Appendix F

Environmental Hazards Abstracts

Appendix F – Environmental Documents Summaries

The following documents were reviewed to assess the environmental conditions/hazards associated with the Fort Lawton and Talaris properties. Below is a list of reviewed documents along with a summary and conclusions as they pertain to hazardous substances on the subject properties.

Fort Lawton Site

1. *Historical Photographs 1937, 1946 and 1950.*

   The historical photograph reviewed did not reveal any environmental concerns.

2. *Fort Lawton, Seattle Washington, Post Map, Map, Sewer Services. January 1946 revision.*

   Overview map of the Fort Lawton complex in 1946. The map illustrates where the buildings, roads, shooting ranges, cemetery, motor pool, coal yard and parade ground were located. The former motor pool and coal yard areas appear to be off of the subject property, located several thousand feet to the southwest. The cemetery appears to be directly adjacent to the west, of the south end of the subject property.

3. *Phase II Environmental Site Assessment (ESA) Report, Fort Lawton US Army Reserve Complex, 4585 Texas Way West, Seattle, WA 98199. ACT Associates, Inc. July 2009.*

   In April 2009, ATC associates, Inc. performed a limited Phase II ESA which included subsurface investigation activities to determine if the FLARC property (directly adjacent to the northwest of AMSA Building 222) was adversely impacted from historical use or adjacent properties. The limited Phase II ESA included an evaluation of the potential environmental issues identified during ATC's 2009 Phase I Environmental Site Assessment. The above referenced potential issues included the following:

   - An evaluation of the potential for impact from suspect USTs and/or ASTs at the property associated with the approximately 15 to 20 "temporary" barracks located on the property circa 1944.
   - An evaluation of the potential for impact to site soil and groundwater from ammunitions used at the small munitions shooting range located on the property circa 1936.
   - An evaluation of the potential for impact from the gas pump island and associated piping on the immediately east-adjacent property.
   - An evaluation of the potential for impact from the potential fuel source at the helicopter landing pad identified on the property in 1977.
   - An evaluation of the potential for impact from fill material imported to the site from an unknown source.

The following conclusions were made. Concentrations of arsenic in groundwater collected from soil boring B-9 are slightly above the MTCA Method A cleanup level of 5 ug/L and concentrations of dissolved lead are present in concentrations that meet the Method A cleanup level of 15 ug/L. ATC notes that groundwater collected from soil boring B-9 appears to be from limited zone of perched groundwater that is likely to be present seasonally. ATC further notes that concentrations of arsenic and lead were not detected in any other locations analyzed at the subject site. Based upon this knowledge, it is ATC's opinion that the presence of arsenic and lead in groundwater at does not represent a reportable release and does not warrant further investigation or remedial action. No other analyte was detected in soil and groundwater samples at concentrations above MTCA Method A cleanup levels.

4. *Final Site Investigation Report, Fort Lawton Rifle Target Range, Fort Lawton Pistol Target Range. 88th Regional Support Command, Fort Lawton U.S. Army Reserve Complex, Seattle Washington. U.S. Army Corp of Engineers, Omaha District. May 2010.*

   In 2010, the US army Corp of Engineers, Omaha District conducted a site investigation to evaluate environmental conditions of property for transfer. The Fort Lawton Rifle Target Range (Rifle Range) and the Fort Lawton Pistol Target Range (Pistol Range) were investigated to determine the presence of munitions constituents in soil due to Department of Defense use of the property. Fort Lawton Rifle Target Range and Pistol Target Range are located on property owned by the Fort Lawton Army Reserve Complex and the City of Seattle. Both are static small arms ranges that were active from approximately 1904 through 1944 for rifle and pistol marksmanship training for those stationed at Fort Lawton Military Reservation.

