix B provides photographs taken during the September 2006 Site visit. Appendix C provides a historic property search report, a chain of title report and an environmental lien report. Historical environmental documents and reports are provided in Appendix D, while Appendix E contains the Environmental Data Resources, Inc. (EDR) reports.

This ECP report classifies the property into one of seven DoD Environmental ECP categories as defined by the Deputy Under Secretary of Defense S. Goodman Memorandum, “Clarification of ‘Uncontaminated’ Environmental Condition of Property at BRAC Installations” (21 October 1996). The property classification categories are as follows:

- Category 1 – Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).
- Category 2 – Areas where only the release or disposal of petroleum products has occurred.
- Category 3 – Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.

- Category 4 – Areas where release, disposal, and/or migration of hazardous substances has occurred, and all removal or remedial actions to protect human health and the environment have been taken.
- Category 5 – Areas where release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are under way, but all required remedial actions have not yet been taken.
- Category 6 – Areas where release, disposal, and/or migration of hazardous substances has occurred, but required actions have not yet been implemented.
- Category 7 – Areas that are not evaluated or require additional evaluation.

2.0 SITE LOCATION AND PHYSICAL DESCRIPTION

2.1 SITE LOCATION

The USAR Center is located in the southwest portion of Franklin County, Washington, within the city limits of Pasco, Washington. The Site is located in a primarily commercial and light industrial area, with the dominant property owners in the area being the Port of Pasco and the City of Pasco. Figure 1 in Appendix A provides a general site location map.

2.2 ASSET INFORMATION

Facility Name and Address:	PFC Daniel L. Wagenaar U.S. Army Reserve Center WA024 1011 East Ainsworth Street Pasco, Washington 99301
Property Owner:	The land and buildings are owned by the United States Government
Date of Ownership:	May 29, 1943
Current Occupant:	737 th Transportation Company (out of Yakima, WA) and the 104 th Division Drill Sergeants
Zoning:	Port of Pasco Commercial District 1
County, State:	Franklin County, Washington
USGS Quadrangle(s):	Pasco, Washington
Section/Township/Range:	Section 32, Township 9 North, Range 30 East
Latitude/Longitude:	46° 13' 10.2" N; 119° 4' 59.5" W
Legal Description:	Being that parcel or tract of land, situated and lying in Section 32, Township 9 North, Range 30 East of the Willamette Meridian in the City of Pasco, Franklin County State of Washington, Parcel No. 112-353-230.

2.3 PHYSICAL DESCRIPTION

The USAR Center is situated on approximately 7 acres of land with two permanent structures: a 16,932 square-foot administration building and a 1,800 square-foot OMS building. Construction of the administration building occurred in 1974 and construction of the OMS building occurred in 2002. According to a 2005 Polychlorinated Biphenyl (PCB) Containing Equipment Inventory an addition to the administration building was built in 1978, and the facility underwent minor renovations in 2001.

The administration building consists of concrete block walls covered with a brick veneer, while the OMS building is constructed of metal. Both buildings rest upon concrete foundations. The OMS is in a gravel area that can act as a military equipment parking (MEP) area. A privately owned vehicle (POV) parking area is also present at the Site. Photographs 1 and 2 in Appendix B provide views of the POV area. Photographs 3 and 4 in Appendix B provide views of the gravel MEP area. Chain-link security fencing topped with barbed wire encloses the OMS and MEP areas (Photograph 5 in Appendix B), while a shorter chain-link fence, reinforced with wire, surrounds three sides of the administration building (Photograph 6 in Appendix B). Approximately 25% 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 with landscape shrubs and trees (Photograph 7 in Appendix B), gravel (Photograph 8 in Appendix B), and an open space consisting of scrub grasses, sage brush and low-growing vegetation adapted to the dry environment (Photograph 9 in Appendix B). Topographically, the Site is relatively flat. Figure 2 in Appendix A provides a current plan view layout of the Site. Appendix B provides photographs taken during the September 2006 site visit.

The USAR Center administration building is an irregular-shaped one-story structure that houses an administration section, and a drill hall section. Photographs 10 and 11 in Appendix B provide front views (south side) of the exterior of the building. Photograph 12 in Appendix B provides a view of the west side exterior of the building, and Photograph 13 in Appendix B provides an east side view of the exterior of the building. Photograph 14 in Appendix B provides a view of the north exterior of the building showing a small loading dock area in the corner of the structure. The interior of the administration building consists of office space, classrooms, kitchen area, storage, and a drill hall. A locked weapons vault is located within the administration building. Site personnel stated that no ammunition is stored or located at the Site. Photographs 15 and 16 in Appendix B provide interior views of the front entry and hall in the administration building. Photograph 17 in Appendix B shows a typical classroom area, while photograph 18 shows a typical office area. Photograph 19 in Appendix B shows the former indoor firing range area that now acts as a weight and physical fitness training area. Photograph 20 in Appendix B shows pits in the block wall at the target end of the former indoor firing range. Photographs 21 - 23 in Appendix B show the drill

hall and storage cages with company equipment which are located around the outside of the drill hall. Photographs of the kitchen area were not taken due to inadequate lighting, however, according to site personnel the kitchen has not been used for a number of years. Photograph 24 in Appendix B shows the weapons vault door. Photograph 25 in Appendix B shows the boiler, and Photograph 26 in Appendix B shows the air conditioner unit. Figure 3 in Appendix A provides a layout of the interior of the administration building.

The OMS building is a one-story, rectangular metal structure, with one open space, and overhead metal, retractable doors at opposite ends of the building. Photographs 27 - 29 in Appendix B show exterior views of the OMS building. The building was essentially empty at the time of the September 2006 site visit, with only one desk in a corner and one flammable cabinet located against one wall. Photographs 30 - 33 in Appendix B show the interior of the OMS building. Figure 4 in Appendix A provides a layout of the interior of the OMS building.

Three interior floor drains are located in the administration building. Two are in the kitchen area, and one is in the mechanical room. The Site contains a can wash area and grease trap associated with the kitchen which is no longer in use (Photograph 34 in Appendix B). Two exterior surface storm drains, 4 dry wells, and an infiltration pond provide site drainage. Photograph 35 in Appendix B shows the grass-bottom infiltration pond located east of the POV parking area.

According to a 2005 Survey of Drains, Pollution Control Equipment, and Discharge Points report by ICI, LLC, the interior drains are tied into the City's sanitary sewer system. The report states that an exterior drain adjacent to the can wash area just north of the administration building discharges into the grease trap, which in turn discharges to the sanitary sewer system. The other exterior drain discharges into one of the dry wells. All four dry wells discharge into the ground through infiltration. The infiltration pond, located east of the POV parking area, was constructed in 1993 to improve drainage from the parking area. One of the dry wells was added at this time to handle any overflow from the infiltration pond.

Five fuel trucks were located in the gravel MEP area during the September 2006 site visit (Photographs 3 and 4 in Appendix B). According to site personnel, the tankers are emptied, purged and washed off site. Only empty, clean vehicles are temporarily stored at the Site.

2.4 SITE HYDROLOGY AND GEOLOGY

2.4.1 Surface Water Characteristics

Figure 5 in Appendix A provides a portion of the 1992 Pasco, Washington, USGS topographic map which includes the Site. As shown, the Site is situated at an elevation

of approximately 369 feet above mean sea level and is relatively flat. In the immediate vicinity of the Site, the land surface gently slopes south towards the Columbia River. The storm water system at this facility consists of 4 dry wells which discharge into the ground through infiltration. An infiltration pond, located east of the POV parking area, was constructed in 1993 to improve drainage from the parking area. Additional storm water runoff at the Site sheet flows to adjacent roadside drainages south and west of the facility. The ultimate discharge point is not known.