   The following conclusions were made: 1) The 1,000-Yard Target Range Munitions Response Site (MRS) is the portion of the Fort Lawton Rifle Target Range located on Fort Lawton US Army Reserve Complex property. No environmental conditions related to munitions were found and no further action is recommended on this property. 2) The 1,000-Yard Target Range-TD MRS is the portion of the Fort Lawton Rifle Target Range and Fort Lawton Pistol Target Range located on City of Seattle property. This property is recommended for further remedial response under the Formerly Used Defense Site Program to address munitions constituents.

5. *Final, Radiological Site Assessment Report (and memo), Leisy Hall and AMSA 79. Fort Lawton Army Reserve Center (WA030), 4570 Texas Way West, Seattle, Washington. Cabrera Services. June 2012.*

   In June 2012, Cabrera Services Inc. performed a Radiological Site Assessment (RSA) at the Leisy Hall and Area Maintenance Support Activity (AMSA) 79, Fort Lawton U.S. Army Reserve Center (USARC) in Seattle, Washington. The RSA covered Leisy USARC (Building 220), AMSA 79 (Building 222), the Fort Lawton USARC (Building 240), the Organizational Maintenance Shop (Building 245), the Harvey USARC (Building 216), the Information Technology (Building 214), and warehouse storage (Building 211). A visual inspection and exposure rate survey were performed to determine if any sources of radioactivity remain at the site.

The results of the visual inspection and exposure rate survey support the conclusion that no sources of radioactivity remain at the site.

6. *Final, Environmental Assessment (EA) For BRAC 05 Recommendations for Closure, Disposal, and Reuse of Fort Lawton, United States Army Reserve Center (FACID WA030, WA031, WA012), Seattle, Washington. U.S. Army Corp of Engineers, Mobile District. July 2012.*

   The EA evaluated three alternatives with the following conclusions:

   - No Action Alternative: Caretaker Status - no environmental impacts.

   - Traditional Disposal and Reuse Alternative - no significant adverse effects on any of the environmental or related resource areas at Fort Lawton or to areas surrounding the USARC. All the resource areas were evaluated to be at the No Effects or No Significant Effect levels.

   - Public Sale Alternative would have no significant adverse effects on any of the environmental or related resource areas at Fort Lawton or to areas surrounding the USARC. All of the resource areas were evaluated to be at the No Effects or No Significant Effect levels.

   The following conclusions were made in the EA:

   - No improper storage techniques or staining was noted in or around the hazardous materials sheds or flammable storage cabinets and no potential environmental threat was noted.

   - Results of post excavation samples after removal of three underground storage tanks and a fuel dispenser area showed total petroleum hydrocarbons (TPH) were either not detected or the levels were well below the WDOE action levels.

   - No leaks associated with the three above ground storage tanks were observed or reported during the 2007 ECPs.

   - There are no PCB-containing ballasts or transformers present at Harvey Hall USARC and Leisy Hall.

   - The EA referenced a 1994 asbestos containing material (ACM) survey report for Leisy hall, which indicated ACM was present in Buildings 220, 222, and 250. Based on construction dates, ACM may also be present in AMSA 79 (Building 222). The EA stated that no ACM abatement documentation was available; however, based on personal interviews conducted during the 2007 ECP, all ACM was removed from Leisy Hall during previous renovation activities. The 1994 asbestos survey report for Harvey Hall indicated the presence of ACM in Building 216, but no ACM in Building 211. According to the EA, no records were available for ACM abatement in Building 216.

- The EA concluded there are no documented LBP surveys or abatement records for buildings on the installation. Because the buildings on the installation were constructed before 1981 (Leisy Hall (1972), AMSA 79, Building 222 (1972), and Harvey Hall (1950s), the presence of LBP is presumed.

- The EA states that a radon survey was conducted in Fort Lawton buildings in 2007. The survey results indicated radon levels below the U.S. EPA recommended action level of 4.0 picoCurries per liter (pCi/l).

- No reportable quantities of hazardous substances have been stored at Leisy Hall and no spills or releases were documented or reported. Installation personnel indicated that a diesel fuel spill/leak occurred in the parking lot of the Fort Lawton USARC and was cleaned up years ago.

- Site records indicate that three underground storage tanks (USTs) were removed from the Leisy Hall area in 1990. A fuel island area was formerly located on the northwestern corner of the AMSA 79 (Building 222) corner of the installation, which contained a gasoline UST, a diesel fuel UST and two dispenser areas. A third UST, used for waste oil storage, was formerly situated on the southern central perimeter the AMSA 79 (Building 222) area. Records indicated that there was no visual evidence of soil contamination and no groundwater was encountered during the tank excavation. Results of post excavation samples showed total petroleum hydrocarbons (TPH) were either not detected or the levels were well below the action levels

- Three above ground storage tanks (ASTs) are located at Leisy Hall. One 4,000-gallon capacity diesel AST is situated on the southern exterior of Leisy Hall and is associated with an emergency generator. One 200-gallon capacity AST utilized to store hydraulic fuel for a vehicle lift is situated in a storage room of AMSA 79 Building 222 and one 500-gallon capacity AST utilized for the storage of used oil collected in maintenance operations conducted at AMSA 79 Building 222 is located within a portable hazmat storage shed west of AMSA 79 Building 222. No issues of leaks associated with the ASTs were observed or reported in the 2007 ECP Report.

7. *Periodic ACM/PACM Condition Assessment – Lawton US Army Reserve Center, Seattle, Washington. Rose Environmental. December 3, 2012.*

   In November 2012, Rose Environmental conducted a periodic condition assessment of asbestos-containing materials (ACM) and potential asbestos-containing materials (PACM) at the Fort Lawton US Army Reserve Center. The purpose of the inspection was to determine the presence and condition of ACM and PACM within the buildings. The US Army 88th Regional Support Command provided Rose Environmental with asbestos survey reports of the facility conducted in November 1993 by AGI Technologies (reports both dated May 5, 1994). At that time, the Harvey Hall report identified nine ACM present within Building 216. The Leisy HQ report identified ten ACM present and two PACM identified in Building 220. The report also identified three ACM present and two PACM in Building 222.

The results of Rose Environmental's walkthrough inspection of all three buildings indicated that ACM and PACM are still present in the buildings. However, Rose Environmental could not confirm to be present, and assumed to be removed, the following ACM/PACM which was identified in the AGI 1994 reports: Building 216 Harvey Hall - (1) Brown 9" x 9" floor tiles with brown mastic in 1st Floor offices, (2) Brown 12" x 12" floor tiles with brown mastic in certain 1st Floor and 2nd Floor offices, (3) Boiler Room furnace gaskets (new boiler installed), (4) 2nd Floor concrete and straw firing range soundproofing, (5) 2nd Floor soundproofing below hardwood flooring. Building 220 Leisy HQ - 12" x 12" white ceiling tiles in the Print Shop. Building 222 AMSA Building - White 9" x 9" floor tiles with brown mastic in the Tool Supply Room.

8. *Environmental Condition of Property (ECP) Update Report: Fort Lawton U.S. Army Reserve Center (WA030, WA031, WA012), Seattle, Washington 98199. EXCEL Engineering, Inc. April 2013.*

   In October 2012, XCEL Engineering conducted a site reconnaissance of the USAR Center (WA030, WA031, WA012) to visually obtain information indicating the environmental condition of the property prior to disposal. The site was vacant at the time of the inspection and has been since September 2011. An original ECP report was prepared in September 2001 by Fuller, Mossbarger, Scott and May Engineers, Inc. The original report was included as an appendix, and was reviewed in conjunction with the update report. The purpose of the update report is to identify any Recognized Environmental Conditions at the property and/or any environmental conditions that may have changed since the 2007 ECP report. Of note, the two areas of potential environmental concern identified in the 2007 ECP were connected with the FLARC parcel and not associated with the subject site.