No surface water features are located at the Site. The Columbia River is located approximately 1,000 feet south of the Site, and is the closest major surface water feature. The Columbia River ultimately discharges to the Pacific Ocean on the Washington and Oregon coast.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Community Panel 5300440825B, the Site is not included in either the 100-year floodplain elevation or the 500-year floodplain elevation. Figure 6 in Appendix A provides a map depicting the extent of the nearest 100-year and 500-year floodplain in relation to the Site.

According to the National Wetland Inventory (Figure 6 in Appendix A), no wetland areas are located at the Site. The nearest wetland areas from the National Wetland Inventory occur approximately 1,000 feet south of the Site adjacent to the Columbia River.

2.4.2 Geology/Hydrogeological Characteristics

According to the Washington State Department of Natural Resources Geology of Washington website (<http://www.dnr.wa.gov/geology/columbia.htm>), the Pasco area is situated in the Columbia Basin physiographic region. The Columbia Basin, also known as the Columbia Plateau, is a vast area in eastern Washington, southwestern Idaho, and northern Oregon. The physiographic province is characterized by incised rivers, extensive plateaus, and anticlinal ridges rising to 4,000 feet above sea level. The region is underlain by Miocene Columbia River Basalt Group rocks and interbedded Neogene terrestrial sediments.

According to information acquired from the Soil Conservation Service's State Soil Geographic Database (STATSGO) for Franklin County, Washington, specific types of soil at the Site are from the Quincy Series. The soil does not meet the requirements for a hydric soil.

The surface soils are generally fine sand and very fine sandy loams. These soil types have high infiltration rates. The soils are generally well drained to excessively drained. Deeper soils tend to be gravelly to fine sand. In a typical profile, the surface layer is approximately 15 inches thick and is a sand or silty sand. The subsoil is approximately 45 inches thick and generally consists of coarse-grained material.

Shallow soils in and around the Site are recent Quaternary alluvium, most likely sand and gravel stream deposits from the Columbia River, while deeper deposits may be Pasco Gravels associated with outburst flood deposits of ancient glacial Lake Missoula.

According to monitoring wells present on the Site, groundwater occurs at a depth of approximately 26 feet below ground surface and flows to the southwest, towards the Columbia River.

2.5 SITE UTILITIES

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

Sanitary Sewer System – The City of Pasco 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.).

Gas & Electric – Franklin Public Utility District provides electric service to the Site. Gas service is provided by Cascade Natural Gas.

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 identified fourteen wells located within a 1 mile radius of the Site. None of the wells are directly adjacent to the Site, and none of the wells are within ½ mile of the Site. Five of the identified wells are intakes for public water use from the Columbia River. The purpose of the other wells is not specified, other than “groundwater other than spring” and, “single well, other than collector or Ranney type”. No information regarding contamination of the wells is presented in the state and federal databases presented in the EDR report in Appendix E.

3.0 SITE HISTORY

3.1 HISTORY OF OWNERSHIP

Land titles for the Site were reviewed back to 1906. Appendix C contains Chain of Title and Environmental Lien reports completed for the Site. The Environmental Lien report did not identify any environmental liens against the USAR Center property. According to the Chain of Title report, a declaration of taking by the United States of America from Franklin County, Washington was recorded on May 29, 1943. No coverage of historical Sanborn fire insurance maps was available from EDR.

Available business directories including City, cross-reference, and telephone directories were reviewed, if available, at approximately five-year intervals for the years spanning 1965 through 2005. According to a City Directory provided by EDR and dated July 18, 2006, the address of the USAR Center was first listed in the research source (Polk's City Directory) in 1989 as US Army Reserves. The Site is also listed in the 1993 and 2005 Polk's City Directory as US Army Reserves, and Army Reserve Recruiting, respectively. No listings were found for the years 1965, 1972, 1977, 1983, and 1999. A copy of the City Directory report is included in Appendix E.

3.2 PAST USES AND OPERATIONS

In 1943, the U.S. Government acquired 7 acres of land from Franklin County, Washington. Construction of the administration building occurred in 1974, and construction of the OMS building occurred in 2002. Personnel interviews suggest that the Site was formerly vacant prior to the construction of the USAR Center; however, historic USGS topographic maps suggest there was a building at the site prior to the current buildings. The Site has served as a reserve and mobilization center for the U.S. Army Reserve since the current administration building was constructed in 1974.

The USAR Center is currently occupied by the 737th Transportation Company (out of Yakima, WA) and the 104th Division Drill Sergeants. Historically, the Site primarily functioned as an administrative, logistical, and educational facility. According to site personnel, no vehicle maintenance activities occurred in the OMS, other than very basic vehicle maintenance activities (topping off oil, antifreeze, filling window washer fluid, etc.).

The Site was historically used by reservists for drill activities on various weekends. The 737th is a fuel transportation company out of Yakima, Washington; however, no fueling activities occur on the Site.

The Site was the headquarters for the Second Brigade, 104th Division for the Army Reserve commanded by Col. Ray Reynolds of Pasco, when it was dedicated to Pfc. Daniel L. Wagenaar at its opening (<http://www.facesfromthewall.com/1969jul.html>).

Currently and historically, the OMS building has been used for limited basic maintenance activities on military equipment, mostly checking vehicle fluids such as motor oil, water, and antifreeze. Equipment requiring other maintenance or a major overhaul is sent offsite. No major vehicle or equipment overhauls have been performed at the facility.

No vehicle washing is done, or has historically been done at the Site. According to Site personnel, fuel tank trucks present at the Site are emptied, purged and washed offsite. To the best of their knowledge it has always been this way for the transportation company. No underground storage tanks (USTs) or aboveground storage tanks (ASTs) are currently or have historically been present on the Site.

Historic 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 5 and Figures 7 - 12 in Appendix A provide USGS topographical maps and aerial views of the Site and surrounding area in 1917, 1964, 1973, 1978, 1982, 1991, and 1992. Figure 13 is a 2004 aerial and map view of the Site from the Franklin County Assessor's website (<http://www.co.franklin.wa.us/assessor/>).

The 1917 USGS topographical map (Figure 7, Appendix A) is at a scale that does not show the Site, however, the general undeveloped nature surrounding Pasco suggests that limited development had occurred in the vicinity of the Site.

The 1964 USGS topographical map (Figure 8, Appendix A) shows the Site occupied by a building different in configuration than the current structure. It is unknown what this building was. The Port of Pasco – Big Pasco Industrial Center east of the Site has begun development. North and south of the site appear relatively undeveloped. The Pasco Public Works waste water treatment facility is present northwest of the Site.

The 1973 USGS topographical map (Figure 9, Appendix A) shows little change from the 1964 USGS map.

The 1978 aerial photograph (Figure 10 in Appendix A) shows that the administration building is present at the Site in its current configuration. Also shown on the aerial photograph are residences south of the site across East Ainsworth Street, the Pasco Public Works facility northwest of the Site, and Tommy's Auto Wrecking, east of the Site. Also noteworthy is the fact that Maitland and Oregon Avenues appear to not yet been constructed (refer to Figure 12 in Appendix A).

The 1982 aerial photograph (Figure 11, Appendix A) clearly shows that Maitland Avenue has been extended south to East Ainsworth Street. Two new buildings are present south and southwest of the Site. These currently house the Port of Pasco Administration offices and the Safety Kleen facility. Oregon Avenue has not yet been constructed.

The 1991 aerial photograph and the 1992 topographic map (Figures 12 and 5 in Appendix A) show essentially the same development. Oregon Avenue has been constructed east of the Site separating the existing vacant land directly east of the Site and Tommy's Auto Wrecking. A small gas station (Wondrack Distributing) has been constructed on the northwest corner of Oregon Avenue and East Ainsworth. This facility is the closest structure east of the Site. A small commercial building which houses M&M Bolt has been constructed on the south side of East Ainsworth, just west of Oregon Avenue. Development at the Pasco Public Works is basically the same as seen on the 1978 aerial Photograph.

The 2004 aerial photograph (Figure 13, Appendix A) shows the area much as it is in 2006. The 2002 addition of the OMS building at the USAR Center is observed. Additional development at the Pasco Public Works is present, showing additional waste water treatment ponds and facilities. A small structure owned by the City of Pasco is present north of the Site. Much of the land immediately adjacent to the Site remains open space.

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 the administration building. Small amounts of vehicle maintenance products were stored within the designated flammable materials cabinet in the OMS building.

Certain types of chemical products 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 (other than that reflecting very dry weather conditions) was observed during the September 2006 site visit.

3.4 PAST PRESENCE OF BULK PETROLEUM STORAGE TANKS

No petroleum USTs or ASTs are currently or have historically been located on the Site.

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 are provided in Appendix D.

3.5.1 1989 United States Army Toxic and Hazardous Materials Agency (USATHAMA) Property Report Database Printout

This short, two page document reports that asbestos may be present in boiler stack insulation, and that groundwater south of facility is contaminated with gasoline from privately owned Pasco Bulk Terminal. No other specific or backup information is presented. In addition, the report does identify the indoor firing range facility in which hazardous materials are present. It states "lead fragments are directed by a baffle system into a sand trap which has not been cleaned out. Concrete floor, no drains, filtered ventilation." The document gives the facility a 0 score in 1989, based on "containment sufficient to prevent release into the environment".

3.5.2 1991 Radon Results Printout

Results of a 1991 radon survey conducted in four locations at the Wagenaar USAR Center show that all four samples resulted in levels well below the United States Environmental Protection Agency's (USEPA) recommended maximum allowable exposure level of 4 Pico Curies per liter of air (pCi/l).

3.5.3 1993 Oil/Water Separators and Storm Drainage System Improvements, U.S. Army Reserve Centers, Various Locations in Washington and Oregon and As Built Drawing

This 1993 report by KPFF Consulting Engineers identified an existing stormwater drainage runoff problem with the POV parking area during large storm events. The report proposed building a grass area infiltration pond designed to store ½ inch of water from the parking area draining to the pond. In addition, two gaps were proposed to be cut in the curb to enhance the flow capacity of the infiltration pond from the parking area. A dry well was proposed to act as an overflow if water gets above the storage volume. An "As Built" drawing confirms the construction of the improvements.

3.5.4 2003 U.S. Army Reserve Integrated Cultural Resources Management Plan for the 70th Regional Readiness Command (RRC)

Parsons, Inc. developed an integrated cultural resources management plan for USAR Centers in the 70th RRC in 2003. The report summarizes that no known archaeological sites, historic buildings, structures, objects, or properties of religious and cultural importance are present on the Wagenaar USAR Center.

3.5.5 2003 Stormwater Assessment and Guidance Report

A Stormwater Assessment and Guidance Report was prepared by Weston Solutions, Inc. in 2003 for facilities in the 70th RRC. The objective was to analyze regulatory and facility information, create decision making guidance, and make recommendations for the 70th RRC. Regulatory agencies were contacted, and the permitting status of individual facilities assessed. Facilities were evaluated for compliance issues, and Stormwater Pollution Prevention Plans were reviewed for quality assurance during a site assessment visit in June 2003.

The Wagenaar Site fell into Group 3, which comprises facilities that are not individually permitted because they either drain into the sanitary sewer, are tenants of larger installations, or do not engage in regulated industrial activity. The report concludes that no permit is required because no regulated industrial activities are performed at the site. In addition, it was determined that no stormwater permit or stormwater pollution prevention plan exists for the facility.

3.5.6 2004 Material Inventory

In 2004, ICI, LLC performed a hazardous material inventory at facilities in the 70th RRC. The report concludes that Wagenaar USAR Center had no hazardous materials stored at the facility.

3.5.7 2004 Survey of Drains, Pollution Control Equipment, and Discharge Points

A Survey of Drains, Pollution Control Equipment, and Discharge Points was performed by ICI, LLC in 2004 and reported in a final report dated July, 2005. The report identifies two exterior surface storm drains, 4 dry wells, an infiltration pond, a can wash area and associated grease trap. In addition, interior floor drains are located within the kitchen area, and mechanical room.

According to the 2005 report, the interior drains are tied into the City's sanitary sewer system. The report states that the exterior drain adjacent to the can wash area just north of the administration building discharges into the grease trap, which in turn discharges to the sanitary sewer system. The other exterior drain discharges into one

of the dry wells. All four dry wells discharge into the ground through infiltration. The infiltration pond is located east of the POV parking area and collects run off from that area during large storm events. One of the dry wells was designed to handle any overflow from the infiltration pond.

3.5.8 April 2005 Soil and Groundwater Investigation Report

A Soil and Groundwater Investigation Report for the Site was prepared in April, 2005 by Weston Solutions, Inc. Weston was retained by the U.S. Army Reserve to evaluate potential impacts to soil and groundwater due to a fuel pipeline release that reportedly occurred in the 1960s.

Three 6-inch diameter fuel pipelines owned by the Port of Pasco cross the Army Reserve property. The underground fuel lines have been abandoned, and capped. Based on a survey conducted in November 2003, the depth of the pipelines range from approximately 15 - 48 inches below ground surface. A pipeline breach in the 1960's released an unknown quantity of fuel (diesel and/or gasoline) to the subsurface. According to former Site personnel, the location of the spill was between 100-150 feet north of the northeast corner of the administration building.

Soil and groundwater sampling was performed in October 2004 on 12 soil, and 8 groundwater samples. Diesel-range hydrocarbons were detected in 4 soil samples and 2 groundwater samples. Based upon these results, four permanent groundwater monitoring wells were installed to verify groundwater direction and ascertain whether diesel impacted groundwater was migrating off the Site.

The results of these investigations indicate that although diesel-impacted soil was detected in the vicinity of the abandoned pipeline north of the OMS, these concentrations are below Washington State Department of Ecology, Model Toxics Control Act (MTCA) Method A cleanup levels. Groundwater samples collected in the vicinity of the former release, and immediately down gradient, however, did contain diesel-range hydrocarbon concentrations above the MTCA Method B cleanup levels. Groundwater samples from two down gradient monitoring wells did not contain detectable concentrations of diesel- or oil-range petroleum hydrocarbons indicating that off-site migration has not occurred.

Based on these results, additional groundwater monitoring was recommended in the report to further assess the stability of the groundwater concentrations beneath the site. This monitoring is currently in process.

3.5.9 2005 Final PCB-Containing Equipment Inventory Summary Report, Spokane Area and Pasco 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. According to this report, electrical power is provided to the Site by the Franklin Public Utility District. One utility-owned power box is reported just outside of the southwest fence line of the Site, adjacent to East Ainsworth Street. The power box is not labeled.

Approximately 400 light fixtures throughout the facility were inventoried by E2M. A light ballast considered typical was labeled “No PCBs”. According to the E2M report, a renovation was conducted at the Site in 2001 which included upgrades to the lighting system. The Final PCB-Containing Equipment Inventory Summary Report concluded there “appears to be no remaining PCB-containing equipment at the Wagenaar USAR Center, and no further action is needed.”

3.5.10 Draft Copy 70th RRC BRAC 2005 Implementation Plan for Wagenaar USAR Center, Pasco, WA, Sections 6, 7, 10, 17 and 18

A draft of the 2005 BRAC Implementation Plan for the Closure of Wagenaar USAR Center, Pasco, WA identifies several environmental issues with the Site; and makes the following statements:

- “There is asbestos tile in the facility that would need abatement and renovation if the Army Reserve remained in the center.” No additional information was provided.
- “The facility has had mold problems in the past”. No additional information was provided.
- “The facility has a sub-standard heating, ventilation, and air conditioning system that came up on an energy audit that recommended replacement...”
- “There is currently one entry for Wagenaar USAR Center in the Army Environmental Database – Restoration... The entry is for the indoor firing range project in 1999.” No additional information was provided, and no additional documentation on the firing range was provided for this ECP report.
- “...it is known that a burrowing owl nest (burrow) is located near the northeast corner of the facility boundary. It is unknown if the nest site is currently active....The burrowing owl is both a federal candidate species and a state candidate species (based on available [2004] data) and protected as a migratory bird under Executive Order 13186.”