   The ECP Update Report did not identify any recognized environmental conditions at the property during the site visual inspection, regulatory database search, or interviews with personnel knowledgeable about the property. The report classified the property as an ECP Type 2, which is defined as an area or parcel of real property where only the release or disposal of petroleum products or their derivatives has occurred. (Refer to the UST Closure Report located in Appendix E of the ECP Report Update).

9. *Environmental Condition of Property Recertification for the Fort Lawton, United States Army Reserve Center, Seattle, WA. Department of the Army, Headquarters, 88th Regional support command. June 2016.*

   A site visit was conducted in June 2016 by the BRAC Environmental Coordinator (Versar Contractor) 88th Regional Support Command Conditions on the subject property and in the area surrounding.

   It was concluded that the environmental conditions of the subject property have not changed materially since the ECP (September 2007) and ECP Update (April 2013) were completed. The ECP did not identify any Recognized Environmental Conditions.

The following other environmental condition was identified during records review: The 2013 ECP Update incorrectly stated that there were two Underground Storage Tanks (USTs) on the Property and the 2007 ECP incorrectly stated that there were three USTS on the Property. According to Fort Lawton UST closure reports and state UST database, there were five UST's on the Property that were used for storage of petroleum products. From 1990-1993, five USTs were removed, cleaned, and disposed of from the AMSA (bldg. 222); Harvey (bldg. 116); and Storage (former maintenance shop-bldg. 211) areas. There was no visual or olfactory evidence of soil contamination at these tank site locations. Soils were over excavated and confirmatory soil samples collected revealed TPH concentrations below Washington Department of Ecology action levels. The status of three reportable tanks has been listed as "removed" within the Washington Department of Ecology UST system, the other two heating fuel USTs were exempt from reporting as soil samples were non-detect.

Talaris Site

1. *2013 Environmental SEPA Checklist (4000 Property). City of Seattle, Department of Planning and Development. October 2013.*

   Notes from the 2013 SEPA Checklist for the Talaris Property pertaining to Hazardous Substances:

   - The property contains nine separate buildings formerly related to the Institute for Advanced Study. Buildings were constructed in two phases. Phase I, 1965 – 1967; and Phase II 1970/1971. Potential for lead based paint and asbestos due to the age of the buildings. Unknown if any LBP or asbestos surveys conducted.

   - Likely to need an NPDES permit (stormwater permit) and Stormwater Pollution Prevention Plan (SWPPP).

   - The site was the subject of a 2004 Final Environmental Impact Statement (EIS). This EIS was not available for review.

   - The abandoned old Montlake Landfill is located adjacent to the subject property. No landfill deposits underlie the site. Methane migration from the former landfill to the subject property was determined to be unlikely.

   - Construction equipment could potentially pose a threat to environmental health via leaky equipment, spills during refueling, and leaky containers stored on-site for construction equipment maintenance.

   - Future residential uses could pose a threat to the environment through the misuse and improper disposal of household cleaners, yard fertilizers and pesticides, and gas and other petroleum products used in the operation and maintenance of automobiles and yard equipment. On-site equipment fueling.

2. *Geotechnical Report, 4000 Property, Seattle, Washington. Shannon & Wilson, Inc. October 2013.*

   In October 2013, Shannon and Wilson, Inc. evaluated the subsurface soil and groundwater conditions in the Laurelhurst neighborhood of Seattle in the property located at 4000 NE 41st Street, Seattle, Washington. The goal was to develop preliminary geotechnical recommendations for the site grading and infrastructure design and construction required for the proposed development. Pertinent information included in the evaluation included a 1,000-foot methane buffer next to the abandoned Montlake landfill, which operated west of the property from 1926 to 1966 and was closed in 1971 following landfill practices of the time. It was covered with about 2 feet of clean soil. The easternmost extent of the mapped abandoned landfill waste is slightly more than 1,000 feet from the western edge of the property.

   In the opinion of Shannon and Wilson, Inc., the probability of methane migrating from the abandoned landfill onto the property is low. It was concluded that no special measures are needed to mitigate potential methane migration from the abandoned Montlake Landfill.