- “There has been communication with the Washington State Department of Ecology (Ecology) regarding the historic fuel spill and subsequent soil and groundwater investigation. As of 19 July 2005, the 70th RRC is waiting for direction (based on review of the Site Investigation Report) by Ecology.”

3.5.11 2006 Integrated Solid Waste Management Plan

MCS Environmental Inc. prepared a solid waste management plan for facilities in the 70th RRC in 2006. The Plan was written for a total of nineteen USAR Centers. Nine facilities were selected for solid waste characterization. The Wagenaar USAR Center was not one of the selected sites. The Site, however, was visited in February or March of 2006, and existing recycling activities were verified and additional recycling opportunities were identified. There is no mention of inappropriate disposal activities at the Site.

3.5.12 2006 Cross Connection/Water Use Survey Report

A Cross Connection/Water Use Survey Report was prepared by ORCA for MCS Environmental as a part of an environmental study of select facilities of the 70th RRC. The report's objective was to identify and survey equipment in connection with the potable water system. Of specific concern were water connections that may connect to chemical processes or connection to the waste water system. The study indicated that the Site should make several upgrades and improvements on equipment in the boiler room and kitchen.

3.5.13 2006 Natural Resources Planning Level Surveys at U.S. Army Reserves, 70th RRC, Washington

In 2005, Shaw Environmental & Infrastructure, Inc. (Shaw) performed a planning level natural resources survey at 70th RRC sites in Washington, including the Wagenaar USAR Center. The subsequent report is dated January 2006.

The scope of the report included contacting the Washington Department of Fish and Wildlife (WDFW) and the Washington Department of Natural Resources (WDNR) - Natural Heritage Program in October 2005 to obtain current known rare animals, habitats, significant natural features, rare plants, and high quality native ecosystems in the vicinity of the USAR Centers. The purpose of the agency correspondence was to collect known data to support natural resources management planning at the USAR Centers, and to improve understanding of the potential presence, distribution, and habitat use by potential rare, threatened, and endangered species. In addition, Shaw conducted pedestrian surveys throughout the extent of each property to identify and document vegetation, wildlife, and habitat.

During the site visit by Shaw in August, 2005, no natural or created wetlands were observed on the Site. Additionally, no streams, stormwater ponds, or other waterbodies were observed on the Site. Consequently, the Wagenaar USAR Center lacks aquatic species and habitats. The Washington Natural Heritage Information System found no current records of rare plants, threatened or endangered species, or high-quality ecosystems in the vicinity of the Site.

During the August 2005 site visit, however, the burrow of a Western burrowing owl (*Athene cunicularia*) was found on Wagenaar USAR Center. Feathers found at the burrow suggest that this nest site may have been active during 2005. Records from WDFW indicate there are ten burrowing owl nests within one mile of Wagenaar USAR Center. These nests have been part of a research project by University of Arizona. The collection of nest sites indicate that suitable habitat exist within and around Wagenaar USAR Center to support a colony of burrowing owls. The burrowing owl is both a federal candidate species and a state candidate species and protected as a migratory bird under Executive Order 13186. As such, the report recommends development of a management plan for the burrowing owl specific to the Site in coordination with WDFW.

3.5.14 Asbestos Survey Status Table for the 70th RRC Facilities

A table provided by the 70th RRC listing the status of Asbestos Containing Material (ACM) surveys for it's facilities, shows that an asbestos survey has been performed at the Site (with no date listing) and that the "report currently with [Force Feasibility Review] FFR committee". No additional information was provided.

4.0 ADJACENT PROPERTIES

Figure 13 in Appendix A provides a 2004 aerial view of the Site and adjacent properties. The majority of property surrounding the Site is owned by the Port of Pasco, and much of the land immediately adjacent to the Site is open space. Specifically, the Port of Pasco owns the land immediately north, east and south (across E. Ainsworth St.). The property west of the Site across S. Maitland Ave. is owned by the City of Pasco. Refer to Table 1 below, Figure 13 in Appendix A, and the photographs in Appendix B where noted, for the following discussion of adjacent properties.

Land immediately north of the Site is open space owned by the Port of Pasco (Photograph 36 in Appendix B). A small parcel north across the Port of Pasco property is owned by the City of Pasco. It is unknown what this parcel is. Railroad tracks lie further northeast.

East Ainsworth St. borders the Site to the south. The property across East Ainsworth is also owned by the Port of Pasco, and is the site of the Port of Pasco Administration Office at 904 E. Ainsworth Ave. (Photograph 37 in Appendix B).

Land immediately east of the site is open space owned by the Port of Pasco. A gasoline station (Wondrack Distributing) is located east of the Site across the open space (Photograph 38 in Appendix B).

South Maitland Ave. borders the Site to the west. The property across South Maitland is owned by the City of Pasco and is the site of the Pasco Public Works wastewater treatment facility.

Southeast of the Site across Ainsworth situated on Port of Pasco property is M&M Bolt, which appears to be a small machine shop (Photograph 39 in Appendix B).

Southwest of the Site is Safety Kleen Corporation (Photographs 40 and 41 in Appendix B).

TABLE 1 LIST OF ADJACENT PROPERTIES			
Direction From Site	Name/Type of Property	Address	Zoning
North	Port of Pasco/Open Space	None	Port of Pasco Commercial District
South	E. Ainsworth St./Port of Pasco Administration Office	904 E. Ainsworth Ave.	Port of Pasco Commercial District

TABLE 1 LIST OF ADJACENT PROPERTIES			
Direction From Site	Name/Type of Property	Address	Zoning
East	Port of Pasco/Open Space	None	Port of Pasco Commercial District
West	S. Maitland Ave/City of Pasco Public Works/Wastewater Treatment Facility	1025 Gray Ave	Port of Pasco Commercial District

Appendix A and Appendix E provide historical aerial photographs, topographic maps, and EDR Reports, which were used to evaluate any potential environmental impacts on adjacent properties that may have also impacted the environmental condition at the Site. Land use at immediately adjacent properties does not appear to have changed significantly over the years and does not appear to have impacted the environmental conditions of the USAR Center.

5.0 REVIEW OF REGULATORY INFORMATION

A component of the ECP is the review of all reasonably obtainable Federal, State, and Local government records for the Site and surrounding properties, where there has been a release or likely release of any hazardous substance or any petroleum product, and which is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the Federal real property. A regulatory database summary was acquired from EDR on July 14, 2006. The regulatory database summary consolidates standard Federal, State, Local, and tribal environmental record sources based on ASTM D 6008-96 (2005) recommended minimum search distances from the Site. A copy of the complete EDR report is included in Appendix E. Acronyms used throughout this section are defined in the EDR report in Appendix E. "High Risk" properties are those that exhibit significant environmental conditions that have the probability of adversely affecting the environmental conditions at another site.

5.1 FEDERAL ENVIRONMENTAL RECORDS

The regulatory information presented in Table 2 below was obtained from the EDR Federal regulatory database search report.

TABLE 2 FEDERAL DATABASE SEARCH								
Database	Search Distance (miles)	Target Site	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	>1	Total Plotted
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
Delisted NPL	1.000		0	0	0	0	NR	0
NPL Recovery	TP		NR	NR	NR	NR	NR	0
CERCLIS	0.500		0	0	0	NR	NR	0
CERC-NFRAP	0.500		1	0	0	NR	NR	1
CORRACTS	1.000		1	0	0	0	NR	1
RCRA TSD	0.500		0	0	0	NR	NR	0

**TABLE 2
FEDERAL DATABASE SEARCH**

Database	Search Distance (miles)	Target Site	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	>1	Total Plotted
RCRA LQG	0.250		0	0	NR	NR	NR	0
RCRA SQG	0.250	X	1	0	NR	NR	NR	1
ERNS	TP		NR	NR	NR	NR	NR	0
HMIRS	TP		NR	NR	NR	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
US Brownfields	0.500		0	0	0	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0

TABLE 2 FEDERAL DATABASE SEARCH								
Database	Search Distance (miles)	Target Site	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	>1	Total Plotted
MLTS	TP		NR	NR	NR	NR	NR	0
MINES	0.250		NR	NR	NR	NR	NR	0
FINDS	TP	X	NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0

Acronyms – are defined in detail in the attached EDR Report, Appendix E

TP=Target Property (the Site) NR=Not Requested at this Search Distance

5.1.1 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) No Further Remedial Action Planned (CERC-NFRAP)

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA’s knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

The following property is listed on the CERCLIS NFRAP database:

- Safety Kleen, 814 E. Ainsworth (<1/8 mi.).

Listing in this database suggests an assessment at the site has been completed and that EPA has determined no further steps will be taken to list this site on the NPL. The site was listed as Archive status on September 4, 1992. This property is southwest and down gradient from the Site, and therefore contamination of the USAR Center from Safety Kleen is unlikely.

5.1.2 CORRACTS Corrective Action Report

CORRACTS identifies hazardous waste handlers with Resource Conservation and Recovery Act (RCRA) corrective action activity.

The following property is listed on the CORRACTS database:

- Safety Kleen, 814 E. Ainsworth (<1/8 mi.).

Listing in this database identifies Safety Kleen as a hazardous waste handler with RCRA corrective action activity that is listed as No Further Action as of December 31, 1992. This property is southwest and down gradient from the Site, and therefore contamination of the USAR Center from Safety Kleen is unlikely.

5.1.3 RCRA Small Quantity Generator (SQG)

RCRAInfo is USEPA's comprehensive information system, providing access to data supporting the 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 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 generate over 1,000 kilograms (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 Small Quantity Generator list, and is listed as having no violations found.

Also listed as an SQG is:

- Safety Kleen, 814 E. Ainsworth (<1/8 mi.).

This facility has 10 recorded violations as a result of compliance evaluation inspections. The violations occurred in 1990, 1992, and 2001. The area of violations includes general requirements, Treatment, storage, or disposal (TSD) - other requirements, manifest record keeping requirements, closure requirements, and financial responsibility requirements. This property is southwest and down gradient from the Site, and therefore contamination of the USAR Center from Safety Kleen is unlikely.

5.1.4 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. Sites identified by this database search are discussed in the following subsections.

TABLE 3 STATE DATABASE SEARCH								
Database	Search Distance (miles)	Target Site	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	>1	Total Plotted
CSCSL	1.000		0	0	0	2	NR	2
HSL	1.000		0	0	0	0	NR	0
CSCSL NFA	0.500		0	0	0	NR	NR	0
State Landfill	0.500		0	0	1	NR	NR	1
SWTIRE	0.500		0	0	0	NR	NR	0
LUST	0.500		1	1	2	NR	NR	4
UST	0.250		2	1	NR	NR	NR	3
AST	0.250		0	0	NR	NR	NR	0
Manifest	0.250		1	0	NR	NR	NR	1
Spills	TP		NR	NR	NR	NR	NR	0
INST Control	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0

TABLE 3 STATE DATABASE SEARCH								
Database	Search Distance (miles)	Target Site	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	>1	Total Plotted
ICR	0.500		0	1	0	NR	NR	1
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
WA Emissions	TP		NR	NR	NR	NR	NR	0
Inactive Drycleaners	0.250		0	0	NR	NR	NR	0

Acronyms – are defined in detail in the attached EDR Report, Appendix E

NR=Not Requested at this Search Distance

5.2.1 Confirmed & Suspected Contaminated Sites List – State Hazardous Waste Sites (CSCSL)

State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Listed on the CSCSL database search are:

- BNRR Pasco Rail Yard, Oregon Ave. and E. A Street (1/2-1 mi.), and
- Pasco Bulk Fuel Terminal Site, Ainsworth and W. 9th (1/2-1 mi.).

BNRR Pasco Rail Yard is situated approximately 3,000 feet northeast of the USAR Center. It is listed as having confirmed petroleum contamination above MCTA cleanup levels affecting soil and groundwater. It is reported that the site is undergoing independent remedial action, and that an Independent Site Assessment of Interim Remedial Action Report has been received by the State regulating agency. Due to the distance, and that remedial action is in progress, contamination of the USAR Center from the BNRR Rail Yard is unlikely.

The Pasco Bulk Fuel Terminal Site is situated close to a mile west, and down gradient of the USAR Center. It is listed as having confirmed contamination by hazardous

substances of soil, groundwater and surface water above MTCA cleanup levels. It is reported that remedial action is in progress. Due to the distance and down gradient direction of this site, and that remedial action is in progress, contamination of the USAR Center from the Pasco Bulk Fuel Terminal Site is unlikely.

5.2.2 State Landfill - Solid Waste Facilities Landfill Sites

State Landfill type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Listed on the State Landfill database search is:

- Tommy's Auto Wrecking, 904 S. Oregon Ave. (1/4-1/2 mi.).

Situated almost 1,500 feet east of the Site, this facility is listed as a recycling facility under private ownership in the database. No additional information is provided. Contamination of the USAR Center from this facility is unlikely due to its distance and direction. Most likely this site is cross-gradient from the Site.

5.2.3 LUST - Leaking Underground Storage Tank List

Leaking Underground Storage Tank (LUST) Incident Reports records contain an inventory of reported leaking underground storage tank incidents. Not all States maintain these records, and the information stored varies by State.

Listed on the LUST database search are:

- Wondrack Distributing, Inc., 919 E. Ainsworth Ave. (<1/8 mi.),
- Port of Pasco – Big Pasco Industrial Center, E. Ainsworth Ave. and A Ave. (1/8-1/4 mi.),
- Pasco Public Works Maintenance & Operations Facility, 1025 S. Gray St. (1/4-1/2 mi.), and
- Water World Marina Inc., 1315 S. 4th Ave., (1/4-1/2 mi.).

All four location's statuses are listed as "Reported Cleaned Up". Contamination of the USAR Center from the incidents reported in this LUST database from these facilities is unlikely. All four sites are cross gradient to the Site. Wondrack Distributing and the Port of Pasco – Big Pasco Industrial Center are east of the site, while Pasco Public Works and Water World Marina are west of the site.

5.2.4 UST – Registered Underground Storage Tanks

UST's are regulated under Subtitle I of RCRA and must be registered with the State department responsible for administering the UST program. Available information varies by State program.

Sites listed on the UST database search are:

- Wondrack Distributing, Inc., 919 E. Ainsworth Ave. (<1/8 mi.),
- Port of Pasco, Near Building T-209 (<1/8 mi.), and
- Basin Disposal, Inc., 1203 S. Gray (1/8-1/4 mi.).

5.2.5 Manifest - Hazardous Waste Manifest Data

Hazardous waste manifest information. The following facility was identified on the Manifest database:

- Safety Kleen, 814 E. Ainsworth (<1/8 mi.).

This property is southwest and down gradient from the Site, and therefore contamination of the USAR Center from Safety Kleen is unlikely.

5.2.6 Independent Cleanup Reports (ICR)

These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree. This database is no longer updated by the Department of Ecology.

The following site is listed on the ICR database search:

- Wondrack Distributing, Inc., 919 E. Ainsworth Ave. (<1/8 mi.).

This facility is located east of the Site and is presumed to be cross gradient. Contamination of the USAR Center from this site is considered unlikely.

5.2.7 State of Washington Department of Ecology

The State of Washington Department of Ecology was contacted to request environmental records available for the Site. Johnnie Landis, the Public Disclosure Coordinator sent back a response dated August 14, 2006 stating that no files were found.

5.3 TRIBAL ENVIRONMENTAL RECORDS

The regulatory information presented in Table 4 below was obtained from the EDR's Tribal database search report.

TABLE 4 TRIBAL DATABASE SEARCH								
Database	Search Distance (miles)	Target Site	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	>1	Total Plotted
Indian Reservation	1.000		0	0	0	0	NR	0
Indian LUST	0.500		0	0	0	NR	NR	0
Indian UST	0.250		0	0	NR	NR	NR	0

Acronyms – are defined in detail in the attached EDR Report, Appendix E

NR=Not Requested at this Search Distance

According to the EDR report, no sites were located within the designated radius for each of the searched Tribal Databases.

5.4 EDR PROPRIETARY RECORDS

The regulatory information presented in Table 5 below was obtained from EDR's Proprietary Records database search report.

TABLE 5 EDR PROPRIETARY DATABASE SEARCH								
Database	Search Distance (miles)	Target Site	<1/8	1/8 – 1/4	1/4 – 1/2	1/2 – 1	>1	Total Plotted
Manufactured Gas Plants	1.000		0	0	0	0	NR	0
EDR Historical Auto Stations	TP		NR	NR	NR	NR	NR	0
EDR Historical Cleaners	TP		NR	NR	NR	NR	NR	0

Acronyms – are defined in detail in the attached EDR Report, Appendix E

TP=Target Property (the Site) NR=Not Requested at this Search Distance

According to the EDR report, no sites were located within the designated radius for each of the searched EDR Proprietary Databases.

5.5 UNMAPPED SITES

The EDR database search yielded twenty-four unmapped sites. Unmapped sites are those with insufficient address information such that they can only be identified as within the zip code of the target property. A reasonable effort was made to locate these sites and assess their relevance to this ECP report. Further research was conducted using the mapping utility provided at maps.google.com and field verification. The locations of all orphaned sites were identified and mapped. None of the sites are located within corresponding ASTM search radius distance.

5.6 SUMMARY OF PROPERTIES EVALUATED TO DETERMINE RISK TO THE SITE

To summarize Subsections 5.1 through 5.5, nine separate properties, in addition to the USAR Center, were evaluated as potential risk properties to the Site. The properties evaluated were identified as a result of information obtained during area reconnaissance and regulatory database searches and are listed below in Table 6.

TABLE 6				
PROPERTIES EVALUATED FOR POTENTIAL ENVIRONMENTAL RISKS				
Company/Site	Database	Elevation in Regards to Site	Potential Risk to Site?	Comment
Safety Kleen	CERCLIS-NFRAP, CORRACTS, RCRA-SQG, MANIFEST	Equal or Higher	Low	Down gradient from Site.
BNRR Pasco Rail Yard	CSCSL	Equal or Higher	Moderate	Remedial action is in progress. Up gradient from Site.
Pasco Bulk Fuel Terminal	CSCSL	Lower	Low	Down gradient from Site.
Tommy's Auto Wrecking	State Landfill	Lower	Low	Solid waste recycling. Down gradient from Site.
Wondrack Distributing	LUST, UST, ICR	Equal or Higher	Moderate	LUST reported cleaned up. UST registered. Cross gradient from Site.
Port of Pasco-Big Pasco	LUST, UST	Lower	Low	LUST reported cleaned up. UST registered
Pasco Public Works Maintenance & Ops.	LUST	Equal or Higher	Low	LUST reported cleaned up.

TABLE 6				
PROPERTIES EVALUATED FOR POTENTIAL ENVIRONMENTAL RISKS				
Company/Site	Database	Elevation in Regards to Site	Potential Risk to Site?	Comment
Water World Marina	LUST	Lower	Low	LUST reported cleaned up.
Basin Disposal, Inc.	UST	Equal or Higher	Low	UST registered.

Acronyms – are defined in detail in the attached EDR Report, Appendix E

Based on an evaluation of available site information and details concerning the properties listed in Table 6, none of the facilities evaluated are classified as “High Risk”. “High Risk” properties are those that exhibit significant environmental conditions that have the probability of adversely affecting the environmental conditions at another site.

6.0 SITE INVESTIGATION AND REVIEW OF HAZARDS

Findings documented in the following subsections are based on the September 11, 2006, Site visit and area reconnaissance, a review of available Site records, and information obtained from U.S. Army Reserve personnel.

6.1 ABOVEGROUND STORAGE TANKS

No ASTs have historically been located at the Site or are currently located at the site. No ASTs were observed during the September 2006 Site visit.

6.2 ASBESTOS CONTAINING MATERIAL

A table provided by the 70th RRC listing the status of ACM surveys for its facilities, shows that an asbestos survey has been performed at the Site (with no date listing) and that the "report currently with FFR committee". In addition, a draft copy of the 2005 BRAC Implementation Plan on the Closure of Wagenaar United States Army Reserve Center, Pasco, WA states, "There is asbestos tile in the facility that would need abatement and renovation if the Army Reserve remained in the center." No additional information was provided.

During the Site visit, floor tiles and pipe wrap, materials that may contain ACM, were observed in cracked and torn condition (Photographs 42 and 43 in Appendix B).

6.3 INDOOR FIRING RANGE

Historically, the Site operated an indoor firing range. The range area is now used as a weight and physical training room. No information on decommissioning or abatement was provided. During the September 2006 site visit, the wall at the target end of the former range exhibited pitting (Photograph 20 in Appendix B).

6.4 INVENTORY OF CHEMICALS / HAZARDOUS SUBSTANCES

At the time of the Site visit, the OMS building was essentially empty (Photograph 30 in Appendix B). Only one desk was present in the corner and a fire proof cabinet was against a wall. The cabinet contained 2 partially used 5 gallon cans of lubricating oil, 1 partially used 5 gallon container of antifreeze, 2 partially used 1 gallon cans of paint, WD-40 and miscellaneous small cans and bottles (Photograph 32 in Appendix B). Miscellaneous training supplies and routine janitorial supplies were observed in the administration building at the time of the September 2006 site visit.

One 55 gallon drum was observed during the September 2006 Site visit against the north wall behind the administration building (Photograph 44 and 45 in Appendix B). The drum was labeled, "Container on hold pending analysis". The label also identified

that the contents was ground water with low diesel concentrations (<5ppm), and that it was from the monitoring wells.

6.5 LEAD BASE PAINT (LBP)

According to information provided by the 70th RCC, there are no documented lead-based paint surveys or abatement projects at the Site. Based on the date of construction (1974), it is likely that LBP exists in the administration building. The OMS building was constructed in 2002 and it is unlikely that LBP is present in that structure. During the 2006 site visit, painted surfaces within the administration building and OMS appeared to be in fair condition.

6.6 MUNITIONS AND EXPLOSIVES OF CONCERN (MEC)

No indications were found during the September 2006 site visit or during the review of records to indicate the presence of MEC at the Site, including unexploded ordinance. A locked small arms vault is located within the administration building. According to site personnel, however, no ammunition for the arms are located or stored at the Site.

6.7 NEARBY PROPERTIES

Land immediately north of the Site is open space owned by the Port of Pasco. East Ainsworth St. borders the Site to the south. The property across East Ainsworth is also owned by the Port of Pasco, and is the site of the Port of Pasco Administration Office at 904 E. Ainsworth Ave. Immediately east of the site is open space owned by the Port of Pasco. A gasoline station (Wondrack Distributing) is located east of the Site across the open space. South Maitland Ave. borders the Site to the west. The property across South Maitland is owned by the City of Pasco and is the site of the Pasco Public Works wastewater treatment facility.

6.8 PITS, SUMPS, DRYWELLS, AND CATCH BASINS

A 2005 Survey of Drains, Pollution Control Equipment, and Discharge Points identified two exterior surface storm drains, 4 dry wells, an infiltration pond, a can wash area and associated grease trap. In addition, interior floor drains are located within the kitchen area, and mechanical room. All of these structures were observed during the 2006 Site visit and appeared to be in functioning condition.

According to the 2005 report, the interior drains are tied into the City's sanitary sewer system. The report states that the exterior drain adjacent to the can wash area just north of the administration building discharges into the grease trap, which in turn discharges to the sanitary sewer system. The other exterior drain discharges into one of the dry wells. All four dry wells discharge into the ground through infiltration. The grass bottom infiltration pond, located east of the POV parking area, was constructed in

1993 to improve drainage from the parking area. One of the dry wells was added at this time to handle any overflow from the infiltration pond.

6.9 POLYCHLORINATED BIPHENYL CONTAINING EQUIPMENT

One pad-mounted, power box located outside the fence adjacent to E. Ainsworth Ave. was observed. No labels, stickers or indication of the presence or non-presence of PCBs was observed on the transformer during the site visit.

Based upon information provided by the 70th RRC, there is no known PCB containing equipment at this facility; however, PCBs may be contained in light ballasts in older type light fixtures. Based on the construction date of the buildings it is possible that some of these ballasts could potentially contain PCBs. Any light ballast not marked with "No PCBs" should be assumed to contain PCBs and management and disposal of these light ballasts must be in accordance with Local, State and Federal requirements.

6.10 RADIOACTIVE MATERIALS

During the September 2006 Site visit and records review process, no indications were found of the past storage or use of radiological commodities at the USAR Center.

6.11 RADON

Information provided by the 70th RCC shows that a site-specific radon survey was performed in 1991. Based on the sampling results, no locations sampled exhibited radon levels above the USEPA's recommended maximum allowable exposure level of 4 pCi/l. Radon surveys are currently being performed at facilities within the 70th RRC by Shaw Environmental Group. The radon surveys commenced in July 2006 and results are currently not available.

6.12 TRANSFORMERS

A concrete pad mounted power box situated outside the facility fence is located adjacent to Ainsworth Avenue. The power box is not labeled and is operated and maintained by the local utility, Franklin Public Utility District.

6.13 UNDERGROUND STORAGE TANKS

No USTs have historically been located at the Site or are currently located at the site. No USTs were observed during the September 2006 Site visit.

6.14 WASTE DISPOSAL SITES AND ACTIVITIES

Solid waste is managed on-site in a metal dumpster and picked up weekly by Basin Disposal, Inc. Non-hazardous waste management, such as waste oil, is managed by

the Defense Utilization Marketing Office (DRMO). There were no signs of land-filling or illegal waste disposal activities at the Site during the September 2006 site visit.

7.0 REVIEW OF SPECIAL RESOURCES

7.1 LAND USE

Figure 13 in Appendix A provides a 2004 aerial photograph of the USAR Center and surrounding properties and depicts current land use. The Site is zoned as part of the Port of Pasco Commercial District 1. The overall area is commercial and light industrial.

7.2 COASTAL ZONE MANAGEMENT

According to the Department of Energy Environmental Policy & Guidance website for Coastal Zone Management Act and related regulations, Franklin County Washington does not lie within a coastal zone management area (www.eh.doe.gov/oepa/laws/czma.html).

7.3 WETLANDS

According to the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory map, no jurisdictional wetland areas are identified on the Site or adjacent properties. The nearest wetland is located approximately 1000 feet south and down gradient of the Site, adjacent to the Columbia River. Figure 6 in Appendix A provides a map showing wetlands in the immediate vicinity of the Site.

During the September 2006 site visit, no cattails and other vegetation indicative of saturated areas were observed at the Site.

7.4 100-YEAR FLOOD PLAIN

A review of the FEMA digital Flood Hazard Area map indicates that the Site lies outside the 100-year and 500-year plains. Figure 6 in Appendix A provides a map showing 100-year and 500-year flood plains located in the immediate vicinity of the Site.

7.5 NATURAL RESOURCES

In 2005 a planning level natural resources survey at 70th RRC sites in Washington, included the Wagenaar USAR Center. No natural or created wetlands were observed on the Site. Additionally, no streams, stormwater ponds, or other waterbodies were observed on the Site. Consequently, the Wagenaar USAR Center lacks aquatic species and habitats.

Also reported in 2005, the Washington Natural Heritage Information System found no current records of rare plants, threatened or endangered species, or high-quality ecosystems in the vicinity of the Site.

During an August 2005 site visit by the environmental contractor performing the planning level survey, the burrow of a Western burrowing owl (*Athene cunicularia*) was found on Wagenaar USAR Center. Feathers found at the burrow suggest that this nest site may have been active during 2005. Records from WDFW indicate there are ten burrowing owl nests within one mile of Wagenaar USAR Center. These nests have been part of a research project by University of Arizona. The collection of nest sites indicate that suitable habitat exist within and around Wagenaar USAR Center to support a colony of burrowing owls. The burrowing owl is both a federal candidate species and a state candidate species and protected as a migratory bird under Executive Order 13186. As such, the report recommends development of a management plan for the burrowing owl specific to the Site in coordination with WDFW.

7.6 CULTURAL RESOURCES

An integrated cultural resources management plan for USAR Centers in the 70th RRC was done in 2003. The report summarizes that no known archaeological sites, historic buildings, structures, objects, or properties of religious and cultural importance are present on the Wagenaar USAR Center.

8.0 CONCLUSIONS

Lawhon & Associates, Inc. in conjunction with FMSM was contracted to prepare an ECP report for the PFC Daniel L. Wagenaar U.S. Army Reserve Center WA024 located at 1011 East Ainsworth Street, Franklin County, Washington 99301. The tract of land is rectangular shaped and encompasses approximately 7 acres. The Site consists of two permanent buildings: the administrative building and an outlying OMS building.

The USAR Center is currently occupied by the 737th Transportation Company (out of Yakima, WA) and the 104th Division Drill Sergeants. The Site has always been a USAR Center since the facility was constructed in 1974. The Site has primarily functioned as an administrative, logistical, and educational facility, with limited basic vehicle maintenance occurring in the OMS building.

Findings of this ECP Report are based on interviews, existing environmental information, including visual observations, 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** - No ASTs have historically been located at the Site or are currently located at the site.
- **Asbestos Containing Materials** - A table provided by the 70th Regional Readiness Command listing the status of ACM surveys for it's facilities, shows that an asbestos survey has been performed at the Site (with no date listing) and that the "report currently with FFR committee". In addition, a draft copy of the 2005 BRAC Implementation Plan on the Closure of Wagenaar United States Army Reserve Center, Pasco, WA states, "There is asbestos tile in the facility that would need abatement and renovation if the Army Reserve remained in the center." No additional information was provided.
- **Hazardous Substances** - Chemicals containing CERCLA hazardous substances may have been used and stored at the Site in amounts necessary to support unit-level vehicle and building maintenance activities. However, the quantities stored would not have exceeded corresponding CERCLA threshold planning quantities. There is no evidence that the chemicals used or stored were ever improperly handled, released, or disposed at the Site.
- **Indoor Firing Range** - Historically, the Site operated an indoor firing range. The range area is now used as a weight and physical training room. No information on decommissioning or abatement was provided. During the 2006 site visit, the wall at the target end of the former range exhibited firing marks.

- **Lead-Based Paint** - 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 of the administration building (1974), it is likely that LBP exists in the structure. The OMS, however, was constructed in 2002, and due to its more recent date of construction, may not contain LBP. During the 2006 site visit, painted surfaces within the administration building and OMS appeared to be in fair condition.
- **Munitions and Explosives of Concern** - No indications were found during the site visit or records review process of the past presence of MEC, including unexploded ordinance. A locked small arms vault is located within the administration building. According to site personnel no ammunition for the arms are located or stored at the Site.
- **Natural Resources** - A previous report has documented that a burrowing owl nest (burrow) is located near the northeast corner of the facility boundary. It is unknown if the nest site is currently active. The burrowing owl is both a federal candidate species and a state candidate species (based on available [2004] data) and protected as a migratory bird under Executive Order 13186.
- **Nearby Properties** - Potential environmental sites of concern, located within corresponding ASTM search radius distances from the Site were evaluated. Overall, none of the sites evaluated exhibit environmental conditions that have a probability to adversely affect environmental conditions at the Site.
- **Non-UST/AST Petroleum Storage** - Although fuel transportation trucks are temporarily parked at the Site, a personnel interview during the 2006 site visit indicated that fuel is emptied and the containers are purged off-site. Additional petroleum storage may historically have occurred within the OMS building. There is no evidence that petroleum products in excess of 55 gallons were stored for one year or more on-site.
- **Pipelines** - Three 6-inch diameter fuel pipelines owned by the Port of Pasco cross the Army Reserve property. The underground fuel lines have been abandoned, and capped. Based on a survey conducted in November 2003, the depth of the pipelines range from approximately 15 - 48 inches below ground surface. A pipeline breach in the 1960's released an unknown quantity of fuel (diesel and/or gasoline) to the subsurface. The location of the spill was between 100-150 feet north of the northeast corner of the administration building.

Soil and groundwater sampling was performed in October 2004 on 12 soil, and eight groundwater samples. Diesel-range hydrocarbons were detected in 4 soil samples and 2 groundwater samples. Based upon these results, four permanent

groundwater monitoring wells were installed to verify groundwater flow direction and ascertain whether diesel impacted groundwater was migrating off the Site.

The results of these investigations indicate that although diesel-impacted soil was detected in the vicinity of the abandoned pipeline north of the OMS, these concentrations are below Washington State Department of Ecology, MTCA Method A cleanup levels. Groundwater samples collected in the vicinity of the former release, and immediately down gradient, contained diesel-range hydrocarbon concentrations above the MTCA Method B cleanup levels. Groundwater samples from two down gradient monitoring wells did not contain detectable concentrations of diesel- or oil-range petroleum hydrocarbons indicating that off-site migration has not occurred.

Based on these results, additional groundwater monitoring was recommended to further assess the stability of the groundwater concentrations beneath the site. This monitoring is currently in process.

- **Pits, Ponds, Sumps, Drywells, and Catch Basins** - A 2005 Survey of Drains, Pollution Control Equipment, and Discharge Points identified two exterior surface storm drains, 4 dry wells, an infiltration pond, a can wash area and associated grease trap. In addition, interior floor drains are located within the kitchen area, and mechanical room. All of these structures were observed during the 2006 Site visit and appeared to be in functioning condition.

According to the 2005 report, the interior drains are tied into the City's sanitary sewer system. The report states that the exterior drain adjacent to the can wash area just north of the administration building discharges into the grease trap, which in turn discharges to the sanitary sewer system. The other exterior drain discharges into one of the dry wells. All four dry wells discharge into the ground through infiltration. The grass bottom infiltration pond, located east of the POV parking area, was constructed in 1993 to improve drainage from the parking area. One of the dry wells was added at this time to handle any overflow from the infiltration pond.

- **Polychlorinated Biphenyls** - A concrete pad mounted power box situated outside the facility fence is located adjacent to Ainsworth Avenue. The power box is not labeled and is operated and maintained by the local utility, Franklin Public Utility District.
- **PCB Equipment** - According to information provided in a 2005 PCB-Containing Equipment Inventory report, "There appears to be no remaining PCB-containing equipment at the Site and no further action is needed".

- **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.). 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** - Information provided by the 70th RCC shows that a radon survey was performed at the site in 1991. Based on the sampling results, no locations sampled exhibited radon levels above the USEPA's recommended maximum allowable exposure level of 4 pCi/l. Radon surveys are currently being performed at facilities within the 70th RRC by Shaw Environmental Group. The radon surveys commenced in July 2006 and results are currently not available.
- **Underground Storage Tanks** - No USTs have historically been located at the Site or are currently located at the site.

In accordance with Department of Defense policy defining the classifications (See Deputy Under Secretary of Defense Goodman Memorandum dated 21 October 1996), the Site has been classified as Category 2, an area or parcel of real property where only the release or disposal of petroleum products or their derivatives has occurred. This classification is based on the breached pipeline and ongoing monitoring of groundwater that initially exhibited concentrations of petroleum hydrocarbons above MTCA cleanup levels.

9.0 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 & Associates, Inc., has 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, USAR Center 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 & Associates, Inc., was 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 & Associates, Inc., notes 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 & Associates, Inc. has summarized certain of the Prior Reports in fulfilling the project prescribed scope of work. 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 & Associates, Inc. neither warrants nor certifies 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 at 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 & Associates, Inc., requests the opportunity to review/modify conclusions, as warranted.

10.0 REFERENCES

10.1 PERSONS CONTACTED

- Mr. Patrick Marchman, Environmental Program Manger, ICI, LLC, U.S. Army Reserves 70th Regional Readiness Command, (206) 301-2091, September 11, 2006.
- Ms. Patricia Bradford, Unit Administrator, PFC Daniel L. Wagenaar USAR Center, Pasco, WA, (509) 547-7527, September 11, 2006.

10.2 RESOURCES CONSULTED

- Environmental Data Resources, Inc. (EDR) Report for the PFC Daniel L. Wagenaar USAR Center, Pasco, WA, July 14, 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 and Suspected Contaminated Sites List, May 11, 2006
 - Hazardous Sites List, March 27, 2006
 - Confirmed & Contaminated Sites – No Further Action, May 11, 2006
 - Solid Waste Facility Database, October 01, 2004
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 - Leaking Underground Storage Tanks Site List, March 08, 2006

- Underground Storage Tank Database, April 27, 2006
- Aboveground Storage Tank Locations, December 12, 2005
- Hazardous Waste Manifest Data, December 31, 2004
- Reported Spills, March 29, 2006
- Institutional Control Site List, June 06, 2006
- Voluntary Cleanup Program Sites, May 11, 2006
- Independent Cleanup Reports, December 01, 2002
- Drycleaner List, January 12, 2006
- Clandestine Drug Lab Contaminated Site List, May 23, 2006
- Washington Emissions Data System, December 31, 2004
- Inactive Drycleaners, January 01, 2006
- Tribal Records
 - Indian Reservations, December 31, 2004
 - Leaking Underground Storage Tanks on Indian Land, April 14, 2006
 - Underground Storage Tanks on Indian Land, April 05, 2006
- EDR Proprietary Records
 - Manufactured Gas Plants
 - Historical Auto Stations
 - Historical Cleaners
- Historical Chain of Title Report for the PFC Daniel L. Wagenaar USAR Center, Pasco, WA, September 13, 2006.
- Environmental Lien Search Report for the PFC Daniel L. Wagenaar USAR Center, Pasco, WA, September 13, 2006.

- Faces from the Wall, Vietnam War website, September, 2006, <http://www.facesfromthewall.com/1969jul.html>.
- Franklin County Washington Assessors website, September 2006, <http://www.co.franklin.wa.us/assessor/>.
- U.S. Department of Energy, Coastal Zone Management Act and Related Legislation website, September, 2006, www.eh.doe.gov/oepa/laws/czma.html.
- Washington State Department of Natural Resources Geology of Washington, Columbia Basin Area website, September, 2006, <http://www.dnr.wa.gov/geology/columbia.htm>.

10.3 AGENCIES CONTACTED

- Johnnie Landis, Public disclosure Coordinator, State of Washington, Department of Ecology, Eastern Region Office, 3190 160th Ave. SE, Bellevue, WA, August 14, 2006.
- Ms Stephanie Kercheval, FOIA Officer, United States Environmental Protection Agency, Region 10, 1200 6th Avenue, Seattle Washington, August 14, 2006.